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Anagran Solution

Anagran provides the world's first *behavioral traffic management* product that enables 100% effective visibility, management and control of any type of traffic (VoIP, video, interactive, bulk) regardless of application (e-mail, CRM, P2P, FTP), protocol (TCP, UDP), or format (encrypted, compressed), at speeds ranging from less than 10Mbps to 10Gbps and beyond.

Using advanced flow-based *behavioral* technology that maintains keen insight into the real-time actions of every network flow, Anagran exposes *exactly* what is happening within your network at all times, and instantly detects and equitably manages *every flow*.

The Problem: Network Traffic Keeps Changing

Traffic has changed, and will only continue to do so. Video continues to consume a greater share of the network, placing increased demands for greater network speeds, traffic volumes, and real-time performance. Compressed and encrypted traffic such as video and P2P continues its relentless growth while rendering traditional traffic management solutions ineffective. Common packet shaping, acceleration, and deep packet inspection (DPI)-based approaches require viewing packet payload content, which is useless with encrypted or already-compressed traffic like video.

Application and Traffic Type Protection

Anagran's products automatically create "virtual pipes" that serve several very important functions:

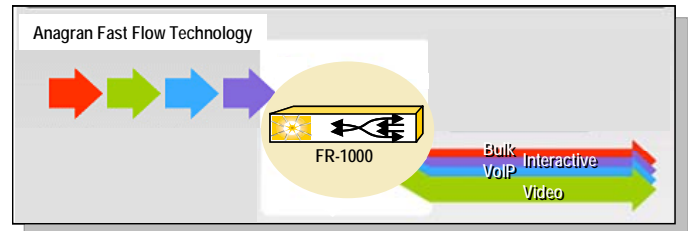
- Automatic traffic differentiation: similar traffic types are automatically grouped and managed within their own "virtual pipe" (e.g., voice, video, interactive, P2P)
- Dynamic per-flow rate management: Intelligent Flow Delivery™ (IFD) allows these virtual pipes to dynamically expand and contract per the current traffic mix and available network capacity
- Traffic integrity: IFD dynamically governs any traffic mix to ensure required performance and quality for all applications, all the time

Solving "The Network Traffic Jam"

Capacity-hungry applications like streaming and on-demand video compete with legacy data and VoIP for network resources. P2P traffic in particular consumes as much capacity as it can, often to the detriment of other applications. Anagran provides visibility and management of today's unpredictable ad-hoc traffic mix that chokes bandwidth, adds delay, and forces massive network over-provisioning.

This "network traffic jam" is occurring because:

- Networks were simply not designed to handle today's unpredictable, ad-hoc diverse mix of traffic.
- Users feel *entitled* to run any application anywhere at any time, with no concern or consequence for their actions.
- TCP traffic consumes as much network capacity as possible, causing applications to "collide" and impact each other, resulting in dropped VoIP, jittery video, slow response, etc.



The Unique Power of Anagran Technology

100% Effective P2P Management Without DPI – Anagran is the only company that controls *all* P2P traffic by observing and managing all flows at link speeds up to 10 Gbps. Intrusive deep packet inspection (DPI) products detect only 60-70% of P2P, raise privacy concerns, and face serious scalability issues beyond 1 Gbps.

Equal Capacity for All Users – Anagran products can automatically ensure equal network capacity for all users of the same service level. Whether a user is downloading video via a single large file transfer or spawning hundreds or thousands of P2P flows, each can be guaranteed the same aggregate capacity. This automatic fairness assurance can be configured in minutes and dynamically adjusts to port speeds and available network capacity levels.

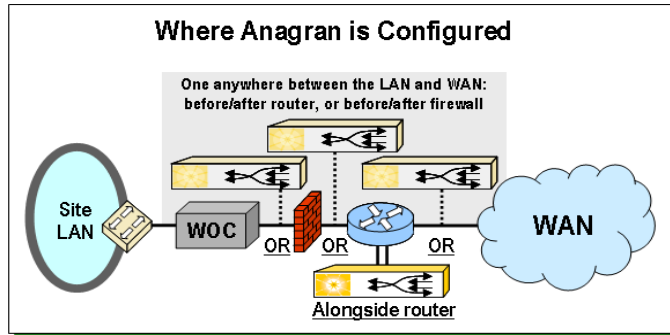
Required Performance and Quality for All Key Applications – Anagran protects networks from overload from sudden traffic surges and also protects key applications like VoIP, video, and interactive from aggressive bulk traffic. Cost-effective convergence with required application performance for all applications is now possible, regardless of the traffic mix.

Complete Visibility into All Network Traffic – Anagran is the *first* company to provide an exact, full breakdown of all network traffic flows at any point in time or over any time interval, at wire-rate speeds to 10 Gbps. You can also easily select any specific subset of flows from which to collect flow data records.

Improved Satellite and Radio Throughput by up to 50X – Anagran's optional enhanced rate signaling for TCP, known as TIA-1039, allows TCP to immediately run at the highest possible speed over satellite and radio links, improving satellite network throughput by up to 50X.

Where Anagran Fits in the Network

The Anagran FR-1000 operates next to an edge or aggregation router, wherever applications contend for network capacity. It may be inserted on either side of a router or firewall, as either a transparent "bump in the wire" or as a Layer 3 node. Operating bi-directionally, another FR-1000 is *not* required "at the other end".



Ultra-high Performance & Simplicity for IT Managers

The FR-1000 scales from less than 10Mbps to 48Gbps throughput, and handles up to 2,000,000 concurrent flows and 8,000 classes.



Installed in minutes, the product includes Netflow statistics collection and reporting for *every complete flow*. QoS policies are set once and then automatically maintained, saving valuable operational time.

Summary

Internet founder and Anagran Chairman Dr. Larry Roberts founded Anagran realizing that as network traffic grows and changes, so must the infrastructure. He has created the only products that make the network more intelligent *and* congestion-resilient to finally eliminate the network traffic jam. Anagran delivers *100%* visibility, management, and control of today's dynamic network traffic mix, for *any* applications, *any* protocols, and *any* formats over *any* network at wire-rate speeds up to 10Gbps.

Common Applications ...

- Network Visibility:
- P2P Management & Control:
- Dynamic Auto-QoS:
- WiFi Network Convergence:
- Video HD & Telepresence:
- Distributed Storage:
- WAN Cost Reduction:

Benefit(s) / Advantages

produces *complete* Netflow records *for every flow* for unsurpassed network insight & audit recognizes and manages *all* P2P traffic *per user* to ensure fair and equitable network usage "set it and forget it" QoS, no more 'tuning', automatically adjusts real-time to state of network enable HD Video, VoIP and Data to run *together with perfect quality* over WiFi eliminate separate networks, additional hardware, or bandwidth purchases real-time storage replication / synchronization without impact on other traffic, any time of day recapture up to 50% more WAN capacity by improving utilization to a sustained 90%+

Common Markets ...

- Education & Research:
- Tier 2/3 Service Providers:
- Enterprise:
- Government:
- Finance:
- Legal:
- Healthcare:

Benefit(s) / Advantages

manages P2P, enables high-quality video distance learning and long-distance collaboration enables cost-effective, efficient delivery of quad-play services protects routers and WOCs from overload, eliminates network congestion and bottlenecks resolves general congestion, speeds TCP over satellite by up to 50X reduces transaction latency and increases transaction speeds; protects VoIP enables cost-effective convergence of document retrieval, VoIP, & video enable HD Telemedicine and real-time access to huge files e.g. X-rays

New Products for *Today's* Networks: Anagran offers a family of flow management devices built from the ground up to eliminate the network traffic jam by filling the performance and quality gap that currently exists between L2/L3 routers and WAN optimization controllers (WOCs) that operate at L4 – L7.

