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OVERVIEW

Riverbed® Cascade® Pilot is a full-featured network analysis, visualization and reporting solution that integrates with Cascade Shark continuous capture appliances, Steelhead® WAN optimization products, and Wireshark® for a fully distributed packet analysis solution.
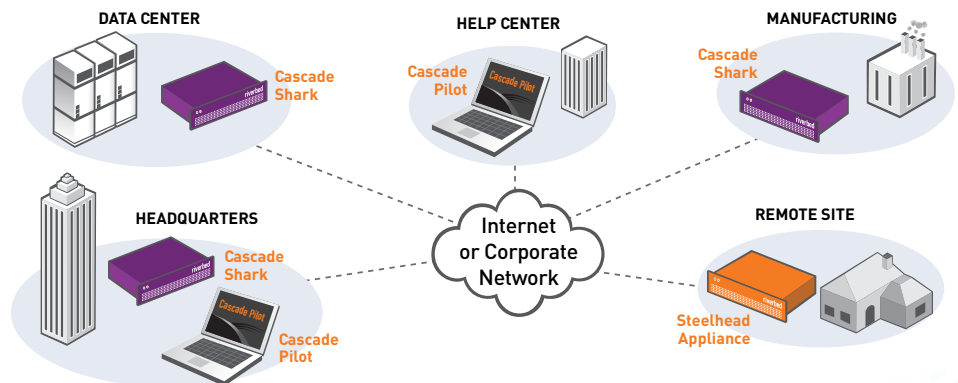
Cascade Pilot

An intuitive and graphical packet analysis console

Cascade Pilot is a robust network analysis and reporting solution that uses an intuitive graphical user interface to maximizes user productivity by rapidly isolating the specific packets needed to diagnose and troubleshoot complex performance issues. It enables users to quickly analyze multi-terabyte packet recordings on remote Cascade Shark appliances and Steelhead products without having to transfer large packet captures files across the network. Cascade Pilot also fully and seamlessly integrates with Wireshark, the leading protocol analyzer, for deep packet analysis and decoding.

Cascade Pilot can be used to:

- Easily isolate traffic of interest using drag-and-drop multi-level drill-down and an extensive collection of network analysis views

- Quickly and easily open and analyze remote or local multi-gigabyte trace files

- Visualize and analyze long-duration local and remote traffic by moving back-in-time through trending data sets with just a few mouse clicks

- Create and manage multiple capture jobs each capable of sustained multi-gigabit per second line-rate recording without packet drops

- Provide transaction-level analysis

- Define flexible triggers and alerts to detect abnormal behavior

- Create professional reports directly from views located on remote Cascade Shark or Steelhead appliances

- Seamlessly send selected traffic to Wireshark for deep packet inspection and decoding

Cascade Pilot can also manage the Embedded Cascade Shark functionality on Riverbed Steelhead appliances or virtual appliances. Steelhead customers can instantly create a fully distributed, easy to-manage packet capture solution to troubleshoot branch office performance, with no additional hardware deployment.


Example deployment of Cascade Pilot, Cascade Shark and Steelhead appliances

"It was taking us hours and hours to capture, decode and get to bottom line information for particular customers. With Cascade Pilot, we're now able to do it in less than 20 minutes."

— *Avi Lonstein, CEO, Airespring*

Wireshark Within

Cascade Pilot is seamlessly integrated with Wireshark. Take advantage of Wireshark's capture and display filters and expansive dissector library for deep packet analysis through the "Send to Wireshark" button.
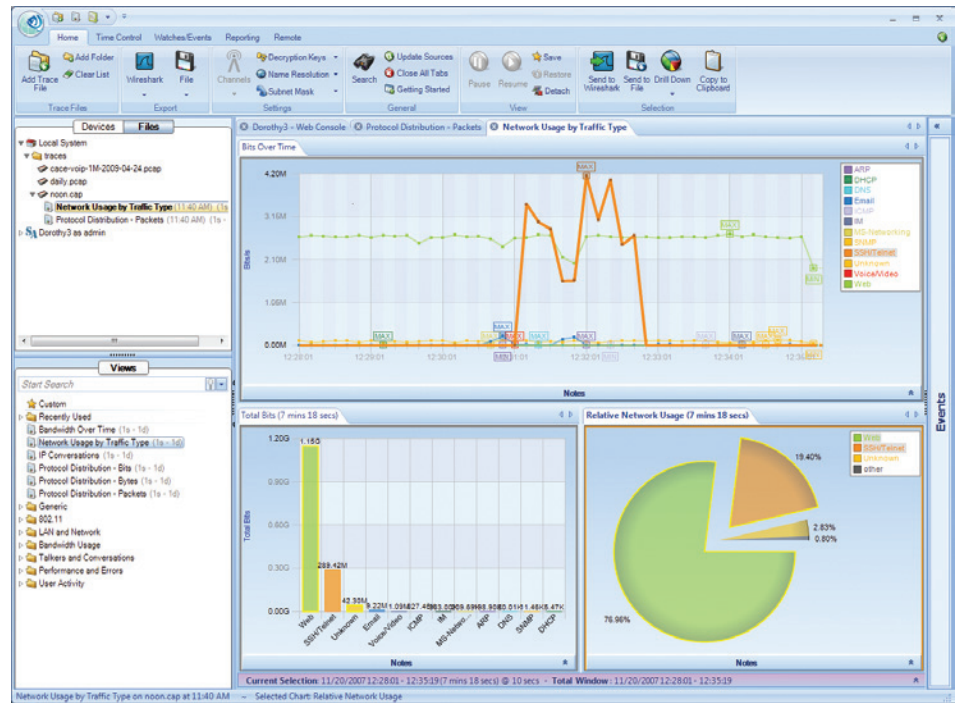
Cascade Pilot's interactive and visually-oriented user interface.

Views: Flexible Analysis and Visualization Paradigm

Cascade Pilot offers a broad selection of view metrics to meet troubleshooting requirements. Views include:

- LAN and network (MAC, VLAN, ARP, ICMP, DHCP, and DNS)
- Bandwidth usage (microbursts, IP, TCP, Web, and VoIP)
- Talkers and conversations (IP, subnets, countries, TCP, Web, VoIP, database, financial)
- Performance and errors (IP, TCP, Web, VoIP, database, financial)
- User activity (Web, VoIP, database, financial)
- 802.11 WLAN troubleshooting (discovery, bandwidth, channel usage, retransmissions, signal and noise)

Charts: Dynamic Visualization Components

Cascade Pilot includes a complete collection of interactive Charts including bar, pie, and strip charts, conversation rings, scatter diagrams, and grids. Intuitive point-and-click process for selecting elements within a Chart, such as bars within a bar chart or time intervals within a strip chart.

Drill-Down: Innovative In-Depth Analysis

Drill-down is one of the most powerful and unique features in Cascade Pilot. Drill-down enables flexible top-down analysis by letting the user display the details of any chart selection. This powerful paradigm allows the user to quickly hone in on the specific packets needed to isolate anomalous network behavior, enabling very large trace files to be analyzed quickly and easily.

Time Control: Flexible, Long-term Trending, Monitoring and Forensics

Viewing long duration network traffic metrics computed over days, weeks, and months can be challenging. With Cascade Pilot's "back-in-time" capability, customers can easily move through view metrics over extended periods of time with just a few mouse clicks. Based on the selected

time interval, sub-sampling and data aggregation techniques are used to optimize the granularity of the visual presentation of view metrics. The back-in-time capability can be applied to live and off-line traffic metrics.
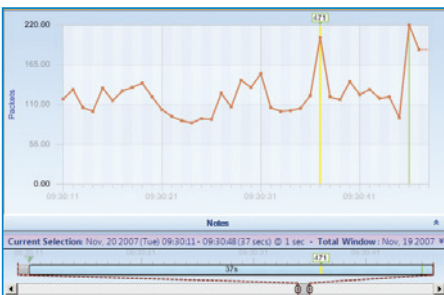
Watches: Advanced Trigger-Alerting Mechanism

Watches are a sophisticated triggering and alerting technology that can be created on virtually any view metric. When a trigger condition is met – for example, high bandwidth, slow server response time, high TCP round-trip time – an action is then executed. Actions include event logging, sending an email alert, and initiating a packet capture.

Superior Reporting

Cascade Pilot offers an enhanced set of reporting capabilities that integrate fully with views, enabling the creation of professional reports directly from screen views. Reports can be created in a variety of formats including PDF, Word and Excel.

Supports Multi-Terabyte Recordings

No more file rotation schemes resulting in thousands of files and inconvenient file boundaries representing a single recording. Cascade Pilot represents every packet recording, even if it's multiple terabytes in size, as one simple data item. Through the use of a powerful and intuitive drag-and-drop capability, the user can quickly and accurately isolate time intervals, called Trace Clips, within a recording and perform in-depth analysis and metric visualization on terabyte-size traffic recordings.

"I would like to start by just saying "WOW" finally a solid product for network professionals to do their job... As a Network Analyst, it is important to have tools that are reliable, manageable and adaptable to the ever-changing environments of high performance networks. Pilot is that tool. "

— Michael G. Hughes
Network Analyst, Global Escalations
IBM Information Management Software

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Remote Management

The Cascade Pilot console is used to configure remote Cascade Shark appliances and Embedded Cascade Shark functionality on Steelhead appliances

- Control the Cascade Shark packet recorder and Embedded Cascade Shark functionality on Steelhead appliances to configure, start, and stop packet recording jobs on remote Cascade Shark appliances

- Configure Cascade Shark appliance user management parameters (user/group profiles/privileges), port protocol names, and protocol types

- Configure the capture ports of Cascade Shark appliance's network adapters to determine aggregation, pass thru, link speed, and auto negotiation settings

- Create multiple capture jobs, each capable of sustained multi-gigabit per second line-rate recording without packet drops. Multiple capture jobs can dedicate differing amounts of storage to each job to flexibly extend storage time for critical applications

- Configure TurboCap cards, user management, and protocol name and type definitions for application identification and classification

SYSTEM REQUIREMENTS	
Operating systems	Windows XP, Windows Vista, and Windows 7 (Administrator rights required for installation and operation)
Suggested Hardware Platform	A dual-core 2.0 GHz CPU or better
Memory	2 GB RAM
Disk space	300MB free disk space plus additional space for trace files and reports
Graphics support	Graphics card with a minimum resolution of 1024 x 768

About Riverbed

Riverbed delivers performance for the globally connected enterprise. With Riverbed, enterprises can successfully and intelligently implement strategic initiatives such as virtualization, consolidation, cloud computing, and disaster recovery without fear of compromising performance. By giving enterprises the platform they need to understand, optimize and consolidate their IT, Riverbed helps enterprises to build a fast, fluid and dynamic IT architecture that aligns with the business needs of the organization. Additional information about Riverbed (NASDAQ: RVBD) is available at **www.riverbed.com**.

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