

## OVERVIEW

Riverbed® Cascade® is an end-to-end solution for network and application visibility, performance management and analysis.

Cascade Pilot, a key component, is a fully-featured network analysis, visualization and reporting product that integrates with Wireshark® and with multiple packet capture devices for a fully distributed network monitoring and troubleshooting solution.



# Cascade Pilot

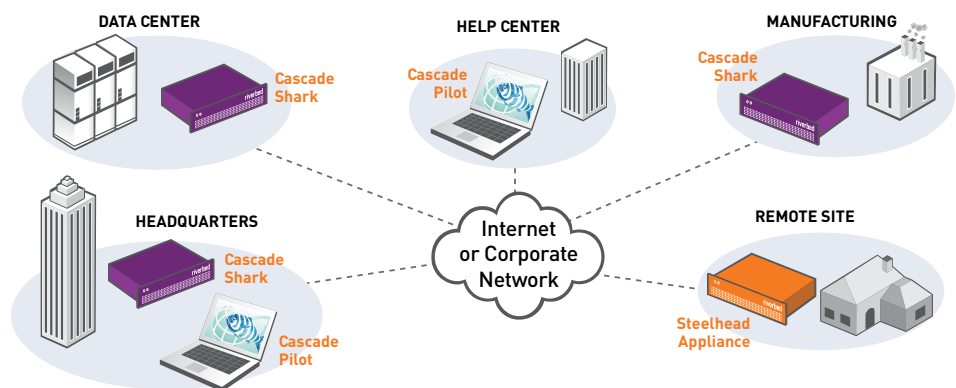
## Taking Wireshark into Uncharted Waters

Cascade Pilot, formerly known as CACE Pilot Console, seamlessly and securely integrates with remote Cascade Shark appliances to provide a complete, end-to-end, enterprise-wide and feature-rich distributed network analysis solution. Moreover, Wireshark integration with Riverbed Cascade and Steelhead extends Wireshark's application domain to distributed network analysis.

Cascade Pilot can be connected to one or more Cascade Shark appliances to:

- Create multiple capture jobs on remote Cascade Shark appliances capable of sustained multi-gigabit per second network traffic recording without packet drops
- Quickly and easily open and analyze multi-terabyte network recordings and trending data located on remote Cascade Shark appliances
- Support local and remote troubleshooting using drag-and-drop multi-level drill-down on local/remote and live/off-line traffic sources
- Visualize long-duration local and remote traffic metrics by moving back-in-time through large data sets with just a few mouse clicks
- Detect anomalies on long-duration local/remote network traffic using "Watches," a flexible trigger and alerting feature
- Create professional reports directly from Views located on a remote Cascade Shark appliance

Cascade Pilot can also connect to one or more Steelhead appliances or virtual appliances. Steelhead customers can instantly create a fully distributed, easy to manage packet capture solution throughout their data centers and branch offices, with no additional hardware deployment.



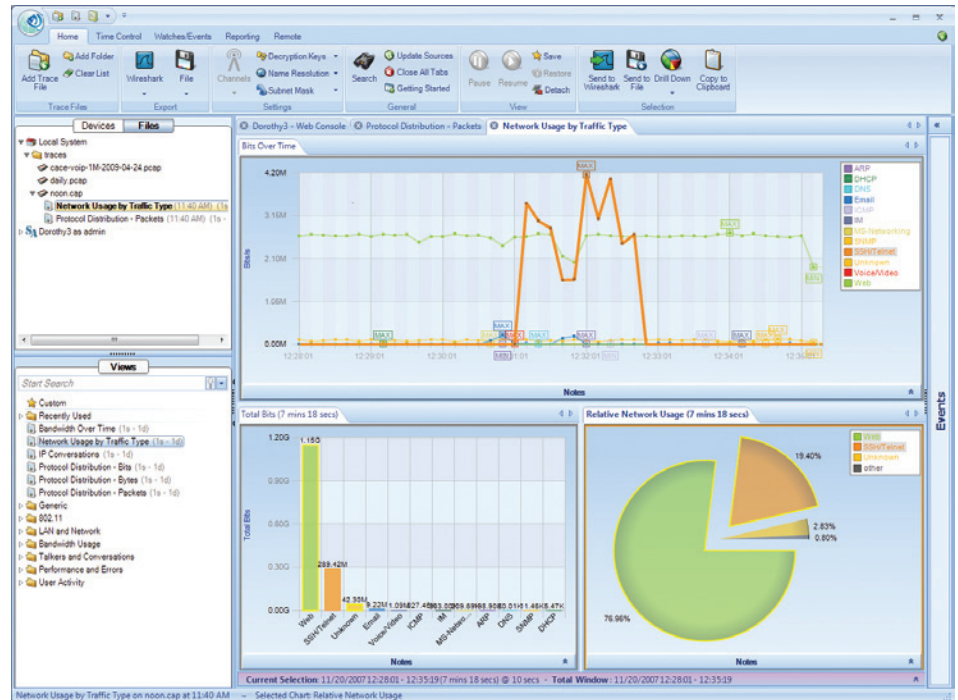
Example deployment of Cascade Pilot, Cascade Shark and Steelhead appliances

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

— Avi Lonstein, CEO, Airespring

### Wireshark Within

Cascade Pilot is the only network analysis tool to be fully integrated with Wireshark. This integration includes the prodigious collection of Wireshark BPF and Display Filters. Using the visual selection and drill-down features of Cascade Pilot, the “Send to Wireshark” feature exports only the selected traffic for deep packet inspection by Wireshark.

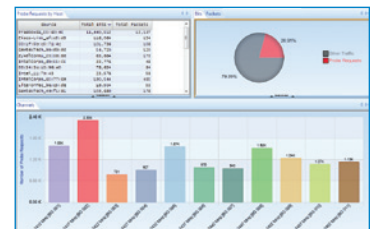


Cascade Pilot’s Interactive and Visually Oriented User Interface

### Views: Flexible Analysis and Visualization Paradigm

Cascade Pilot offers a broad selection of interactive View metrics to meet your troubleshooting requirements. These include:

- 802.11 WLAN troubleshooting (Discovery, Bandwidth, Channel Usage, Retransmissions, Signal and Noise)
- LAN and network troubleshooting (MAC, VLAN, ARP, ICMP, DHCP, and DNS)
- Bandwidth usage (including MicroBursts, IP, TCP, Web, and VoIP)
- Talkers and conversations (IP, subnets, countries, TCP, Web, and VoIP)
- Performance and errors (IP, TCP, Web, VoIP)
- User activity (Web, VoIP)



### 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 occurs when the user applies a View to a source which itself is the result of a selection made within a previously-instantiated View. This powerful paradigm increases the user's analysis capabilities many-fold. Very large trace files can be analyzed using the drill-down feature to quickly find and isolate anomalous network behavior.

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

Viewing network traffic metrics computed over days, weeks, and months can be challenging. With Cascade Pilot's "back-in-time" capability, you 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

Cascade Pilot includes a sophisticated triggering and alerting technology called "Watches." Create a Watch (trigger plus action) on virtually any View metric and be alerted based on a trigger condition computed on the metric. For example, you can be alerted on high bandwidth, slow server response time, high TCP round-trip time, and so on. When a Watch detects that a trigger condition has been met, an action will be executed. Actions include event logging, sending email, and starting a packet capture.

### Superior Reporting

Cascade Pilot offers an enhanced set of reporting capabilities that integrate fully with Pilot Views, enabling you to create professional reports from what you see on the screen. Reports can be created in a variety of formats including PDF, Word and Excel.

### Management Interface

- Cascade Shark appliance management Interface allows you to:
- Control Shark Packet Recorder 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

"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

**SYSTEM REQUIREMENTS**

Operating systems: Windows XP, Windows Vista, and Windows 7

Suggested Hardware Platform:

- A dual-core 2.0 GHz CPU or better
- 2 GB RAM
- 300MB free disk space plus additional space for trace files and reports
- Support for graphics cards with a minimum resolution of 1024 x 768

**Want to learn more about Cascade Pilot?**

Contact Riverbed, the IT performance company, for more information on the products and solutions that are right for you. Thousands of companies world-wide trust Riverbed to achieve cost savings and deliver strategic advantage over the competition. Visit [www.riverbed.com](http://www.riverbed.com) for more information.

**About Riverbed**

Riverbed Technology is the IT performance company. The Riverbed family of wide area network (WAN) optimization solutions liberates businesses from common IT constraints by increasing application performance, enabling consolidation, and providing enterprise-wide network and application visibility – all while eliminating the need to increase bandwidth, storage or servers. Thousands of companies with distributed operations use Riverbed to make their IT infrastructure faster, less expensive and more responsive. Additional information about Riverbed (NASDAQ: RVBD) is available at [www.riverbed.com](http://www.riverbed.com).



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**Riverbed Technology**  
 199 Fremont Street  
 San Francisco, CA 94105  
 Tel: +1 415 247 8800  
 Fax: +1 415 247 8801  
[www.riverbed.com](http://www.riverbed.com)

**Riverbed Technology Ltd.**  
 Farley Hall, London Road  
 Binfield  
 Bracknell  
 Berks RG42 4EU  
 Tel: +44 (0) 1344 401900

**Riverbed Technology Pte. Ltd.**  
 391A Orchard Road #22-06/10  
 Ngee Ann City Tower A  
 Singapore 238873  
 Tel: +65 6508-7400

**Riverbed Technology K.K.**  
 Shiba-Koen Plaza Building 9F  
 3-6-9, Shiba, Minato-ku  
 Tokyo, Japan 105-0014  
 Tel: +81 3 5419 1990

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