

Introducing  
Endace Network History





## Endace — the Network History Specialists

Endace redefined the packet capture market in 2001 with the industry-leading DAG card, which quickly became the gold standard for accurate and reliable packet-capture.

In 2007 Endace shook the market up again with an innovative, open packet-recording platform capable of simultaneously recording traffic and hosting packet analysis applications. And the EndaceProbe Analytics Platform was born.

Endace has continued to set the benchmark for 100% accurate, packet-capture, Network Recording and Playback at high-speed on the world's largest networks.

Endace Network History is used by operators of the most complex networks on the planet. It enables them to quickly and conclusively investigate and resolve cybersecurity threats, network problems and application performance issues, using a 100% accurate, packet-level record of network activity.

Endace customers include some of the world's largest banks, telecommunications and mobile carriers, media and broadcast companies, healthcare organizations, web giants, retailers, governments, and militaries.

## Our Open Platform Philosophy

These three principles underpin the design of our open network recording and analytics hosting platform:

### 1. 100% Network History

We believe recorded packet-level Network History is the only truly definitive source of evidence for investigating network security threats and performance issues. But it needs to be complete and precise - so you can reconstruct past events and see exactly what happened. That's why our platform is designed for 100% accurate, lossless recording.

### 2. Integrate all your tools

Because Network History is such a crucial source of evidence, we think it should be accessible to all the teams and applications that need it. That's why we created a powerful API that can integrate Network History into your chosen analytics tools and streamline investigations for rapid response to network issues.

### 3. Virtualize your analytics

The time has come for the cost benefits, flexibility and agility that virtualization has delivered to datacenters and networks to be available for network security and performance analytics too.

That's why we built a virtualization environment into our network recording platform. Now you can deploy analytics quickly and inexpensively and gain back the rackspace that's currently used to house racks of costly, obsolescence-prone analytics appliances.



# Overcome the Challenge of Monitoring Network Security and Performance

Distributed applications, web and mobile applications, cloud services and ubiquitous Internet access have all delivered unparalleled flexibility and power. But complex network and application architectures have made it increasingly difficult to ensure the security, reliability and performance of networks and the applications that run on them.

In the event of a security breach or cyber attack, it can be difficult or impossible to quickly determine exactly what happened, how it happened and what was compromised.

And organizations frequently find themselves frustrated by costly application performance problems and network outages that reduce productivity and impact badly on reputation and customer experience.

Tracking down the root cause of these problems used to be frustratingly slow and time-consuming. Not any more.

## Introducing Network History

The answer to these challenges lies in Network History. Evidence of all activity on the network – including malicious activity – resides in the packets that travel across it. But once those packets have traversed the network, only faint shadows of that activity remain. Which leaves SecOps and NetOps teams forced to try and reconstruct events from log files, NetFlow meta-data and other sources. A slow and often inconclusive process.

Endace technology lets you record copies of every packet that traverses your network. When a problem occurs, or there's a security breach, you can go back and look at the original packets to see exactly what happened. Without the guesswork.

We help customers ensure the security and performance of their networks and the integrity of their confidential data by enabling them to record an accurate history of exactly what has happened on their networks. Using this Network History, NetOps, SecOps, IT and DevOps teams can go back in time to quickly and accurately reconstruct events and respond appropriately.

## Making Network History Useful



### 100% Accurate Recording

Endace technology provides 100% lossless packet recording with nanosecond accurate time-stamping of every packet. Using a common time signal – such as GPS – timestamps can be synchronized across geographically-distributed networks. This precision and completeness is essential to enable accurate event reconstruction after the fact.



### Network History Playback

Playback lets SecOps and NetOps analysts replay recorded Network History to their analytics applications to analyze past events. This allows detailed back-in-time investigations and automated analysis that is simply not possible using conventional investigative techniques.



### Analytics Workflow Integration

The power of Network History is magnified when it can be integrated easily with the security and monitoring tools you already use. Endace's powerful API makes it easy to integrate Network History with your existing tools to streamline investigation workflows and enable rapid response.

Endace's Pivot-to-Vision and Pivot-to-Packets API integration lets analysts go from an alert in their analytics tool of choice directly to the related Network History. They can quickly analyze the historical traffic using EndaceVision™, decode packets in EndacePackets™ or download packet trace files for analysis using tools such as Wireshark™ or Dynatrace DNA™.



### Provenance™ Enriched History

For Network History to be useful, you need to know where it came from, how it was recorded and the state of the environment at the time. Provenance enhances recorded Network History with rich contextual data, embedding it into the packet history every second.

Provenance data lives with the packets, so at any time you can examine it in decode tools like EndacePackets and Wireshark alongside the packet data itself. With detailed information about how and where the packets were recorded there's never any doubt about the veracity of your evidence.



# EndaceFabric

Seamlessly connect multiple EndaceProbe Network Recorders to form a centrally-managed, network-wide recording and analytics fabric.

## EndaceProbe Analytics Platforms

EndaceProbes provide 100% accurate recording of network traffic from multiple links – from 10Mbps to 100Gbps. With sustained recording speeds up to 40Gbps, and up to 288TB of native packet storage, EndaceProbes can scale to handle the largest networks with ease. There are EndaceProbe models to suit a wide range of deployment options, from the core to the edge of the network.

## EndaceVision and EndacePackets

EndaceVision and EndacePackets are browser-based applications included free on every EndaceProbe. EndaceVision lets analysts visualize and search network history to quickly identify and locate packets-of-interest. Packets can then be analyzed directly using the EndacePackets™ packet decode application, removing the need to download large trace files across the network.

## EndaceCMS Central Management Server

Connected EndaceProbes can be centrally monitored, managed and configured using EndaceCMS™ Central Management Server. This allows an EndaceFabric to scale to hundreds, or even thousands of individual EndaceProbes while minimizing OPEX overheads. EndaceCMS can be deployed as either a virtual server or a dedicated appliance.

## EndaceConsole

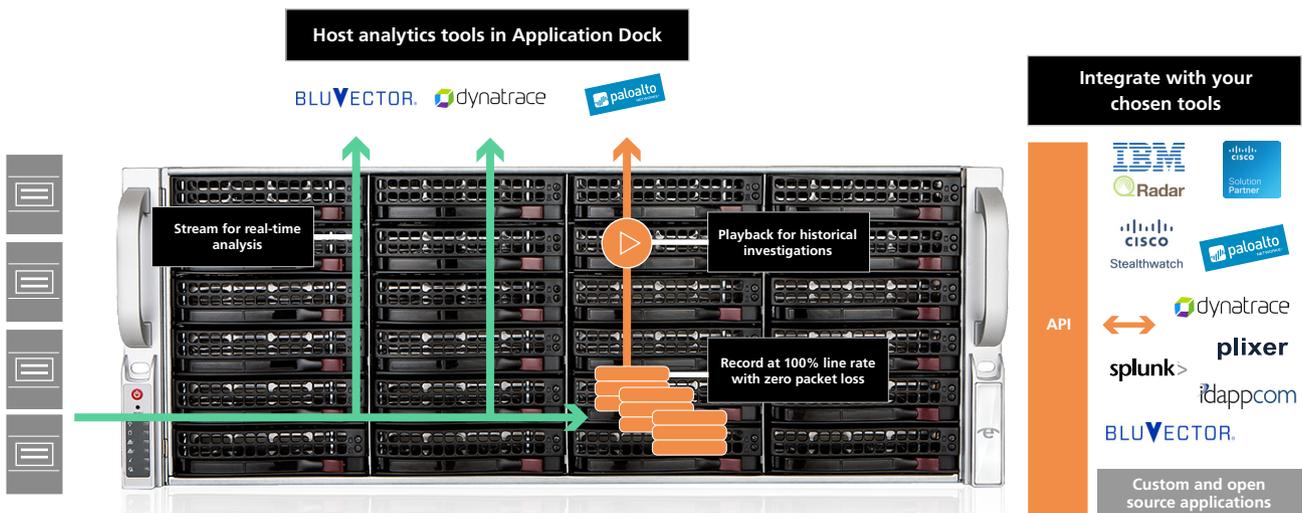
EndaceConsole™ is a browser-based, data-mining application that provides search and retrieval of Network History from across the EndaceFabric. Packets of interest can be downloaded for analysis or sent to SAN or NAS for long-term archival.



# EndaceProbe Analytics Platform

The EndaceProbe is a unique packet capture, recording and analytics hosting platform.

In addition to recording Network History, the EndaceProbe Analytics Platform can simultaneously host a wide range of commercial, open-source and custom-built network security and performance monitoring applications in Application Dock, the EndaceProbe's VM hosting environment, so you can deploy the tools you want when you want. The EndaceProbe's powerful API allows Network history to be integrated into all your security and performance analytics tools to streamline and automate the investigation and resolution of security threats and network or application performance issues.



## Application Dock

The EndaceProbe's built in virtual hosting environment, Application Dock™, builds on the concepts of Software Defined Networking (SDN) and Network Function Virtualization (NFV). It enables the virtualization of network security and performance monitoring analytics, delivering the same cost benefits and flexibility to analytics that SDN and NFV have delivered in enterprise networks.

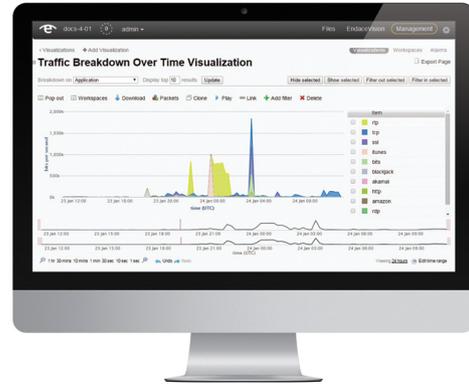
Application Dock lets you deploy analytics functions across the network wherever you need them and quickly change what you deploy as needed. All without requiring a truck-roll. Which means deployments can happen in hours not months, and you can slash costs by leveraging one common hardware platform to support your analytics needs.

Hosted applications can access a stream of live traffic for real-time analysis. Or, using Playback, they can be fed a stream of historical traffic giving you the ability to go back in time and investigate past events using a complete and accurate recording of exactly what happened.

## Built-In Investigation Tools

EndaceProbes include EndaceVision™, a powerful, browser-based investigation and visualization tool, and EndacePackets™, a built-in packet decode tool based on Wireshark™. Centralized data-mining enables analysts to quickly find and analyze packets-of-interest from anywhere on the network that EndaceProbes are deployed.

EndaceVision lets analysts dissect and analyze packet history to nanosecond level accuracy with views filtered by Application, IP, Protocol, Top Talkers and other parameters enabling rapid insights and accurate conclusions.



EndacePackets allows analysts to decode packet history directly on the Endace Probe, removing the need to transfer large packet capture files across the network.

## Workflow Integration

The EndaceProbe's powerful API enables customers to integrate Network History into their security and performance monitoring analytics solutions for streamlined investigation workflows. Its Pivot-to-Vision function allows analysts to click on an alert in their monitoring tools and go directly to EndaceVision to view the pre-filtered incident data, giving them access to definitive evidence so they can quickly and accurately investigate and resolve issues.

This dramatically increases productivity, lowers operational costs and reduces exposure to security threats and network or application downtime.

## Endace Fusion Partner Program

Integrate Network History with the tools you use every day.

Endace's Fusion Partner Program is an ecosystem of market-leading cybersecurity, network performance monitoring (NPM) and application performance monitoring (APM) vendors.

Endace Fusion Partners leverage the EndaceProbe's API integration and Application Dock hosting to integrate their solutions with network history, streamlining and automating detection and investigation and enabling back-in-time investigation using Playback.



## Open-Source Tools

Open source cybersecurity and network monitoring tools are ideal candidates for hosting in Application Dock. Endace customers commonly deploy tools such as SNORT, Suricata, Bro and Argus on their EndaceProbes.



# The EndaceProbe Family



## EndaceProbe 9200 Series

Delivering up to a Petabyte of effective packet storage, the flagship EndaceProbe™ 9200 Series uses built-in compression and patent-pending Smart Truncation™ on top of 432Tb of fully RAID-protected raw storage. All in a single, 4RU appliance that can record at a sustained 40Gbps..

Multiple 9200's can be stacked and used with a Network Packet Broker to provide monitoring for 100GbE, or faster, links and petabytes of storage capacity.

The 9200 is ideal for data center deployments and always-on recording and comes with four or eight 1GbE/10GbE recording interfaces (or up to two 40GbE interfaces).

## EndaceProbe 9000 Series

The EndaceProbe 9000 Series provides 192TB of onboard RAID storage and a maximum sustained write-to-disk speed of 20Gbps. With an optional compression-card upgrade, the 9000 Series can provide more than half a petabyte of packet storage.

This makes it ideal for data center deployments and always-on recording. It comes with four or eight 1GbE/10GbE recording interfaces (or up to two 40GbE interfaces).

## EndaceProbe 4100 Series

The diminutive size of the 1RU EndaceProbe 4100 Series belies its power. It delivers a maximum sustained write to disk speed of 15Gbps into up to 15.3TB of SSD storage and provides four or eight 1GbE/10GbE recording interfaces (or up to two 40GbE interfaces). This makes the 4100 Series ideally suited to on-demand recording at data center speeds.

## EndaceProbe 4000 Series

Endace's 4000 Series EndaceProbes offer up to eight 1GbE/10GbE recording interfaces, up to 32TB of storage and a maximum sustained write to disk speed of 3Gbps.

## EndaceProbe 114 and 124

The EndaceProbe 114 and 124 have a compact "short form factor" design and 3.8TB of ultra-reliable SSD storage, making them ideal for deploying in remote or branch offices.

The 114 offers four 10/100/1000 recording interfaces and maximum sustained write to disk speed of 500Mbps.

The 124 offers four 1GbE/10GbE recording interfaces (or one 40GbE) and a maximum sustained write to disk speed of 1Gbps.

## Timing and Accessories

The EndaceTDS™ TDS-24 Time Distribution Server enables time signals to be accurately synchronized across multiple capture points simultaneously from a common external time signal source such as a Global Positioning System (GPS) receiver - we supply GPS time signal receivers from Trimble.

We also provide a wide range of transceivers including both optical and electrical devices, covering all interface types from 10Gbps Ethernet to SONET OC-192.



## Endace Support and EndaceCare Professional Services

Endace Support is available globally, 24 hours-a-day, seven-days-a-week. We're always there when you need us to help with questions or on the rare occasion when a hardware unit requires replacement or servicing. There is also a Customer Support Portal containing documentation, software file downloads, a knowledgebase and a forum, where you can connect with Endace's product and support teams and other Endace customers.

EndaceCare Professional Services offers accelerated and cost-effective training, installation, maintenance and product integration. EndaceCare helps customers get the most out of their Endace solutions quickly and efficiently. Our experienced engineers offer deep industry experience, proven deployment methods and best practices. Services can be provided onsite or remotely depending on customer needs.



## Contact Endace

Endace has offices in the US, UK, Australia and New Zealand. For further information about Endace products and services or to speak with a representative, please contact us:

**Email:** [info@endace.com](mailto:info@endace.com)

**Web:** [www.endace.com](http://www.endace.com)

**USA and Americas:** +1 877 764 5411

**United Kingdom, Europe, Middle East**

**and Africa:** +44 0800 088 5008

**Australia:** +61 1800 642 476

**New Zealand:** +64 9 582 0360

Endace™, the Endace logo and DAG™ are registered trademarks in New Zealand and/or other countries of Endace Technology Limited. Other trademarks used may be the property of their respective holders. Use of the Endace products described in this document is subject to the Endace Terms of Trade and the Endace End User License Agreement (EULA).