ExtraHop

What IT Thinks About Big Data

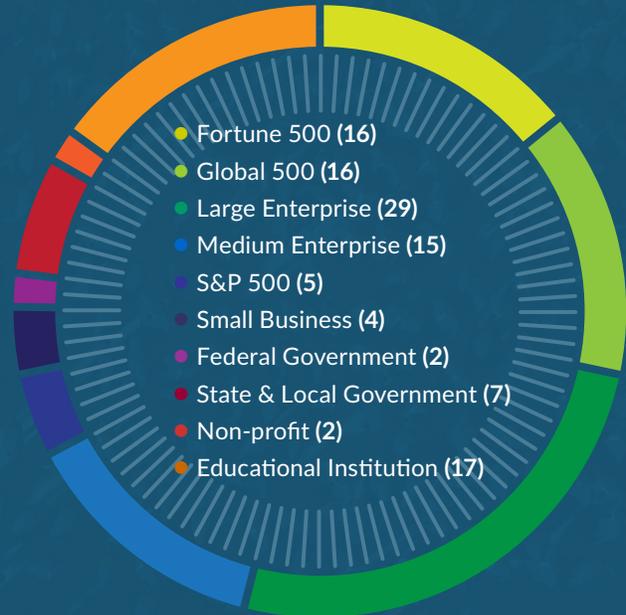|	
Data extraction	Data proficiency
Skills for data analytics	IT Operations and Management
Organizational maturity	Data-driven decisions
Correlation of data sets	Business impact
Visualization	Timeliness of data
Data in flight	Data at rest
Flexibility of analysis	Operationalization
Time to value	Turnkey appliances
Stream analytics	Return on investment

2016 Survey Report

Survey Demographics

TechValidate™

ExtraHop partnered with TechValidate to survey IT professionals about Big Data. We wanted to find out if Big Data was real, and if so, then what the benefits were to the business and IT organization.

The survey received 113 responses from a broad representation of IT roles, but focused on Director-level roles.

113

Application Support **(3)**
Business Intelligence Developer **(3)**
Chief Information Officer **(4)**
Chief Technology Officer **(2)**
Database Administrator **(1)**
Engineer **(11)**
IT Administrator **(1)**
IT Architect **(4)**
IT Consultant **(4)**
IT Director **(22)**
IT Manager **(10)**
IT Project Manager **(3)**
IT Quality Assurance Tester **(1)**
IT Specialist **(8)**
IT Systems Analyst **(10)**
IT Trainer **(2)**
IT Vice President **(6)**
Service Desk Agent **(2)**
System Administrator **(13)**
Other **(3)**

- Fortune 500 **(16)**
- Global 500 **(16)**
- Large Enterprise **(29)**
- Medium Enterprise **(15)**
- S&P 500 **(5)**
- Small Business **(4)**
- Federal Government **(2)**
- State & Local Government **(7)**
- Non-profit **(2)**
- Educational Institution **(17)**

From the CIO

Many IT leaders are ambivalent about vendors' claims regarding Big Data analytics. In order to understand the real and perceived challenges for Big Data, we commissioned TechValidate to survey IT professionals about their biggest challenges regarding Big Data, as well as the opportunities for advanced analytics to support better decisions.

The survey report that follows shows that IT professionals see technical challenges (extracting and correlating data sources) but also a lack of specialists to make sense of the data. Only half of our survey respondents said that IT was using data analytics to improve decision-making, but the group had an even dimmer view of how well other departments were making use of Big Data techniques.

The answers to the open question at the end of the survey offered a brighter view. One engineer said, "Buzz words like Big Data do not mean much to me. However, the ability to sort, categorize, and use large amounts of data is paramount to any company that anticipates growth, opportunity, and profit. There is no portion of the business that would not benefit or be impacted by the increased use and understanding of data analytics."

If you think that Big Data still holds promise for improved IT and business operations, but have become jaded with traditional approaches, we welcome you to investigate how ExtraHop has directly addressed the perceived challenges around Big Data technology.

I hope that you find this report helpful. It contains your peers' refreshingly honest answers to frank questions.
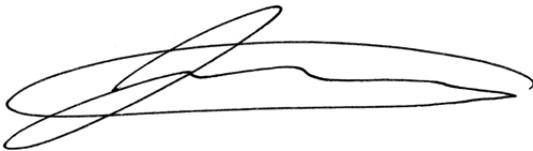
John Matthews
Chief Information Officer
ExtraHop Networks

Key Findings

53%

Only 53 percent of respondents said that they were using data analytics to improve IT operations.

One of the main challenges to data analytics was a lack of specialists to analyze and interpret data.

Lost credibility was the most-feared consequence of a wrong decision.

Data Proficiency

During the 1980s, the Saturday morning cartoon G.I. Joe always ended with a call for children to educate themselves because "knowing is half the battle." That's especially true in businesses today. Everything is digital, so most of the time organizations have the data they need—even more than they probably realize. The challenge lies in making sense of all the data that is available to them.

We asked respondents to rate how well their organizations made use of the data at their disposal. Only 5 percent of respondents claimed data mastery; 95 percent of respondents saw some opportunity for improvement. This is the business case for Big Data—organizations need to make sense of disparate sets of data and perform analysis in a timely manner.

How would you rate your organization's data proficiency?

TVID: B1B-331-EAD

- Mastered: **5%**
- Very Proficient: **34%**
- Proficient: **35%**
- Some Proficiency: **24%**
- Not Proficient: **2%**
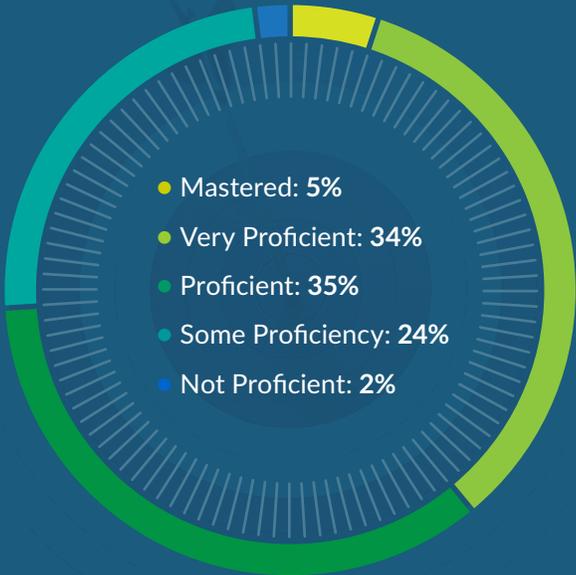
Data Mastery Is Still a Goal
TVID: 9F5-D16-D74

Only 5% of surveyed IT organizations rate their organization's data proficiency as mastered or better.

Big Data Is a Heavy Lift

Big Data has become a loaded term, associated with traditional business intelligence and Enterprise Data Warehouse technologies that require significant resources to set up and maintain.

We tested that perception, asking respondents how long it took for their organization to start seeing value from their Big Data projects. Thirty-seven percent of respondents reported that their organizations had not been able to put a Big Data solution into production at all. Of those that did implement Big Data, 18 percent reported that their project took more than one year to deliver value. These data points validate the need for simpler, turnkey solutions.

How long has it taken you to go from Big Data idea to a solution that delivers value in your organization?

TVID: C38-F2E-0A3

- Less than 1 month: **7%**
- 1 to 3 months: **11%**
- 4 to 6 months: **16%**
- 6 to 12 months: **12%**
- More than 1 year: **18%**
- My organization has not achieved a Big Data solution in production: **37%**
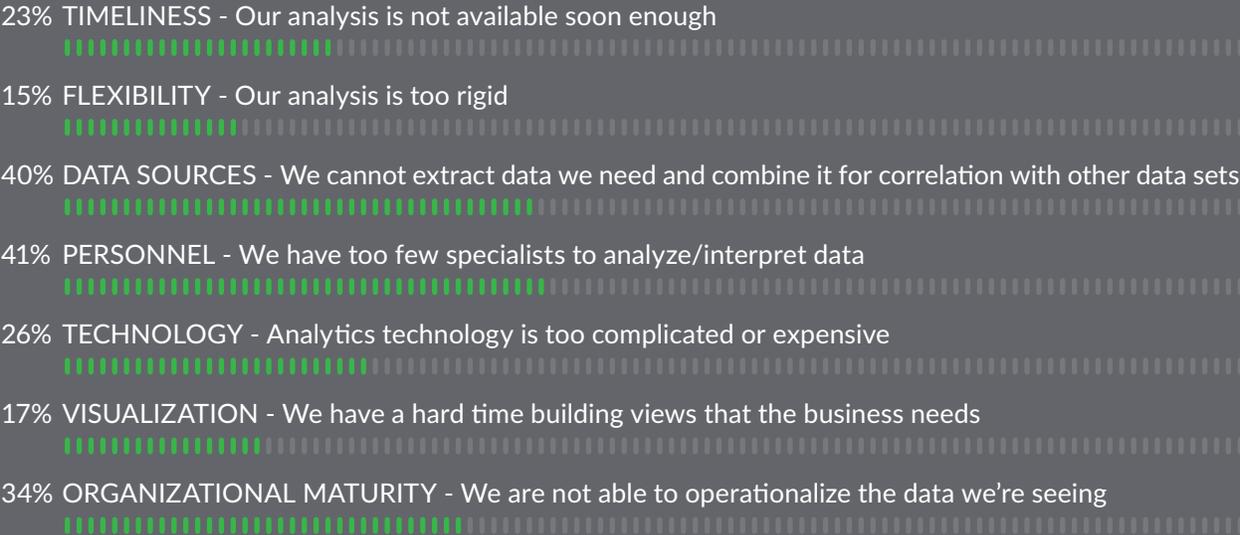
What's Stopping Data Analytics?

There's the vendor hype around Big Data, but what's the reality? It's hard!

We wanted to uncover the main challenges for analyzing data: Is it people, technology, or something else? Our survey respondents were able to select multiple answers to this question. Two areas stood out: 1) personnel skilled in analytics and 2) data sources, specifically the ability to extract data from various systems and then correlate those data sets.

This points to an opportunity for analytics technology that is more accessible. In other words, Big Data that does not require data scientists. Also, data extraction and correlation needs to be simplified. The IT audience that responded to our survey is savvy in this regard—they understand the difficulty of wrangling data, as well as the importance of having good data sources for analysis.

What are your main challenges in regards to analyzing your business and IT operations data? TVID: 4B3-A4B-39B

23% TIMELINESS - Our analysis is not available soon enough

15% FLEXIBILITY - Our analysis is too rigid

40% DATA SOURCES - We cannot extract data we need and combine it for correlation with other data sets

41% PERSONNEL - We have too few specialists to analyze/interpret data

26% TECHNOLOGY - Analytics technology is too complicated or expensive

17% VISUALIZATION - We have a hard time building views that the business needs

34% ORGANIZATIONAL MATURITY - We are not able to operationalize the data we're seeing

Where Is Data Analytics Effective?

Our IT audience surprised us by their low opinion of the effectiveness of data analytics in all areas of the business. Even in their own area of responsibility, IT operations and management, only 53 percent of respondents said that they were using data analytics to improve their decision-making ability.

Is the glass half full or half empty? We're optimists here at ExtraHop, so we'll interpret the survey responses as an opportunity for data analytics to be used more effectively throughout the organization. This is the heart of the matter: making informed decisions for IT, business, and security.

Where are you using data analytics effectively within your business to improve decision making? TVID: 22F-477-527

53% IT operations & management

22% Purchasing & vendor management

39% Marketing

31% Sales

13% Personnel & Facilities

11% Security

15% Not using data analytics today but plan to in the future

05% Not using data analytics today with no plans to

Only Half of Organizations Effectively Using Data Analytics in IT Operations

TVID: 00D-ABA-D8C

IT Security Is an Opportunity for Data Analytics

TVID: 2E8-086-3CD

Data-Driven IT Decisions

In an ideal world, we have always have the complete set of data needed to make an informed decision. Unfortunately, that's not the case in real life, which is frustrating when you know that the data you need exists somewhere.

We wanted to dive deeper into how data analytics— or the lack of it—affects the lives of our survey respondents. Forty-six percent of respondents felt that they often lacked all the data they needed to make an informed decision.

What percentage of the time do you feel your organization has all the data necessary to make an informed decision?

TVID: 5C2-22D-ED4

- 0-25%: **12%**
- 25-50%: **34%**
- 50-75%: **31%**
- 75-100%: **22%**
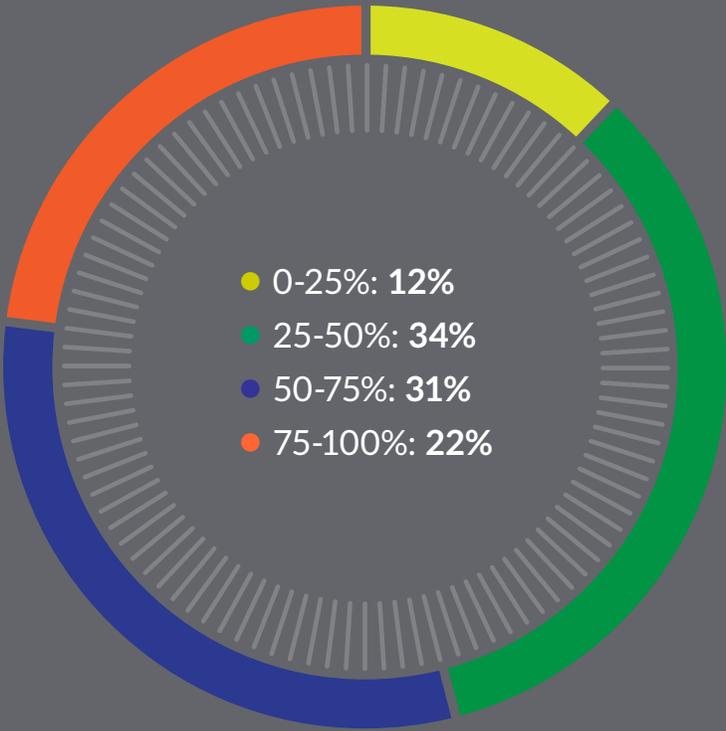
Consequences of Poor Decisions

When you were in middle school, one of the most feared situations was making a fool of yourself when called on by the teacher. We're older and wiser now, but the fear of making a wrong decision still strikes a chord—especially for people who work in IT.

Thirty-seven percent of the survey respondents feared losing credibility as the result of a wrong decision. If anyone ought to be able to make data-driven decisions, it should be IT professionals.

The second-most-popular answer was surprising—26% of respondents feared missing an opportunity as the result of a wrong decision. Missed opportunities can take many forms, but in today's world opportunities are often created by IT in form of new services, new product capabilities, and more efficient processes. Armed with the right data, you can make a greater impact!

When a wrong decision occurs what do you fear most as a likely consequence?

TVID: 194-84D-2B3

- Reduced resources or budget: **15%**
- Lose credibility with stakeholders or customers: **37%**
- Jeopardize company's financial health or reputation: **14%**
- Personal job stability: **5%**
- Missing an opportunity to grow or meet new needs: **26%**
- Other: **2%**

Access to Data Affects Decision-Making

For marketing or sales, running a daily report is fine. But many IT tasks require rapid access to data, such as when troubleshooting performance issues or responding to security incidents.

That's why we were surprised at people's low expectations. Fifty-seven percent of respondents said that they could wait a day or longer before they had the data needed to make a critical decision.
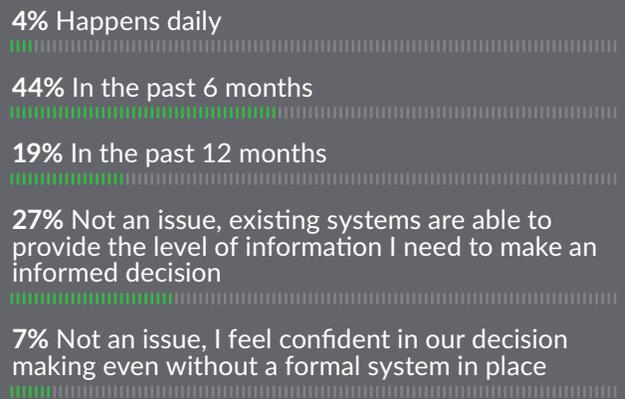
When trying to make critical decisions, what is an acceptable amount of time to gather the needed data?

TVID: F16-E0E-D35

- Seconds: **5%**
- Minutes: **16%**
- Hours: **22%**
- A Day: **15%**
- Days: **31%**
- Weeks: **11%**
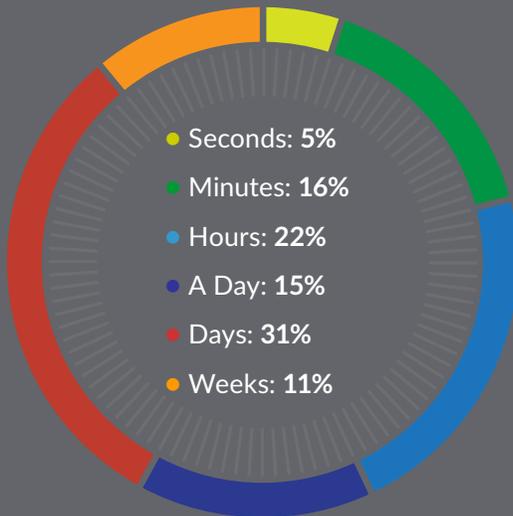
At what frequency have you had to correct a decision that was made without access to necessary and timely information?

TVID: 8A9-D23-925

4% Happens daily

44% In the past 6 months

19% In the past 12 months

27% Not an issue, existing systems are able to provide the level of information I need to make an informed decision

7% Not an issue, I feel confident in our decision making even without a formal system in place

67% of respondents have to correct something at least once a year.

Skepticism … but also Hope

We gave our survey respondents an open question regarding the promise of Big Data. Many saw the opportunity that Big Data brings, but few reported that they were using it effectively right now.

If products demonstrate value without lengthy, complex deployments, then that would make a big impact on the market.

What are your thoughts on the promise of Big Data?

"Buzz words like Big Data do not mean much to me. However, the ability to sort, categorize, and use large amounts of data is paramount to any company that anticipates growth, opportunity, and profit. There is no portion of the business that would not benefit or be impacted by increased use and understanding of data analytics."

Engineer, Large Enterprise Transportation Services Company | **TVID: 69C-94A-FB7**

"We are evaluating at this time and have plans to implement a Big Data analytics solution in 2016."

IT Director, Large Enterprise Computer Software Company | **TVID: 6BE-E91-0D0**

"Real-time decision making is critical. Bringing together multiple data sources and concordance of data is a signifiant challenge."

IT Director, Large Enterprise Media & Entertainment Company | **TVID: 2E5-D2C-C45**
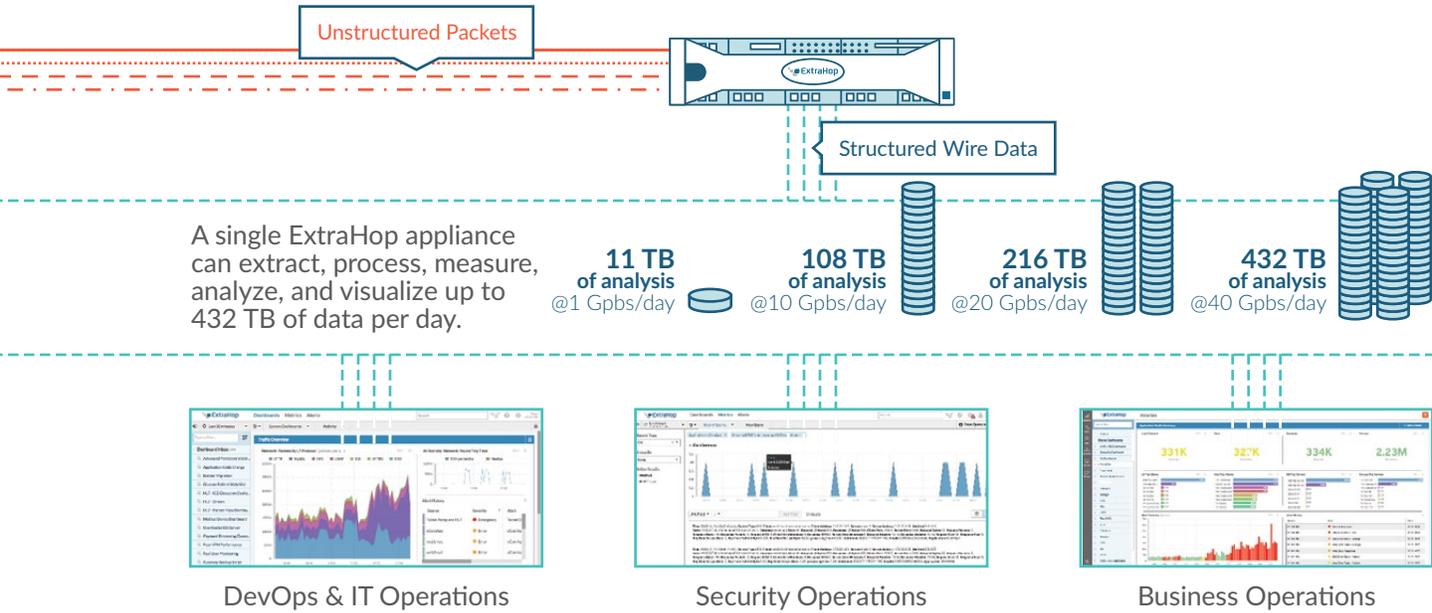
"Existing on-premises Enterprise Data Warehouse solutions are dinosaurs. We will move toward a hosted cloud service in the next 2-3 years."

IT Architect, Fortune 500 Construction Company | **TVID: 413-74C-519**

"Big Data and analytics are great for dynamic operations as well as for analyzing all data and correlating data for potential solutions and opportunities to grow the business. Right now, we do not have a solution deployed but will require one soon."

IT Manager, Medium Enterprise Industrial Manufacturing Company | **TVID: C50-896-B83**

A New Approach: Stream Analytics

Unstructured Packets

Structured Wire Data

A single ExtraHop appliance can extract, process, measure, analyze, and visualize up to 432 TB of data per day.

11 TB
of analysis
@1 Gpbs/day

108 TB
of analysis
@10 Gpbs/day

216 TB
of analysis
@20 Gpbs/day

432 TB
of analysis
@40 Gpbs/day

DevOps & IT Operations   Security Operations   Business Operations

Older generations of Big Data solutions relied on analyzing data that was collected in a central store. This involved complex extract-transform-load (ETL) processes that made the system fragile and difficult to set up. If stakeholders wanted new views, experts had to cleanse the data and set up new analyses.

New Big Data solutions use stream analytics to analyze data in flight, as opposed to traditional solutions that analyze data at rest. The ExtraHop platform enables you to apply stream analytics technology for your network, which is your richest source of real-time data. This has not been possible until now.

We've made the ExtraHop stream analytics platform plug-and-play, so you can see results immediately after sending it a copy of your network traffic.

> *"None of our competitors are providing this kind of information and this kind of transparency. ExtraHop has really improved our standing with our customers."*
>
> Eric Sharpsten
> CTO, Health and Life Sciences –
> Federal Health
> Lockheed Martin

How Companies Are Using Stream Analytics

Zonar Lowers Costs by Analyzing Mobile Data Consumption

Zonar Systems helps organizations that manage fleets of trucks and buses gain insight into driver performance. The company's Zonar ZLogs application runs on a tablet connected to a mobile carrier network. Zonar used ExtraHop to determine what activity was consuming this expensive mobile data and lower their operational costs.

"At the end of the day, we bought ExtraHop because IT is here to support business outcomes, and that's what ExtraHop helps deliver," says Jole Sack, Director of IT at Zonar.

Read the full case study

Conga Improves Customer Experiences with Real-Time Analytics

Conga is a leading Salesforce application partner. The company's flagship app, Conga Composer, has been in the Top 10 Salesforce add-ons for seven years in a row. Equipped with insight from ExtraHop, Conga representatives can identify customers who may be experiencing an issue and proactively reach out to them.

"When we come into the office, one of the first things we do now is turn on the displays with the ExtraHop dashboards," says Brad Blake, Director of IT at Conga. "We are always watching them to see user experience, activity levels, and application behavior in AWS. ExtraHop has fundamentally changed the way that we monitor and manage the business."

Read the full case study

Sportingbet Uses Big Data to Identify and Stop Security Threats

Sportingbet operates sports betting and casino sites in the United Kingdom. "As a leading sports betting brand we are obviously a target and we run a dedicated team, all in house, to respond to any threats. As such, we generate huge amounts of data and ExtraHop allows us to correlate data from multiple different sources, in real time, to quickly spot any issues and react accordingly," says Lee Riches, Operational Analyst at Sportingbet.

Common attacks such as brute force attempts to break into accounts as well as "scrapers" can be detected through the ExtraHop platform, enabling the team at Sportingbet to subvert these attacks. Sportingbet can also set baselines, making it easier to reliably detect anomalies and threats in the future.

Read the full case study

Getting Started Is Easier Than You Think

If you think that Big Data analytics can improve your business and IT operations, ExtraHop is a great place to start. Our platform lets you harness the power of the network, your richest source of real-time data. By analyzing your data in flight, you will have the information you need to make smarter decisions.

Check out our fully interactive online demo to see what you can do with ExtraHop.

www.extrahop.com/demo

About ExtraHop

ExtraHop is the global leader in real-time wire data analytics. The ExtraHop platform analyzes all L2-L7 communications, including full bidirectional transactional payloads. This provides the correlated, cross-tier visibility essential for today's complex and dynamic IT environments. The ExtraHop platform scales up to 40 Gbps, deploys without agents, and delivers tangible value immediately upon deployment.