



# Top Hospital Cuts MTTR by 90% with Insight from Real-Time Wire Data



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—Ant Lefebvre, Senior Systems Engineer, Middlesex Hospital

## COMPANY PROFILE

Connecticut-based Middlesex has been ranked one of the Top 100 Hospitals in the U.S. by Reuters, with a 200-bed community hospital and over 30 offsite facilities.

## CHALLENGE

Troubleshooting was time-consuming with Middlesex’s diverse array of applications, including more than five different EMR systems.

## SOLUTION

The real-time, cross-tier insight provided by ExtraHop created a dramatic boost in troubleshooting efficiency.

## BENEFITS

- **90% reduction in MTTR for complex problems**
- **Better accountability from third-party vendors**
- **Precise insight into performance issues**

## Challenge

Like many successful healthcare organizations, Middlesex Hospital must manage a diverse and ever-expanding array of applications and services, including Cerner, eClinicalWorks, and McKesson Homecare. With so many complex applications to support, troubleshooting was time-consuming. Even when the team could successfully identify a problem, their monitoring tools didn’t always give them the clear evidence that they needed to convince vendors and internal app teams.

## Solution

The Middlesex IT team had primarily used packet-capture tools for troubleshooting and forensic analysis, and investigated ExtraHop to get real-time insight into all L2-L7 communications between systems.

“Instead of capturing packets, ExtraHop gives you all the information from the wire,” says Ant Lefebvre, Senior Systems Engineer for Middlesex Hospital. “So you see real-time activity and can also go back in time and see trending and errors without having to capture all that data and replay it.”

## Objective Data for IT Troubleshooting

When Middlesex was upgrading one of its EMR systems, the EMR vendor couldn’t figure out the cause of significant slowdowns. The vendor kept telling the IT team that they needed to add capacity—but when more capacity didn’t solve the problem, the vendor then blamed the network. With ExtraHop, the IT team was able to prove that Citrix round-trip times were good on the network side, which convinced the vendor to go back and correctly identify the issue.

## Pinpoint Precision in Real Time

A monitoring tool kept generating alerts that a shared storage server was nearing capacity and threatening data loss—but since the tool only provided information on capacity and availability, the IT team wasn’t sure what was consuming storage space.

Prior to having ExtraHop, the team would run a utility to help determine which files were the largest (and hence the best candidates for removal), but that process took eight hours. The first day that ExtraHop was installed, the team could immediately identify—down to the specific user, file, and timeframe—what was causing a “server down” scenario: Someone from the PR department was backing up 41GB of video unnecessarily. With this information, the IT team worked with that person to find a better alternative.

## Arbitration Through Wire Data

The IT Operations team at Middlesex Hospital uses reports from ExtraHop to show internal and external application teams how their applications are behaving in the production environment.

Reports can be generated from ExtraHop at the push of a button. The example above shows the database query `SELECT * FROM PRODUCT` has been run 80,018 times over a 30-minute period, indicating a mistaken application code change. This type of insight is invaluable when discussing application performance with application teams.

### Per Datacenter Database Query Total

Application: eComApp  
 Time Interval: August 20, 2014 17:42:00 -0700 – August 20, 2014 18:12:00 -0700  
 Version: v4.0.21530

Key	Seattle
SELECT * FROM PRODUCT	80,018
SET autocommit=1	2,673
SET NAMES latin1	2,668
SET character_set_results = NULL	2,668
/ mysql-connector-java-5.1.16 ( Revision: \$bzr revision-id ) *SELECT @@session.auto_increment_increment	2,667
/ mysql-connector-java-5.1.16 ( Revision: \$bzr revision-id ) *SHOW VARIABLES WHERE Variable_name = 'language' OR Variable_name = 'net_write_timeout' OR Variable_name = 'interactive_timeout' OR Variable_name = 'wait_timeout' OR Variable_name = 'character_set_client' OR Variable_name = 'character_set_connection' OR Variable_name = 'character_set' OR Variable_name = 'character_set_server' OR Variable_name = 'tx_isolation' OR Variable_name = 'transaction_isolation' OR Variable_name = 'character_set_results' OR Variable_name = 'time_zone' OR Variable_name = 'time_zone' OR Variable_name = 'system_time_zone' OR Variable_name = 'lower_case_table_names' OR Variable_name = 'max_allowed_packet' OR Variable_name = 'net_buffer_length' OR Variable_name = 'sql_mode' OR Variable_name = 'query_cache_type' OR Variable_name = 'query_cache_size' OR Variable_name = 'init_connect'	2,667
SHOW COLLATION	2,667
SET sql_mode='STRICT_TRANS_TABLES'	2,666
PRODUCTID	
VALUES	

## Benefits

The Middlesex IT team has been able to dramatically reduce the time spent troubleshooting complex problems with ExtraHop. With a tool that has proven easy to use, learn, and share.

### Ease of Use, Right Out of the Box

“In healthcare, a lot of vendors over-promise and under-deliver,” says Lefebvre. “But ExtraHop works as advertised, right out of the box. It’s intuitive and almost plug-and-play in terms of set up. That’s rare in healthcare, and it’s refreshing.”

**ExtraHop is the global leader in real-time wire data analytics. The ExtraHop Operational Intelligence platform analyzes all L2-L7 communications, including full bidirectional transactional payloads. This innovative approach provides the correlated, cross-tier visibility essential for application performance, availability, and security in today’s complex and dynamic IT environments.**

To learn more, visit [www.extrahop.com](http://www.extrahop.com) or call +1 877-333-9872.

“ExtraHop is one of those products that you want to have because it’s fun to use, it works, and it’s cool,” says Lefebvre. “We can immediately plug it in and play with it—and I know that I can hand it off to another guy and he’s going to know how to use it, too, without going to a training.”

### 90% Faster Mean-Time-to-Resolution

For complex issues that are not due to hardware failure or crashes, the Middlesex IT team has seen an over 90% reduction in mean time to resolution.

“ExtraHop is a lot quicker than using a packet capture,” says Lefebvre. “It also has that built in functionality where it decodes things and explains things. Errors just pop out, and you get a PDF with solid evidence that’s easy to email to a supervisor or a vendor.”

### Proactive Identification of Issues

With ExtraHop, the Middlesex IT team is able to proactively work to improve user experience by identifying issues that no one knew about previously.

“Sometimes, when there are no symptoms and users are not complaining, people assume there are no problems,” says Lefebvre. “But ExtraHop sheds light on issues that when we fix them, they improve the performance and stability of the application.”

### Better Accountability for Application Vendors

ExtraHop provides Middlesex with objective data off the wire that they can use to arbitrate differences between application and infrastructure teams.

“Before, when we would send a packet capture back to the vendor, they might not understand what they were seeing,” says Lefebvre. “With ExtraHop, it’s the difference between the vendor believing us and the vendor not believing us—or the difference between getting to the root cause of a problem now versus getting to the root cause of a problem weeks from now, after exhausting every other possible avenue.”

