AD Lab Delivers Speed and Flexibility to Support Digital Forensics Collections by 4MAT Data Solutions

4MAT Data Solutions is a UK-based provider of digital forensics and investigations services. One of the firm's core offerings is conducting digital “search and seizure” operations, ensuring that electronic evidence is captured and the integrity of the chain of custody is maintained.

Challenge of Data Collection

Matt Blackband, a former New Scotland Yard detective who was afforded expert witness status at the Central Criminal Court and Royal Courts of Justice, founded 4MAT in 2009 to assist corporations around the world with digital forensics investigations.

During his police service, Matt was involved in a wide range of computer-related investigations, including child abuse cases, computer crimes and terrorism investigations, for which he was commended. He was one of the founders of the multi-agency National Hi-Tech Crime Unit and was actively engaged in the development and growth of both the Metropolitan Police's SO13 Anti-Terrorist Branch and SO15 Counter Terrorism Command Hi-Tech Units. He also figured prominently in a number of important civil investigations, including fraud, copyright, forgery and regulatory investigations.

“I served in law enforcement for 21 years prior to setting up 4MAT, and over the course of my career, I have worked with all sorts of forensic software products,” said Blackband. “I learned first-hand about the crucial role that software tools play in order to collect data in a forensically sound manner.”

“AD Lab ... allows us to process evidence faster and more efficiently than other tools in the marketplace,”

—Matt Blackband, 4MAT founder
When he launched 4MAT, he determined that digital investigations would be carried out using only the most reliable software tools and always within the guidelines set down by the UK’s Association of Chief Police Officers (ACPO).

In recent years, for example, 4MAT has been involved in the design and implementation of complicated forensic software projects for law enforcement agencies, military and corporate clients, both domestic and international. The firm has also provided both technical and strategic advice to the Royal Military Police and Royal Naval Police.

**Relying on AD Lab**

“When I moved out of law enforcement and into corporate consulting, FTK® was the first software tool that I wanted to acquire to support my investigative work for clients,” said Blackband.

AccessData’s FTK (Forensic Toolkit®) is an award-winning digital investigations software tool that helps customers find relevant evidence faster, dramatically improving data analysis speed and reducing investigations backlogs with unmatched processing and stability. As an FTK user, Blackband had confidence in AccessData and was willing to test AD Lab when he was handling even larger cases with complex data types.

Built on FTK technology, AD Lab helps digital forensics investigators gain control over their caseloads by enabling examiners to work cases faster, thanks to distributed processing that leverages a multi-hardware environment to give more power when needed to handle massive data sets, reducing the time it takes to get through a case. Depending on the hardware, AD Lab has nearly limitless scalability, while its shared database and Web-based interface make collaboration across teams easy.

“As soon as I saw AD Lab, I immediately realized the potential of this platform to support comprehensive digital investigations,” said Blackband. “The workflow built into the software enables investigative teams to conduct work and process evidence much faster.”

Blackband was especially impressed that AD Lab allows both forensic examiners and those with minimal exposure to computer forensics to participate in the investigative process. Moreover, AD Lab offers customers the possibility of supporting multiple concurrent reviewers.

“I envisioned AD Lab becoming a go-to platform for supporting our investigations because of its flexibility to support cases of all sizes,” he said. “This is important because consulting firms like ours must be able to scale up or down quickly, depending on changes in the sizes of the data collections we’re asked to support.”

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Benefits

Now that his team has relied on AD Lab to support a number of its digital forensics investigations, Blackband lists three major benefits the product delivers to his firm:

**SPEED OF PROCESSING**

“AD Lab is normally run from a network server that is capable of processing evidence at a much faster speed than other tools,” said Blackband. “This means that investigative teams can close cases faster and reduce their backlogs.”

Blackband shared a specific example of a client with 12 TB of data that needed to be processed, including de-duplication and removal of system files. Running on Dell hardware (Web server with 96GB of RAM and two DPEs with 32GB of RAM), he conducted a head-to-head test with the data set on AD Lab versus a competitive product—and found that AD Lab performed much faster and more efficiently.

“AD Lab successfully processed the data set to review status within five weeks, while the other software ground to a halt in four weeks and did not complete processing,” he said.

**CAN BE USED BY ANYONE**

Based on his experience, Blackband believes that perhaps the most valuable thing about AD Lab is that users don't need to be trained forensics investigators to navigate and operate the platform.

“Reviewers who can simply log on to a computer are able to quickly learn how to use AD Lab,” he said. “From my perspective as a consultant, the biggest benefit of the platform is that it can be used by both forensics professionals and those who are not trained in our technical discipline.”

Blackband notes that AD Lab will support multiple investigators on a case at the same time, so professionals with expertise in specific aspects of an investigation can collaborate with other team members at the same time—regardless of their varying levels of training and proficiency in digital forensics.

**FLEXIBLE WITH LARGE CASES**

Blackband has observed over the years that some cases produce massive amounts of data too overwhelming for existing equipment. He's been asked, for example, to manage a data set with as many as 60 million files that have been de-duped and filtered. That can be a challenge for investigative teams that need to scale up quickly in response to urgent deadlines for data collection and analysis.

“AD Lab is flexible enough to accommodate a large-scale case that requires us to process huge volumes of data very quickly,” he said. “This is because the platform was designed with distributed processing capability that allows us to distribute the processing load across multiple computers, not just a single piece of hardware.”

AD Lab’s flexibility to support large cases enables faster data analysis, and the redundant processing provides 4MAT’s team with greater confidence in the event of hardware or software failure. The platform is also flexible enough to handle different kinds of data and different types of data sources encountered by the 4MAT investigators.
Conclusion

Since it was built on AccessData's FTK technology, 4MAT Data Solutions was willing to give AD Lab an opportunity to become its primary digital forensics investigative platform. The firm has never looked back.

"AD Lab is easy to use by anyone on our team, is powered by engines that are stable and reliable, and allows us to process evidence faster and more efficiently than other tools in the marketplace," said Blackband.

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