

AN MSAB GUIDE

# The rise of Cloud Computing

AND WHY YOU NEED TO TAKE IT SERIOUSLY



**> FIVE GOOD REASONS  
TO SWITCH TO CLOUD-  
BASED TECHNOLOGY**

**MSAB**

Your Trusted Partner in Mobile Forensics

## INTRODUCTION:

Cloud services offer great new opportunities for mobile forensics. Faster, safer and more efficient, the new technology provides scalable storage for larger amounts of data that can be sorted through for important clues and leads. Ultimately, the synergies created could help authorities solve more crimes and even prevent new ones from occurring.

## Infinite storage in the cloud

**SMARTPHONES HAVE DEVELOPED** cloud storage at record speeds over the last decade. With applications such as Dropbox or iCloud, we have long had access to content stored in the cloud wherever we are. With options for unlimited and shareable storage and backup, infinite amounts of information can be easily handled by a regular smartphone. For example, in applications such as Instagram, images are stored in the cloud and in a millisecond are downloaded from different parts of the world as soon as you view them in your Instagram app.

However, few businesses, government agencies and legal authorities that need to analyze huge amounts of data to solve crimes have taken the step yet to cloud computing. Many organizations continue to work with local storage on their own servers and constantly make large IT investments to try to keep pace with development. Yet today it is possible to take the step even for these types of organizations. With well-developed and secure technology, the benefits of cloud services can no longer be ignored.

In this guide, we will outline the benefits of cloud computing and how it will impact the mobile forensics industry. We will also look ahead to understand what opportunities will arise once 5G becomes standard.


## Security first and foremost

**TODAY, SOME OF THE BIGGEST OPPONENTS** of cloud computing are those who haven't yet started using it. Typically, they question how secure it is. But the giants in the cloud-based storage industry are simply offering a solution, provided you can also deliver a secure product. Today, mistakes are still made in handling data, but due solely to human error. If, for example, a police authority stores its data locally and needs to share it, this is typically done by downloading data to a physical USB memory that has been encrypted. The USB memory must then be transported and handled by many people before reaching its destination with another organization that will use the data. If something happens to the contents during this process, the whole procedure needs to be repeated. If instead you work using a cloud-based solution, the right content can be shared, with the right person, via an encrypted link, logging in from their own computer to access the data. This is a much more secure process than physically passing the USB from hand to hand. This way of working offers a much less complicated process, where simple mistakes are easily avoided.

- If you work using a cloud-based solution, content can be shared, with the right person, via an encrypted link instead of physically passing the data from hand to hand.

## Future-proof storage

**CHOOSING CLOUD COMPUTING** is also about saving money. With the amount of information online exploding, storing data on local servers instead of in the cloud means constantly facing new and costly upgrades. This also requires investing in upgrading IT skills for staff, as the updated systems must be secured internally. With cloud computing, you decide for yourself when you want to increase storage capacity, and it can be done with the simple push of a button by your provider. This also means that you never have to pay for more than you use, and you don't have to worry about investing for the possible future. You are always properly equipped and have access to the very latest technology, which also secures the future of your storage processes. Cloud-based storage not only protects your data with backups but also protects against floods, fire and other natural disasters that are difficult to predict, as all cloud-based storage is kept in a number of different geographical places.

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## Opportunity for mobility

It is crucial to be able to secure evidence as soon as possible at all sorts of crime scenes. Since mobile phones are the single most important object at the scene of a crime, the data contained must be handled in a way that ensures the content is secure. With cloud computing and 5G, it will be possible to share data from the crime scene that investigators can begin to analyze right away. Being able to handle evidence so efficiently can be crucial for serious crimes, since clues and leads quickly cool.

### FIVE REASONS TO SWITCH TO CLOUD-BASED TECHNOLOGY:

#### 1. Easy set-up, easy access

Cloud computing means a minimal investment in hardware and software, which is more sustainable financially as you only pay for the storage you currently need. Being always able to work with regularly updated and future-proof platforms enable fast access to all data wherever you are.

#### 2. Efficient sharing processes

With easy access and fast handling of large amounts of data, all steps of the process of securing evidence are affected. Cloud-based storage makes it easier to share data with external stakeholders – such as the reports police investigators create for prosecutors – by allowing them to connect to cloud storage and access information on their local computer via an encrypted link. The technology also creates safer and more efficient internal processes, as data can always be accessed regardless of where you are.

### 3. Process large amounts of data

With cloud computing, there is no limit to how much data can be stored. This means you can, for example, process and coordinate information from the same crime where data has been collected by different police districts. The large amount of storage also means that with the help of AI-controlled programs, you have the capacity to find more clues in a larger number of images, messages or videos.

### 4. Control your devices remotely

If a government agency works with, for example, MSAB Kiosk, you can remotely control updates of the software used for mobile forensics with cloud-based services. If the devices are not connected to the cloud, all updates must be done manually, a time-consuming job.

### 5. Save on resources

Investing in your own local storage is costly, but what is escalating quickly is the cost of energy for storing and backing up all your data. Being able to share energy consumption instead is not only good for your own finances but also a more sustainable solution for the environment. Cloud computing players such as Microsoft, Amazon or Azure are constantly developing new ways to run their facilities with as much green energy as possible. They also offer environmental certifications of their storage services.



➤ With cloud computing, you can process and coordinate information from the same crime where data has been collected by different police districts.

## INTERVIEW:

*“5G will be a game-changer for mobile forensics.”*

Tomorrow’s technology brings new opportunities to solve crimes that require finding clues hidden in huge amounts of data.

Simon Crawley is a Senior Consult at MSAB with past experience working in law enforcement in London. He closely follows a number of government agencies that are currently testing the technology that will become the standard for the mobile forensics of the future.

*“Several leading agencies within the legal system are currently moving their data storage from local servers to cloud computing. They do this by setting up their own test departments to better understand the technology up close, using non-sensitive data. This change, together with 5G, will make it possible to work more efficiently with unlimited amounts of data to find clues and evidence in large networks of mobile phones used in a crime.”*



“Cloud computing, together with 5G, will make it possible to work more efficiently with unlimited amounts of data.”

**Simon Crawley**

*MSAB Senior Consultant, former Sergeant with the Met Police*

## Using AI to process millions of images

*“By using AI-controlled facial recognition software and cloud computing, investigators can get help sorting out connections and clues from millions of images, text messages and videos that would not have been possible to process previously. In the future, 5G will also make it possible to extract mobile phones directly in the field and upload large amounts of data to cloud storage. This means better conditions for solving serious crimes in a shorter time frame. Being able to store and process larger amounts of data also means that in the future, you will have a greater chance of cracking passwords that today are impossible to unlock.”*

Simon continues: *“The amount of information everywhere is increasing all the time. New mobile phones can have local storage capabilities of one terabyte and in the event of serious crimes, it is not uncommon for the police to secure an entire network of mobile phones. In such a situation, if you do not have scalable storage capacity or are limited by local storage capacity that won't be increased until you have the approved budget for it, the crime will be more difficult to solve. Another advantage of working with cloud-based technology is that you always have access to the latest technology and are not limited by your own IT and can focus on solving crimes and preventing new ones from happening.”*



- The amount of information everywhere is increasing all the time.

## WORK WITH MSAB

The Swedish company MSAB is a leader in mobile forensic technology. In addition to offering software that can extract and analyze all known mobile phones and operating systems, it has also developed products according to the on-the-ground needs of the police, the military, customs, and prison authorities.

As an MSAB customer, you will be part of a training and support program that constantly keeps your organization updated on the latest developments in mobile forensics and MSAB solutions. MSAB also supports its customers in the development of their own mobile forensic strategies. Tailored solutions are available on request.

- [Read more about the MSAB solutions here](#)
- [Read more about MSAB training here](#)
- [Read more about the MSAB services here](#)

**MSAB** is a pioneer in forensic technology for mobile device examination. With offices worldwide and our products in over 100 countries, we have a global reach. The company has been involved with mobile communications since 1984 and has a singular focus on the forensic recovery of data from mobile devices.

**Simon Crawley** is a former Police Sergeant in the Metropolitan Police Service, with 10 years' experience in Counter Terrorism intelligence gathering using digital forensic tools. Simon designed, built, and managed an effective and efficient MSAB Ecosystem in order to improve data collection, and he is now a senior consultant for MSAB.

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