



Unlimited storage for the Law Enforcement sector

A Scality briefing paper

A must read for Law Enforcement agencies

In countries around the world, Law Enforcement agencies are facing a range of common challenges. Effective use of technology is central to meeting these challenges, but current IT infrastructures are often unable to meet the new demands facing modern policing.

So what is the solution? This paper shows the way forward by examining:

- > Why IT transformation is essential for today's Law Enforcement sector
- > The challenges created by today's outdated IT infrastructures
- > The role that technology can play in enabling better results and more effective use of resources
- > The role of Scality's software-defined Object Storage in meeting the needs of modern Law Enforcement agencies

“Data is a critical asset – and must be managed at scale – as security monitoring and surveillance become a larger part of next-generation law enforcement.”

*Paul Turner
CMO, Scality*

The pressures on today's Law Enforcement systems

From diversifying demands and tightening budgets to internal imperatives for improved inter-agency collaboration, police forces across the globe are facing a number of common challenges.

Terrorism

As well as policing the traditional crime landscape, law enforcement and intelligence agencies are now under intense pressure to cope with the threats of terrorism.

In Europe, for example, extreme terrorism has led to an exponential rise in the number of individuals to be tracked and the amount of data to be analyzed. France has been in a continual State of Emergency since November 2015, straining existing resources to an unprecedented degree.

Cybercrime

The rise in cybercrime and hacking also presents new challenges. With some of this activity being criminal, some political and some linked to terrorism, the importance of a coordinated response is essential.

Resource-intensive investigations

From historic child abuse to financial fraud, police forces face an array of investigations that demand huge manpower and resource allocation.

Shrinking budgets

Since the financial crisis of 2008, public finances around the world – including the budgets and resources of Law Enforcement agencies – remain under ongoing pressure.

Growing public expectations

At the same time as facing up to these demands, Law Enforcement agencies are having to deal with increasing public expectations. In a world where digital technology is now ubiquitous and a service-led culture dominates, the public expects both rapid responses and immediate access to information when they interact with police services.

Inter-agency and operational efficiency

Improving inter-agency working is a common focus around the world, particularly in countries with a fragmented Law Enforcement system that relies on multiple agencies for the prevention, detection and prosecution of crime.

Added to that, there is now widespread recognition that approaches to policing need to become more efficient – including the transformation of manual processes through effective use of technology.



1,300

The number of cyber attacks in France associated with extremist organizations in the space of a few weeks, according to one report¹



70%

The percentage of German businesses suffering a cyber attack in 2015, with 45,000 cybercrime cases reported to the country's federal crime-fighting agency (BKA)²



18%

The percentage fall in real terms in UK police budgets between 2010/11 and 2015/16³



16

The number of separate state police forces, federal agencies and prosecution authorities in Germany – including organizations such as Interpol and Europol – that need to collaborate in fighting crime and protecting the public from terrorist threats⁴



15,000

The number of local Law Enforcement departments and sheriffs offices in the US⁵

¹ www.nationalcybersecurity.com, 2015 ² BKA, 2015 ³ National Audit Office, 2016
⁴ Bureau of Justice Statistics, 2013 ⁵ Bureau of Justice Statistics, 2013

How technology can help

Technology has a key role in enabling Law Enforcement agencies to respond to today's challenges. Specific technology-enabled opportunities include:

- > **Improving inter-agency information sharing** programs like the National Fingerprint Registry in the US and the development of Europol's security databases across Europe are already enhancing co-operation, and the need for even greater information sharing is widely recognized
- > **Automating inefficient, manual processes** such as crime reporting – to help improve productivity and reduce the likelihood of human error
- > **Providing new intelligence and evidence sources** such as bodycams and CCTV
- > **Increasing the use of data analytics**, enabling the use of new techniques such as predictive policing
- > **Using digital channels to build public trust** including better utilization of social media
- > **Transitioning to digital evidence storage** to make evidence more available to more crime-fighting professionals
- > **Managing information overload** from all the new sources of data available, and enabling easier prioritization of critical information

2019

The date by which every New York city police officer will be fitted with a bodycam¹

Why current IT infrastructures are holding back Law Enforcement

The limitations of current IT infrastructures mean that many Law Enforcement agencies cannot take advantage of these opportunities. In fact, they are struggling to even manage what they have. Key limitations include:

Lack of interoperability

The need for multiple agency involvement makes sharing data and collaborating effectively both complex and challenging, with IT system limitations preventing an effective, joined-up approach.

Siloed systems

By making it impossible to gain a complete picture from all the evidence sources available (from social media feeds to electronic surveillance), siloed systems limit the ability to extract new insights and identify new threats.

144

The estimated number of police data centers in the UK alone²

IT complexity and fragmentation

The difficulty in managing current fragmented infrastructures increases inefficiency and pushes up overhead costs.

Inability to manage the growth of unstructured data

Existing platforms simply cannot scale to cope with the massive growth in unstructured data that Law Enforcement agencies now need to accommodate.

At least
10,000

The hours of video footage generated each week by police departments in major US cities³

5.2m

The estimated number of video surveillance cameras installed across Germany⁴

Disruptive refresh cycles

Existing systems require significant hardware refresh cycles every three years or so to cope with increasing storage demands – consuming considerable budget and resources.

Lack of skills and resources

Already challenged in managing legacy systems, IT teams are being stretched beyond capacity by the addition of today's new demands.

A major 2015 report into UK policing stated "Many ICT (Information and Communications Technology) systems remain outdated and cumbersome across the police service . . . Often the ICT available to officers remains considerably behind that used by both criminals and the public."⁵

Police IT infrastructures simply cannot continue to get by with existing siloed, inefficient systems. Transformation is the only viable option.

The role of software-defined Object Storage

A newer type of storage platform – software-defined Object Storage – has a key role to play in addressing many of the IT challenges faced by Law Enforcement agencies.

Critical advantages over traditional storage platforms include:

- > The ability to scale beyond petabytes
- > Easy management at scale
- > Cloud-like cost efficiencies
- > Advanced system security and reliability
- > Hardware freedom with broad compatibility
- > The versatility to support static and unstructured data – delivering maximum flexibility to support both new and legacy applications from a single platform

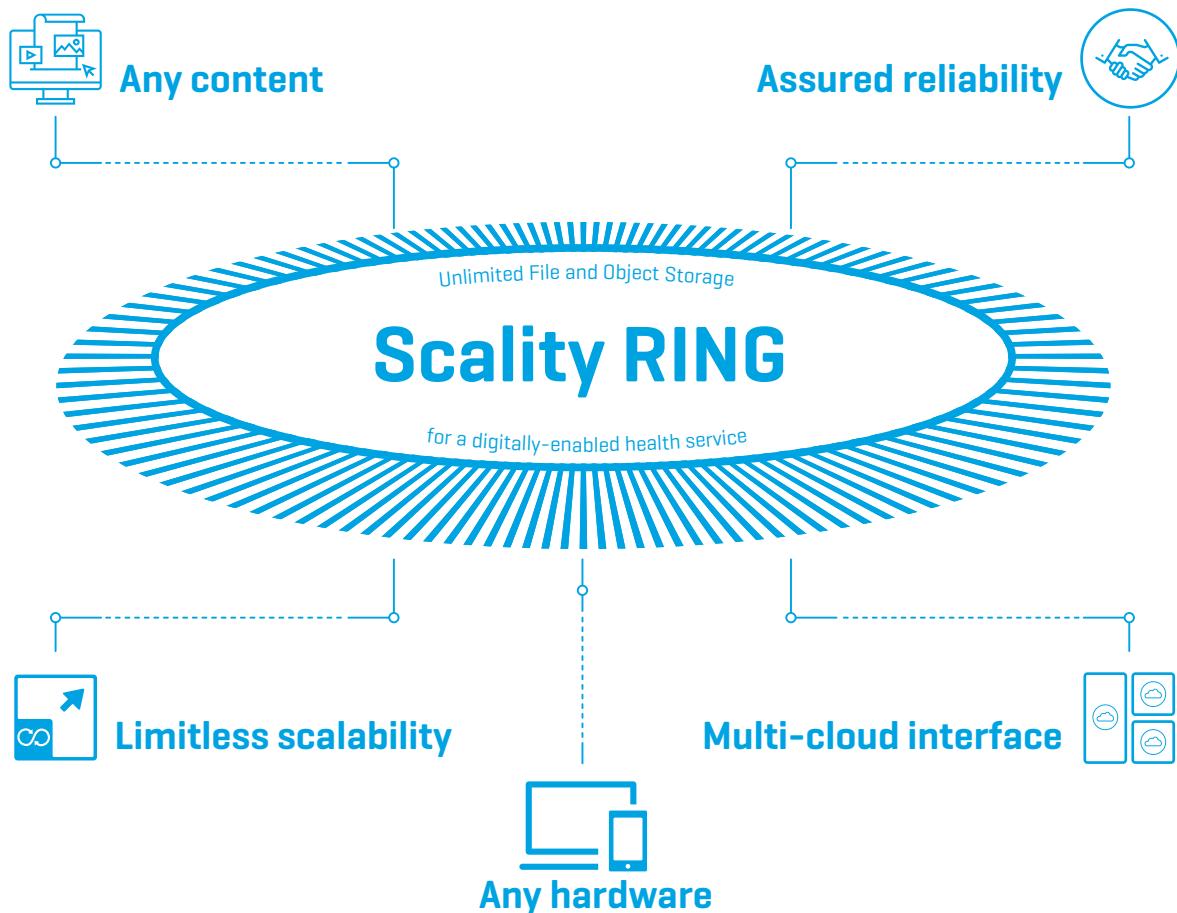
Areas across Law Enforcement where software-defined Object Storage platforms deliver huge positive impact include active archives, digital evidence storage, improved inter-agency collaboration and enabling new intelligence insights.

The superiority of Scality RING

Scality RING is the market-leading Object Storage software that turns any standard x86 servers into web-scale storage. With the Scality RING, Law Enforcement agencies can store any amount of data, of any type, with outstanding efficiency.

Scality RING provides a range of significant benefits:

- > **Any content** – access, store and manage all legacy and digital content from one platform. Scality RING, the only storage platform with native support for both File and Object, maximizes storage flexibility
- > **Any hardware** – total hardware freedom enables any standard x86 server to be used
- > **Multi-cloud interface** – launch public or private cloud services with a proven storage foundation, with AWS S3 interface for maximum flexibility
- > **Assured reliability** – a shared-nothing, distributed architecture enables geographical redundancy and no single point of failure
- > **Limitless scalability** – scales to hundreds of petabytes to manage billions of small or large files.



Why unlimited storage from Scality RING is right for Law Enforcement agencies

Scality RING provides the unlimited storage platform that enables Law Enforcement agencies to reduce costs, operate with greater agility and achieve more efficient collaboration.



Driving down storage costs and eliminating refresh cycles

Scality's technology drives down storage costs and eliminates expensive and time-consuming hardware refresh cycles:

- > Unlimited ability to scale — without disruption — eliminates the need for costly three-year migration cycles
- > Unique architecture increases storage efficiency at scale
- > The ability to use high-density x86 servers lowers hardware costs
- > Multiple workloads can be consolidated onto the same storage platform, even across multiple locations
- > Resilient architecture eliminates back-up requirements
- > Right-tiering reduces Storage Area Network (SAN) costs



Extracting more intelligence from data

The combination of Scality and our extensive partner ecosystem enables the extraction of new insights from a broad range of data sources. Delivering actionable intelligence, these data sources range from historical evidence to new data types (such as video from bodycams).

By collapsing existing siloes and aggregating data, we make consolidated analysis possible. We also ensure that more historical data is online and accessible to the professionals who need it.

Standards-based interfaces and support for a variety of object and file interfaces make it easier to develop new apps and support new data types, such as video.

Scality RING enables the use of advanced analytics solutions that provide actionable, data-driven insights to improve policing outcomes. Acting as a 'data lake', it provides a large single storage namespace for multiple workflows and applications. Having insight into such a large set of data points helps analytics solutions achieve better accuracy.



Ensuring apps and data are available and accessible

Scality RING helps ensure the openness, performance and availability of all data.

Greater openness is achieved through standards-based interfaces (such as AWS S3), which deliver enhanced interoperability across systems and eliminate data siloes to improve information sharing. The result is more effective joint working across Law Enforcement and related agencies.

Scality RING also provides numerous features that ensure scalable performance, including:

- > Linear performance scale to many petabytes of data
- > No increase in latency regardless of number of nodes or objects in the system
- > Unlimited scaling – with no data migration or disruption – ensures optimal performance at all times

The availability of applications and data is assured through Scality RING's shared-nothing, distributed architecture, which enables up to 100% data availability and zero downtime. All of which is backed up by rigorous SLAs with contractual guarantees.

Scality RING also delivers assured business continuity through built-in durability and disaster recovery features, and provides data integrity assurance through self-healing processes and integral CRC checks.

Scality's first customer in 2010 – Telenet – has run multiple generations of applications, hardware and the Scality RING over seven years with no downtime.



Building a robust storage strategy

The combined resources of Scality and our partner eco-system provide comprehensive support to help build a forward-looking, holistic storage strategy, meeting the broad requirements of modern police forces.

Scality is a pioneer in Object Storage, with seven years' experience helping digital organizations transition to web-scale storage.

With our partners, the range of our professional services support encompasses developing storage strategies (including data discovery and classification), business cases and transition planning. Many of our partners have relevant security clearances to work in policing environments.



Minimizing transition risks and disruption

With 150+ cloud-scale deployments to date, Scality RING is proven technology. This is backed up by our deep experience in helping organizations successfully transition to software-defined storage with minimal risk and disruption.

Unique features that help ensure seamless transition include:

- > Support for File and Object Storage, enabling any unstructured data type and multiple applications to be transitioned – consolidation is achieved on one storage platform while individual departments keep running their existing applications
- > Easy integration of new and existing applications – for example, with full S3-compatibility and Microsoft Active Directory and AWS IAM support

Our total transition support features:

- > Migration of existing apps
- > Comprehensive change management support
- > Staff training



\$8 million cost savings – 229% ROI

In 2016, Forrester's Total Economic Impact study (TEI) looked at the benefits of the Scality RING compared with traditional NAS storage arrays. For a customer with 2 petabytes growing to 4 petabytes, Scality RING was shown to deliver \$8m in expected cost savings (over \$3m from capital savings alone) and a 229% ROI over the life of the storage. It also delivered a capital payback within just six months.

About Scality

Scality is a pioneering innovator of software-defined, multi-cloud data storage at petabyte scale. Recognized as a leader in distributed File and Object Storage by Gartner and IDC, Scality assures data control and freedom to manage data across clouds. Our products scale on-demand, non-disruptively, and drive lower cost for today's leading enterprise companies.

Be sure to get your complimentary copy of the [Gartner Magic Quadrant for Distributed File Systems and Object Storage report](http://bit.ly/2ip1NSh).



Gartner Magic Quadrant for Distributed File Systems and Object Storage report
(<http://bit.ly/2ip1NSh>)



800 billion +
objects managed by Scality



150 clouds +
Scality cloud implementations

Follow Scality on LinkedIn, Facebook and Twitter, and visit Scality.com to learn more about Scality Software-Defined Storage.

