

Unlocking growth opportunities for Service Providers

A Scality briefing paper



A must read for Service Providers

The market landscape for IT and Communications Service Providers continues to be subject to rapid change. Alongside the challenges that change brings, significant opportunities are emerging. However, today's storage infrastructures often hold Service Providers back.

Success depends on minimizing the risks and seizing the opportunities. How? This paper shows the way forward by examining:

- > The market forces creating new demands on Service Providers
- > The opportunities available to those Service Providers willing to embrace change and the critical factors for achieving success
- > The limitations of current storage infrastructures
- > The transformational potential of software-defined Object Storage
- > The role of Scality's market-leading Object Storage platform in enabling a critical competitive edge

“For Service Providers across the globe, embracing Object Storage is critical in order to support customers’ digital transformation agendas to remain competitive.”

*Paul Turner
CMO, Scality*

A market landscape in transition

Digital transformation – and the subsequent data explosion – is impacting every industry and every customer. It is now a board level issue, putting IT and Communications at the heart of business strategy. A recent PwC survey found that 86% of CEOs think it is important that they personally champion the use of digital technologies.¹

While it is creating new opportunities for Service Providers, this situation also puts them under pressure to demonstrate how they are relevant to their customers' transformation agendas.

New services for new ways of working

Technology is central to this transformation. It is enabling new ways of working – with greater mobility and increased collaboration across virtual teams – which in turn creates demand for different types of services delivered in different ways.

Data explosion

The digital revolution is driving a massive increase in the volume of data that needs to be managed and stored within Enterprises, which is creating new opportunities for Service Providers.

Public cloud impact

The public cloud is becoming mainstream and changing how technology is consumed. This is both threatening some existing Service Provider revenue streams and fuelling more demanding customer expectations.

Regulatory requirements

Change is also being driven by an evolving regulatory environment. This is placing new demands on both Service Providers and their customers, forcing re-evaluations of how IT infrastructures are organized.

For example, the General Data Protection Regulation (GDPR) – coming into force in 2018 – will have a major impact on how and where data is stored and managed in the EU.

Security pressures

The succession of high-profile data breaches in recent years has led customers to become far more focused on ensuring that their data is secure. Yet the threat landscape continues to evolve, forcing Service Providers to keep adapting in order to keep pace.

New competition

Against this backdrop, new competitors are emerging with disruptive business models or innovative new technologies – threatening both well-established Service Provider incumbents and smaller players trying to get a foothold. High-profile examples include over-the-top providers such as Skype, WhatsApp and Google, who are transforming the market for traditional communications services.



100 million +

The number of applications by 2020 – with 4 times as many devices as people connected to the internet – as estimated by leading technology analysts IDC²



40 zettabytes +

The amount of data – expected to continue doubling every year – forecast by 2020, requiring over 40 million petabytes of storage³



37%

Gartner's growth forecast for the public cloud infrastructure services market in 2017⁴



81%

The number of IT executives who believe that industry boundaries will dramatically blur as platforms reshape industries into interconnected ecosystems⁵

¹ PwC Global CEO Survey, 2017 ² IDC IoT and Digital Universe Update, August 2016

³ IDC IoT and Digital Universe Update, Aug 2016 ⁴ Gartner, 2017

⁵ Accenture Technology Vision, 2015

The new challenges for Service Providers

Squeezed margins

Many traditional Service Provider offerings – from voice and data networking to Remote Monitoring and Management – are becoming commoditized, putting margins under severe pressure.

Increased flexibility demands

Customers are also demanding more flexible consumption models, with the ability to switch from capex-based investment to opex-based PAYG models.

New price and performance standards

These changing expectations are partly driven by the success of public cloud providers (such as AWS, Google and Azure), who are creating new benchmarks for price and performance – leaving many Service Provider offerings looking expensive, inflexible and sub-standard.

Shortened time-to-market

To stay competitive, continual service innovation is essential. But the windows of opportunity for new services are shortening, making time-to-market more critical than ever.

Security and compliance

With security and compliance becoming priorities in customers' buying criteria, Service Providers need to demonstrate that they adhere to the most demanding standards – so systems and processes must be continually re-evaluated.

Always on

As business users become increasingly dependent on their apps and data, they expect and demand 'always on' – 100% availability is no longer a nice-to-have. Service Providers who cannot deliver that level of performance simply do not retain customers for long.

The new opportunities to be exploited

While it presents challenges, today's changing market also creates significant new opportunities for Service Providers.

Demand for Storage-as-a-Service

There is now increasing demand for Storage-as-a-Service type offerings to help businesses cope with explosive data growth.

30%

The growth rate per annum of the global Storage-as-a-Service market between 2016 and 2020, as forecast by Research and Markets¹

Analytics-as-a-Service growth

Today's customers increasingly see data as a strategic asset, and they need help to extract more value from that data.

USD
23.49
billion

The size of the Analytics-as-a-Service market size by 2021 – up from USD 4.76 billion in 2016 at a CAGR of 37.6% – as estimated by MarketsandMarkets³

Continuing shift to managed services

Alongside the move to cloud, the shift to managed services is continuing.

10.8%

The growth rate per annum of the global managed services market between 2016 and 2021, as forecast by MarketsandMarkets²

The need for new apps as managed services

A range of new apps is needed to support customers' digital transformation, and customers are increasingly looking to consume these apps as managed, cloud-based services delivered by trusted Service Providers.

The high value of high resilience

As access to apps and data becomes increasingly mission-critical, customers are putting a premium on Service Providers who can deliver robust, high-availability SLAs – creating opportunities for those who can deliver the required levels of resilience.

Importance of industry eco-systems

The growing importance of industry eco-systems is also driving new requirements as companies need access to trusted and secure shared platforms to help them trade and collaborate safely.

Why today's storage infrastructures are holding Service Providers back

To stay competitive, and unlock new opportunities, Service Providers need to achieve a difficult blend, which combines:

- > **Continued innovation**
- > **Improved economics**
- > **Greater agility and responsiveness**
- > **High levels of security and resilience**

But Service Providers are being held back by current storage infrastructures. Critical limitations include:

- > **Inability to scale to support growing demand** – when the limits of existing systems are reached, volume growth requires an expensive rip and replace approach. Added to which, new services require significant capex investment in new infrastructure
- > **Siloed and fragmented infrastructures** slow the introduction of new services and mean that Service Providers are unable to benefit from economies of scale by combining multiple services on a single platform
- > **Outdated, proprietary technology** is unable to handle newer content types (such as video) and often limits the ability to deliver innovative new services. Plus, vendor lock-in increases costs by reducing purchasing choices
- > **Manageability issues** beset many older, complex infrastructures, increasing operational costs and reducing both flexibility and agility
- > **Unreliability** – driven by many of the reasons already mentioned – is an increasing issue with many legacy infrastructures. Systems that are difficult to secure increase the risk of service outages and highly damaging data breaches

The game changer: software-defined Object Storage

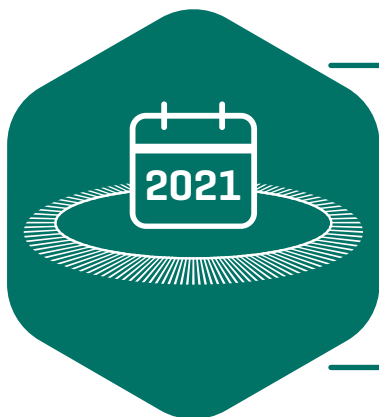
Analysts such as Gartner are forecasting that software-defined, scale-out Object Storage is the future for Enterprise and cloud storage.

It is also the future for Service Providers.

Playing a vital role in addressing many of the challenges faced by Service Providers today, software-defined Object Storage offers a number of significant benefits over traditional storage platforms.

Benefits include:

- > The ability to scale beyond petabytes
- > Easy management at scale
- > Cloud-like cost efficiencies
- > Hardware freedom with broad compatibility



More than 80%

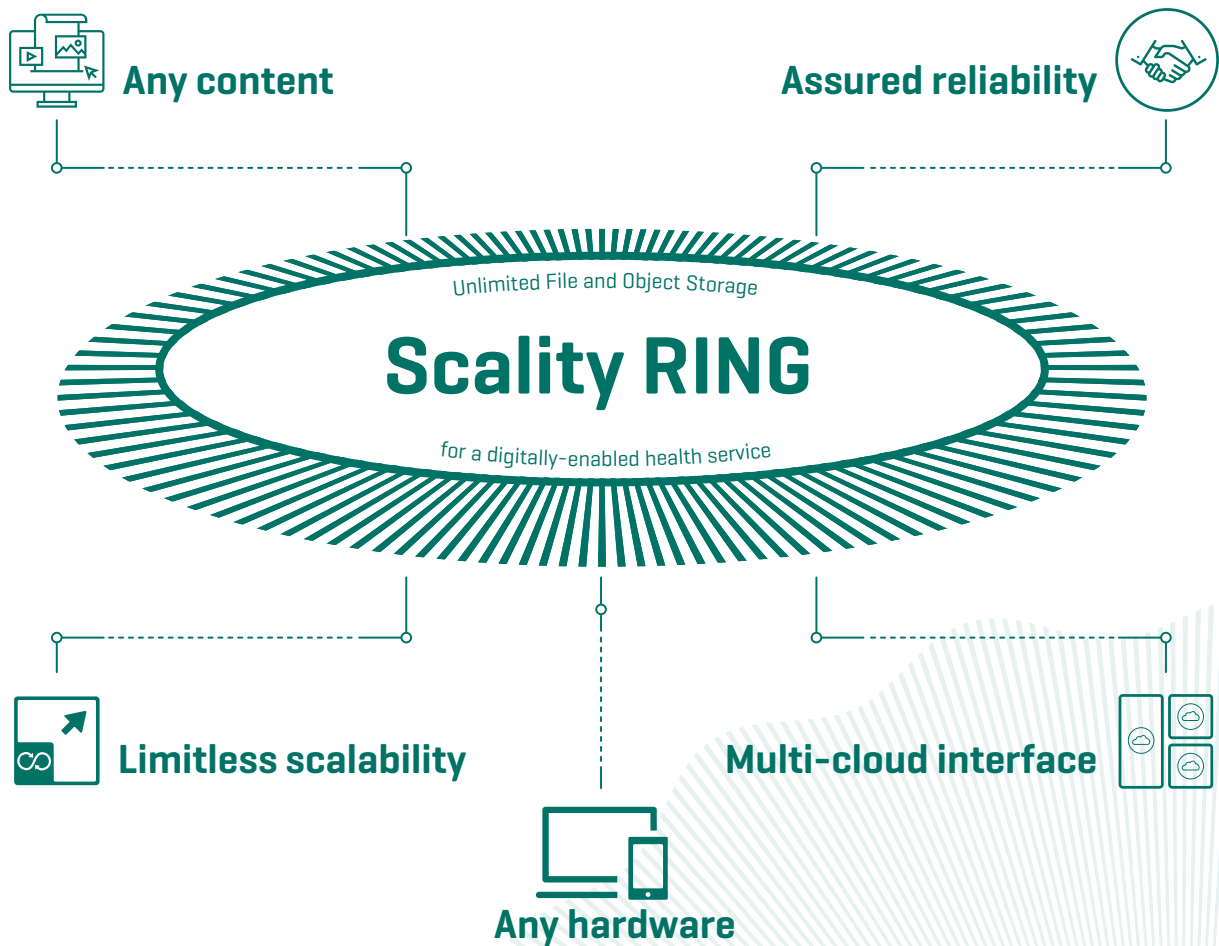
The percentage of business data that Gartner forecasts will be stored in scale-out storage systems in Enterprise and cloud data centers by 2021, compared to 30% today

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 RING, organizations can store any amount of data, of any type, with outstanding efficiency.

Scality RING provides a range of key advantages:

- > **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
- > **Limitless scalability** – scales to hundreds of petabytes to manage billions of small or large files
- > **Any hardware** – total hardware freedom enables any standard x86 server to be used
- > **Multi-cloud interface** – public or private cloud services with a proven storage foundation can be launched (with AWS S3 compatible interfaces for maximum flexibility), enabling Service Providers to support customers' shifts to hybrid infrastructures
- > **Assured reliability** – a shared-nothing, distributed architecture provides geographical redundancy and no single point of failure



Delivering unlimited storage for progressive Service Providers

With our market-leading range of benefits, Scality is uniquely positioned to help Service Providers overcome the challenges and seize the opportunities presented by today's market.

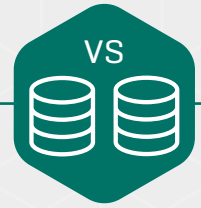


The cost base that delivers a competitive edge

The combination of Scality's technology innovation with full commercial support from our partners enables Service Providers to drive down their cost base. We provide the economic model that ensures Service Providers can compete with public cloud providers.

Our technology innovation delivers many benefits:

- > Unique architecture that increases storage efficiency at scale
- > Lower hardware costs through high-density x86 servers
- > The flexibility to mix and match new and existing hardware in the same system
- > Replacement of expensive-to-maintain legacy systems by consolidating multiple workloads onto the same storage platform, even across multiple locations
- > Management and automation tools that massively reduce the admin burden associated with running storage infrastructure – we have Service Providers managing many petabytes of storage with a fraction of an FTE
- > Resilient architecture that eliminates back-up requirements
- > Reduction in Storage Area Network (SAN) costs with right-tiering
- > Flexible commercial models offered through our partners to address Service Provider budget challenges – enabling the matching of expenditure profiles to revenue streams



**3.0–5.0 x
VS
1.3–1.7x**

The difference in storage overhead between Scality with its erasure coding and traditional architectures



**\$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.



The flexible platform that underpins service innovation

The flexibility of the Scalify RING equips Service Providers with the platform they need to support continual service innovation.

Scalify supports any content type and provides multi-protocol access to the storage layer, making it far easier for Service Providers to develop new applications or integrate services from other providers.

It also enables different data SLAs from the same infrastructure, further enhancing its ability to be a Service Provider's single storage platform.

Scalify allows the use of any x86 server, enabling Service Providers to avoid vendor lock-in with your choice of hardware options.

Plus, Scalify has an extensive ISV eco-system – with a range of pre-integrated solutions that can be easily incorporated into Service Providers' portfolios and provide the nucleus for building new services.

The upshot is greater flexibility, an improved ability to innovate and opportunities to open up new revenue streams.

Service Providers' common use cases for Scalify RING include:

- > Backup & Compliance Archive
- > Video Distribution & Nearline Archive
- > IoT Cloud Services & Public Cloud for Mixed Applications
- > Enterprise file services (sync + share, collaboration)
- > Applications as a service

SFR, France's #1 alternative telecoms operator, serves over 21 million customers and uses a single Scalify RING platform to support multiple cloud-based services – including online backup and archiving, file sync & share applications and several mobile applications.



Enabling faster time to market and revenues

With windows of opportunity shortening and competition intensifying, time-to-market is a critical success factor.

Enabling Service Providers to respond far more quickly to new market opportunities, the Scalify RING scale-out storage platform provides a completely new approach to infrastructure delivery.

Up to now, with the traditional model:

- > Service Providers probably needed to add a new array or a new stack or each new service that they needed to support, resulting in delays due to hardware lead-times, deployment and test & development.
- > On-boarding of new customers tended to be time-consuming and cumbersome.
- > Service Providers found it difficult to prove their service concept without making a big upfront investment in infrastructure.

With Scalify technology:

- > You can scale as needed, with no need for big step changes in capacity to meet new requirements and no need to plan 12 months ahead.
- > Existing infrastructure can be re-used to support new services, with the simple addition of more disks as and when needed. Given that Scalify turns any commodity x86 server into storage, it makes adding more capacity quick and inexpensive.
- > Onboarding of new customers is straightforward and hassle-free with our advanced management tools.
- > Proof of Concepts and trials with low upfront expenditure can be offered through our CloudServer.
- > Service Providers can grow as they win new customers with our limitless scalability, eliminating the need for big upgrades every three to four years.

Dailymotion is supporting a storage infrastructure of more than 35 petabytes on a Scalify RING.



Reducing the risk of service failures

Offering guaranteed availability and better manageability than traditional storage infrastructures, Scality's technology reduces the risk of service outages.

Always available

Scality is designed with a shared-nothing, distributed architecture, and enables geo-redundancy across multiple sites. It offers guaranteed 100% availability – backed up with rigorous SLAs – as well as built-in Disaster Recovery features.

A self-healing architecture also reduces the impact of any hardware failures. Maintenance work can be scheduled when it is convenient, rather than having to be treated as an emergency.

Telenet, the leading media and telecommunication service provider in Belgium, was the first company to deploy Scality RING. After more than seven years – in which Telenet scaled to 25 times its initial capacity – the company has experienced 100% reliability and zero downtime.

Improved manageability

Service Providers can operate and manage extremely large scale, globally dispersed storage operations – simply and cost-effectively – from a single control point.

RING Supervisor GUI also enables the automation of many common storage optimizations. It provides comprehensive and browser-based administrative interfaces – with full topology view, monitoring, reporting and graphing – plus RING status with Zone, platform and Node details.

Scality HALO Cloud Monitor further simplifies Service Providers' management challenges, offering turnkey 24/7 monitoring of the Scality RING Object Storage platform and S3-optimized Scality products. Intuitive dashboards help visualize events, providing configuration assistance, system health checks and configurable alarms for abnormal KPIs.

Remotely monitoring storage environments in real time, Scality HALO collects telemetry data and generates predictive analytics to ensure storage systems are optimized.

Service Providers can easily integrate Scality's management tools and APIs into their existing monitoring and management systems, with pre-built integrations for commonly used systems such as Nagios.



Ensuring the security and integrity of customers' data

Protecting Service Providers' reputations and customer bases, Scality helps to ensure the security and integrity of customers' data.

With its single solution for both File and Object Storage, Scality RING offers full integration with existing Identity and Access Management and Authentication systems. It supports the full AWS Identity and Access Management (IAM) model and Microsoft Active Directory.

Scality Erasure Coding and variable replication Class-of-Service protects against multiple, simultaneous disk and server failures – insulating data from hardware failures.

Data integrity assurance is delivered through integral CRC checksums on stored Objects.

Plus, Scality RING provides full encryption for both Data-at-Rest and Data-in-Transit. And, crucial to Service Providers, it allows the provision of full multi-tenancy.

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.



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

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