

How can distributed edge reduce cloud costs for enterprises?

STL Partners webinar

28th May 2024

In partnership with:



Agenda

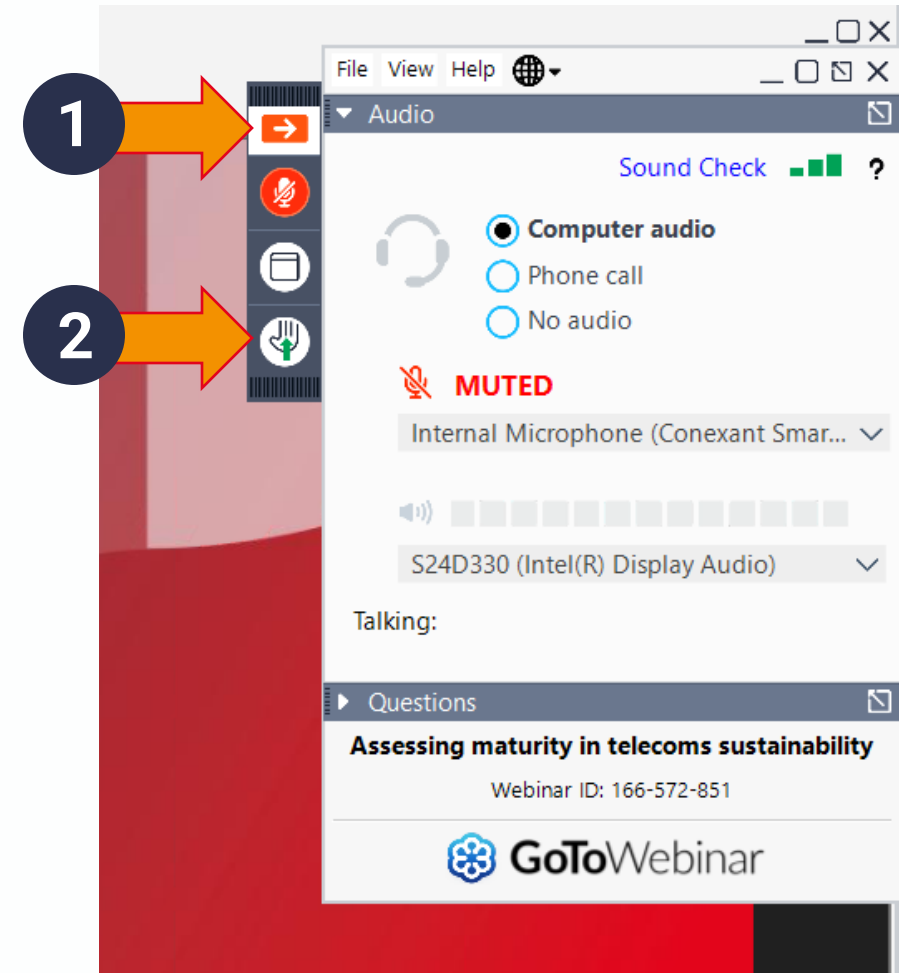
1	Introduction and housekeeping	14:00 – 14:05
2	STL presentation: The advantages of pursuing a distributed edge model for enterprises	14:05 – 14:25
3	Varnish presentation: Accelerating delivery through platform-agnostic caching	14:25 – 14:35
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- You're in listen only mode
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- Feel free to type questions throughout the session for the Q&A at the end
 - Any questions that we don't answer live will be answered offline and shared in a summary Q&A document
- We'll send you the slides and a recording shortly after the session, please do share with colleagues



Our speakers



JACK HURLEY

Consultant

STL Partners

Presenter



ADRIAN HERRERA

North America GM & CMO

Varnish Software

Presenter and Panellist

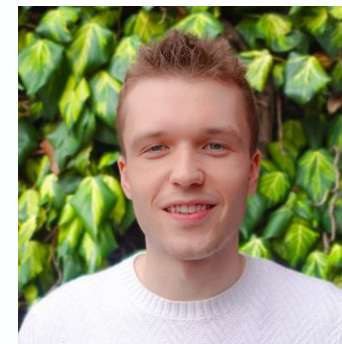


TILLY GILBERT

Director, Consulting

STL Partners

Panellist




HENRY OSBORNE

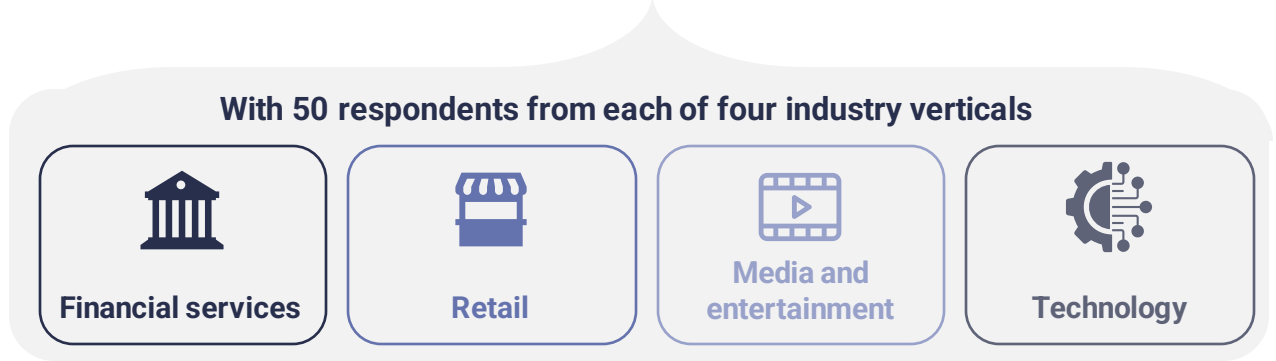
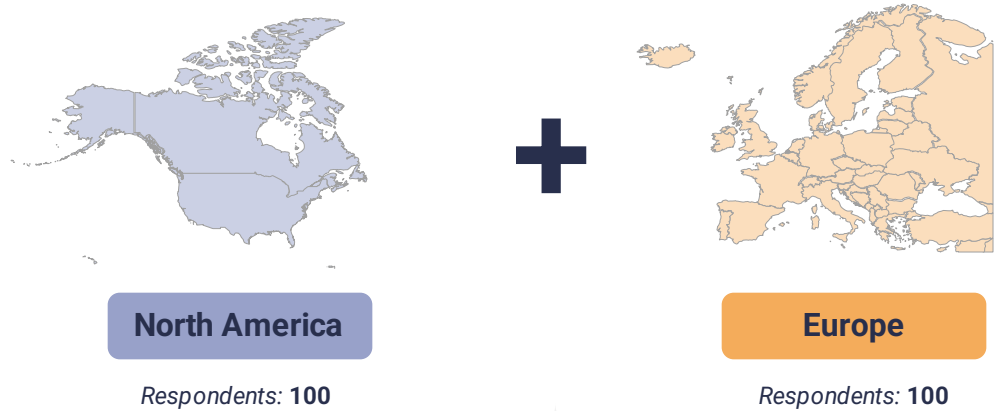
Senior Consultant


STL Partners

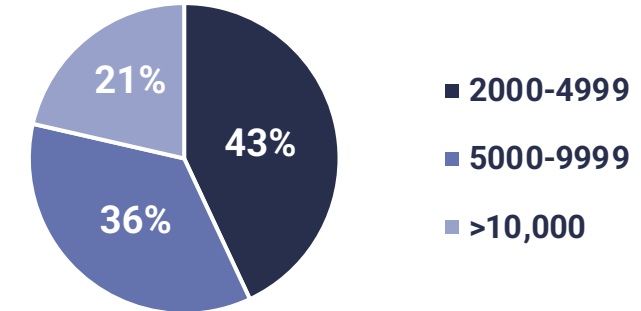
Moderator


Our survey quantifies trends in enterprise cloud adoption in four industry verticals across North America and Europe

 We conducted a survey with 200 enterprise respondents across North America and Europe



 Survey respondents were from enterprises of varying size



 All survey respondents are involved in the assessment/implementation of IT services



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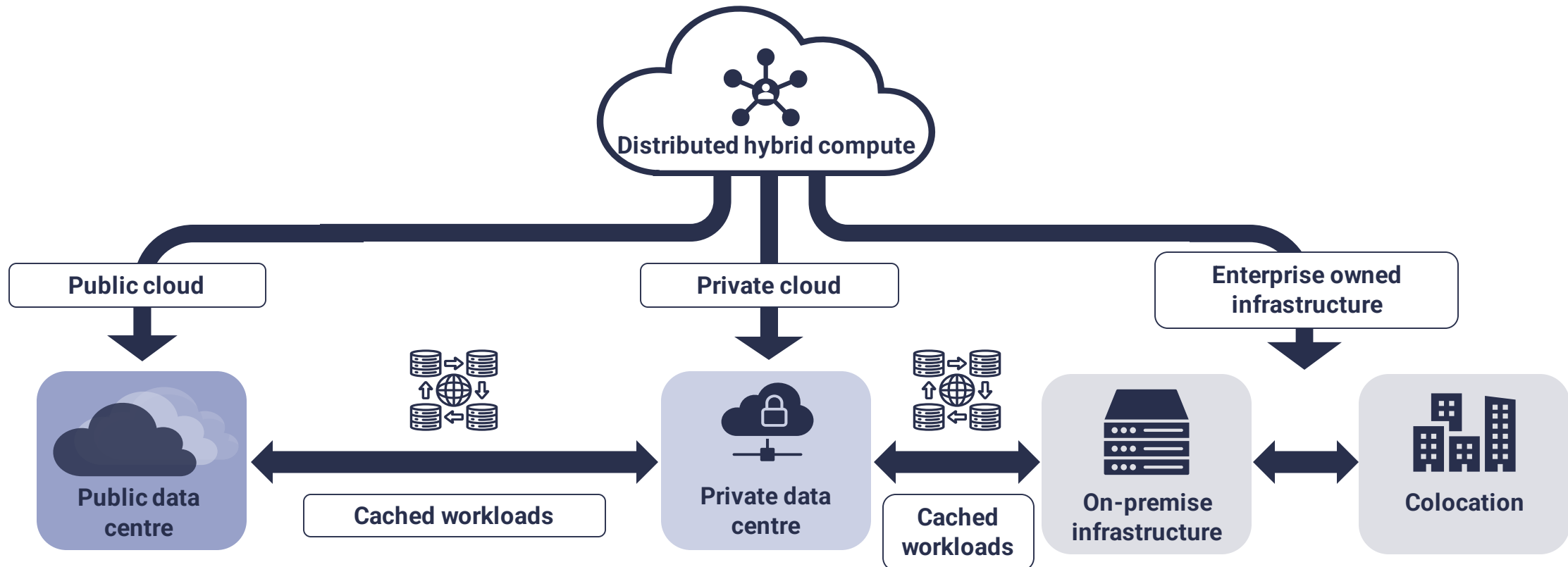
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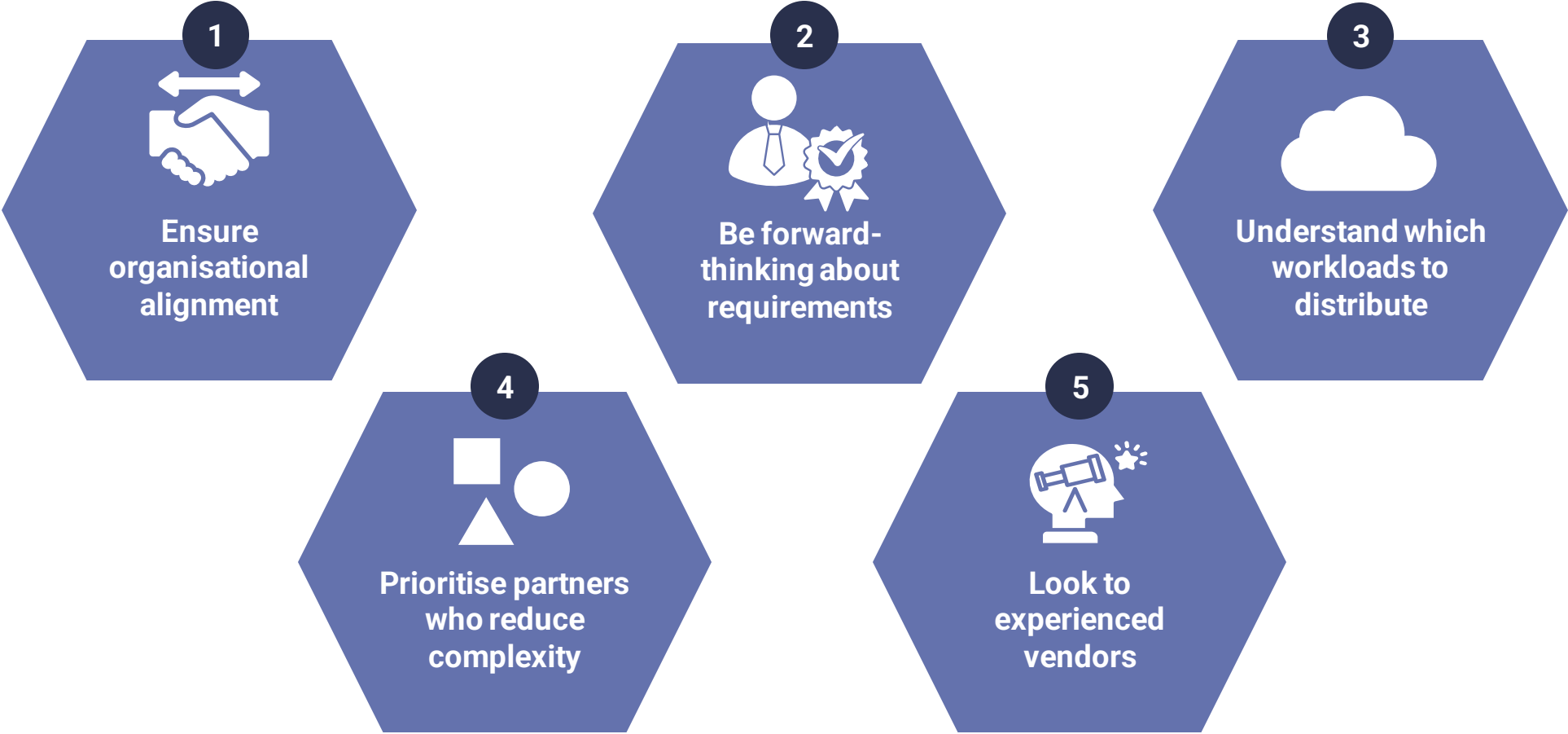
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Distributed hybrid compute enables enterprises to harness the advantages of public, private and on premises infrastructure

'a flexible and scalable IT environment that combines public cloud, private cloud, and on-premise infrastructure that has dynamic solutions to performance requirements, sensitive data, and high costs'



STL Partners have identified five key recommendations for enterprises to adopt a distributed cloud model

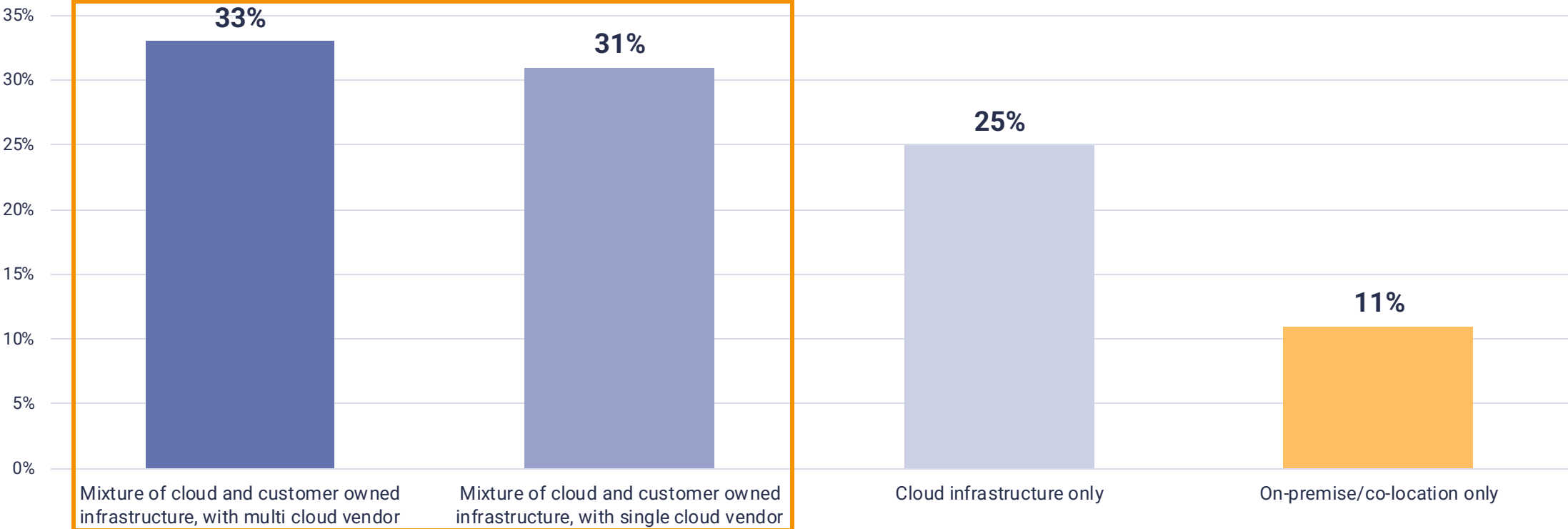


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Over 60% of enterprises surveyed have adopted mixed infrastructure models, however there is industry variation

Q: What is the current IT architecture that you use?

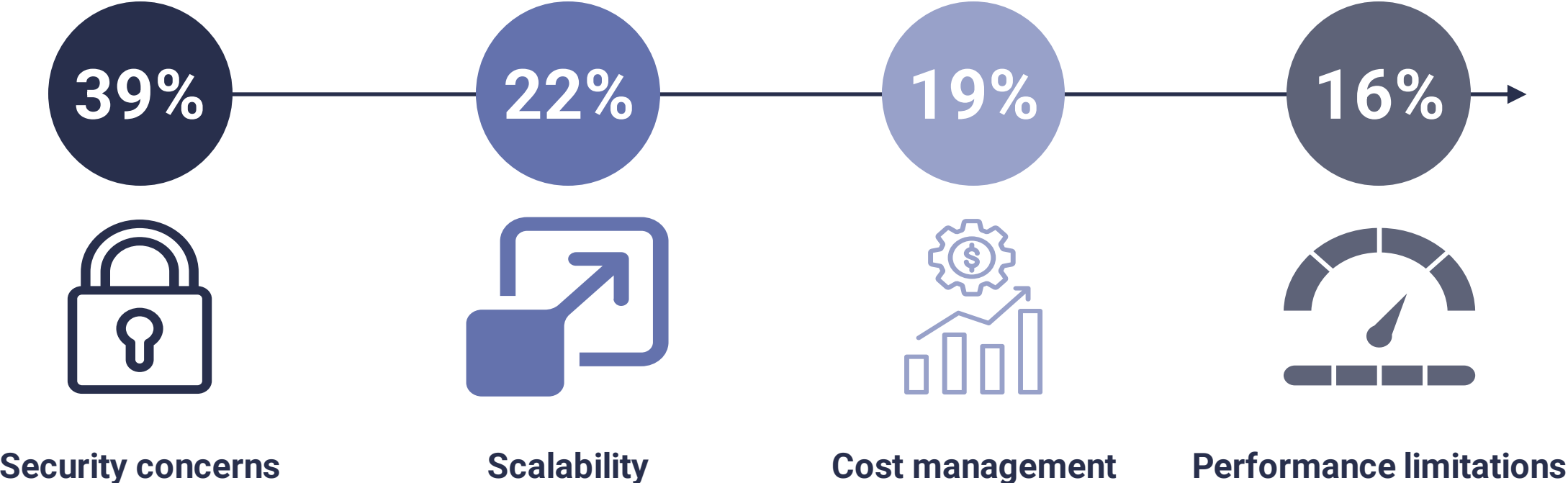


There is no one prevailing IT architecture that all enterprises are tending towards, likely because enterprises all have distinct needs and requirements

Source: STL enterprise survey 2024, n = 200

Enterprises are currently facing cost, performance, security, and scalability challenges with their IT architectures

Q: What is the main challenge you are experiencing with your current IT architecture?

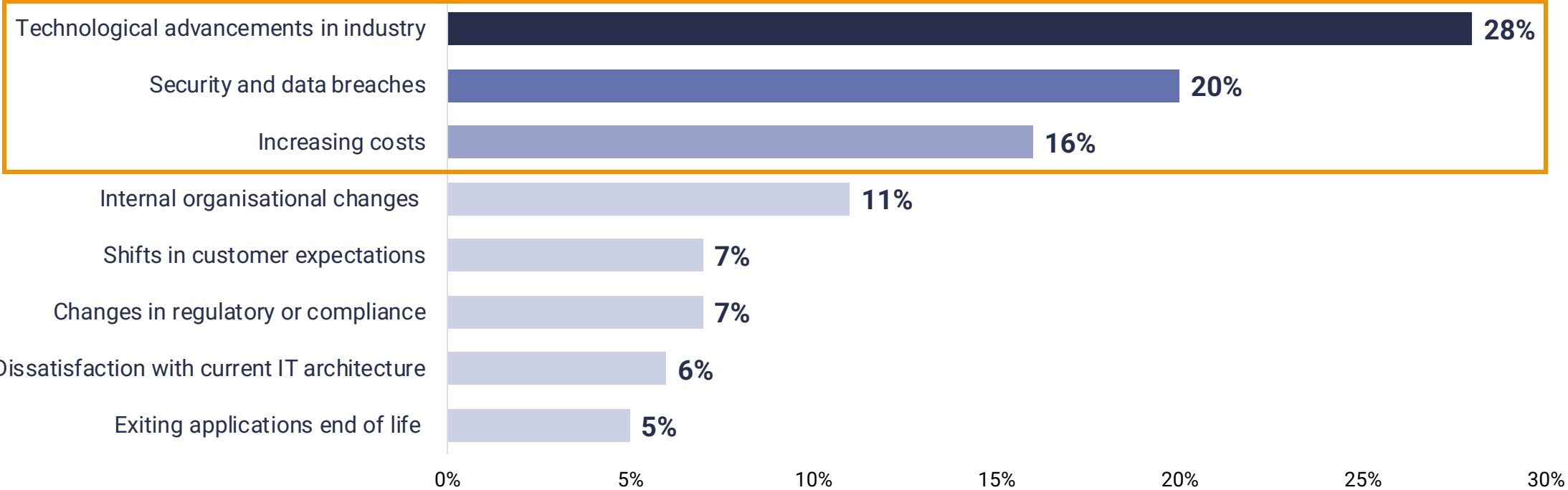


Overcoming these challenges are imperative to an enterprise using digital technologies to unlock new avenues for growth, efficiency and innovation

Source: STL enterprise survey 2024, n = 200

30% of enterprises selected technical advancements as their trigger for adopting a cloud-centric model

Q: What has been your primary trigger in your adoption of cloud technology?

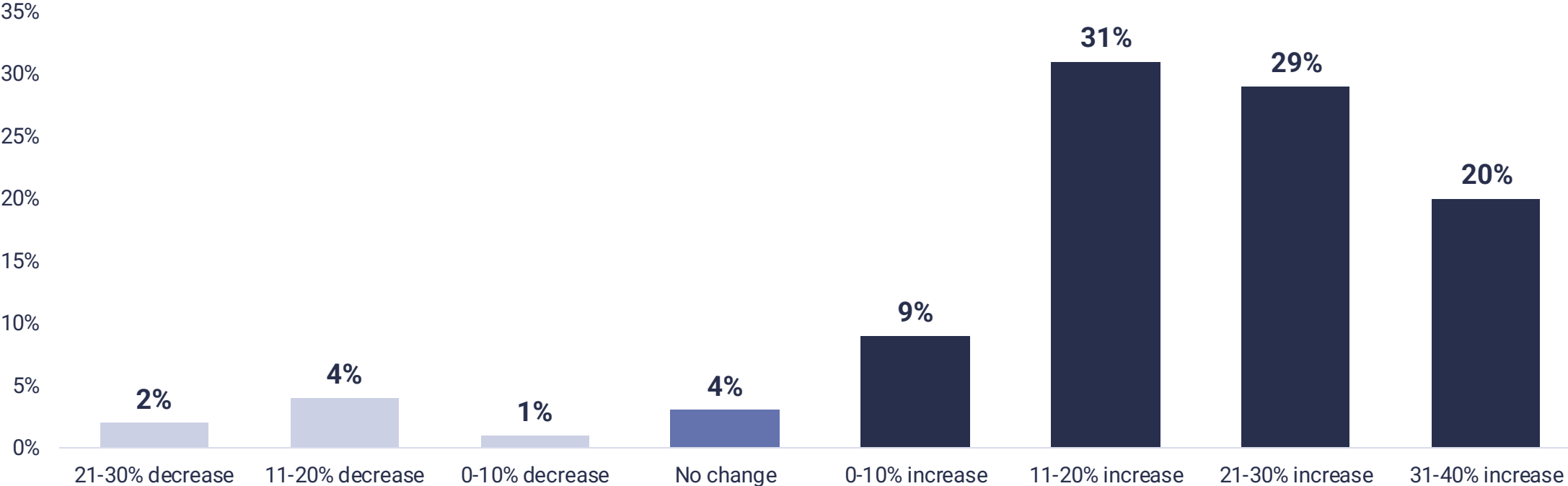


Demand for cloud services continues to grow as enterprises explore digital transformation practices, with cloud-based applications playing a crucial role in facilitating remote work

Source: STL enterprise survey 2024, n = 200

90% of enterprises have experienced an increase in cloud costs in the last 2 years

Q: How much have your cloud costs changed over the last 2 years?

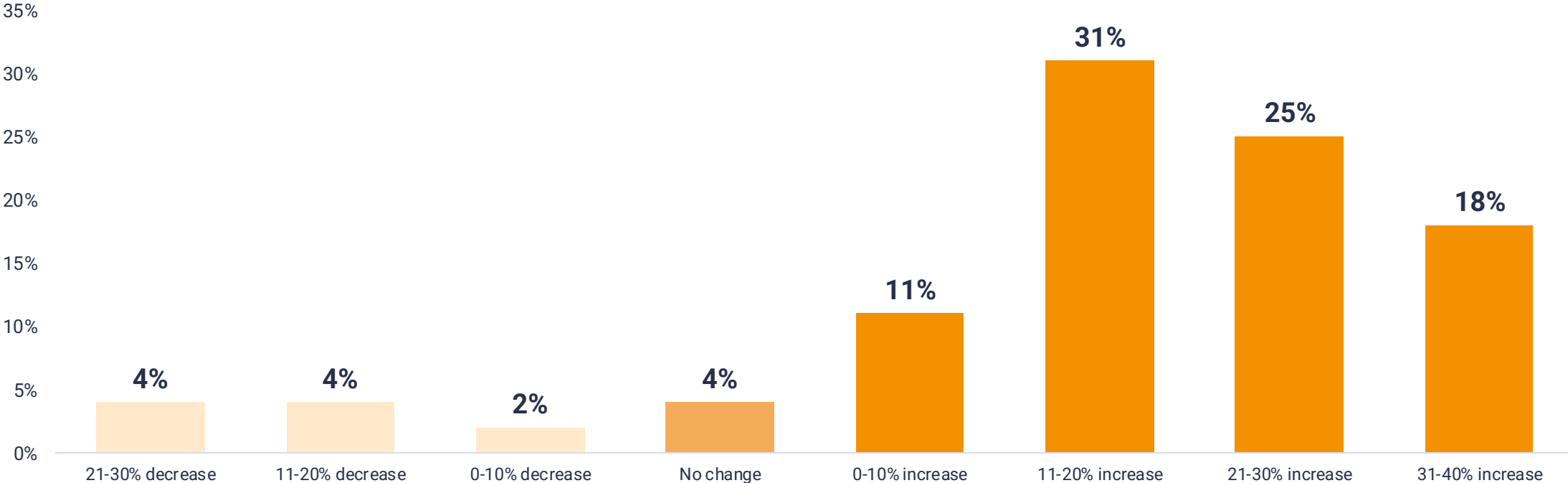


50% of enterprises have seen over a 20% rise in their cloud costs in the last two years

Source: STL enterprise survey 2024, n = 200

Enterprises are expecting increased cloud costs to continue over the next three years

Q: How much do you think your costs will change over the next 3 years?



75% of enterprise are predicting to experience a cost increase of 10% or more in the next three years

Source: STL enterprise survey 2024, n = 200

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Poll: What do you see as the largest category of cloud costs for enterprises?

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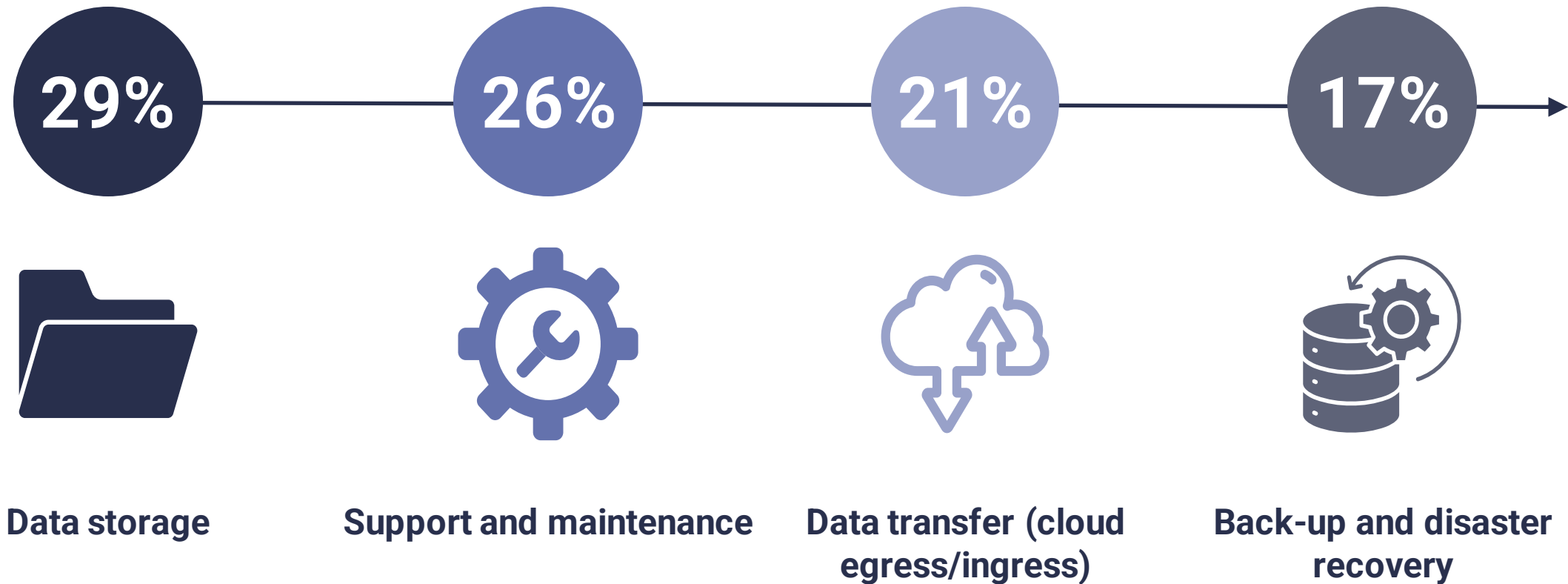
1. Data storage
2. Support and maintenance
3. Data transfer (cloud egress/ingress)
4. Back-up and disaster recovery
5. Compute

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Data storage, support and maintenance and data transfer are the most significant cloud cost buckets

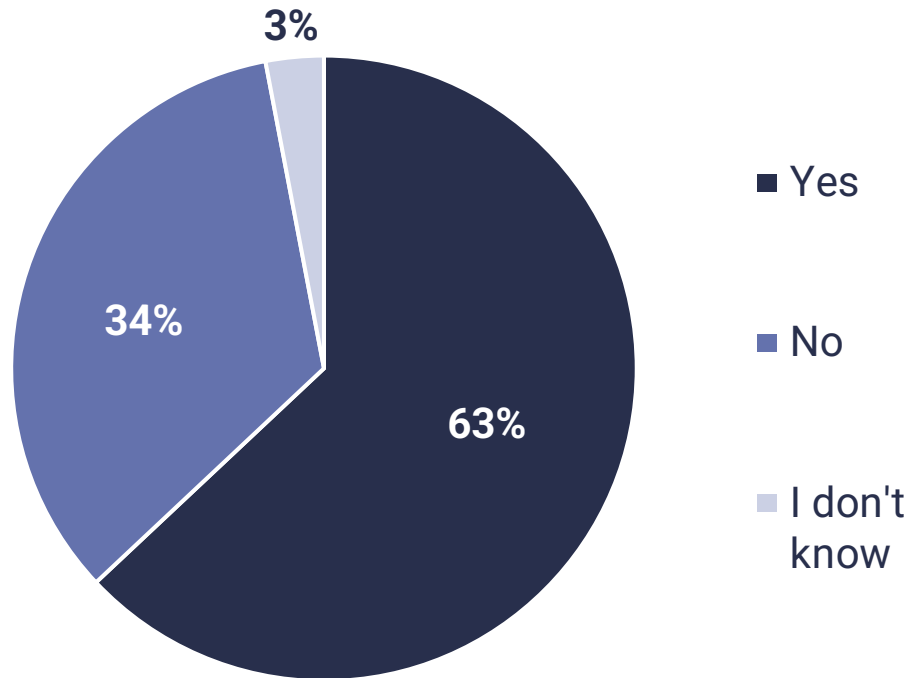
Q: What is the largest category of cloud costs you are currently experiencing?



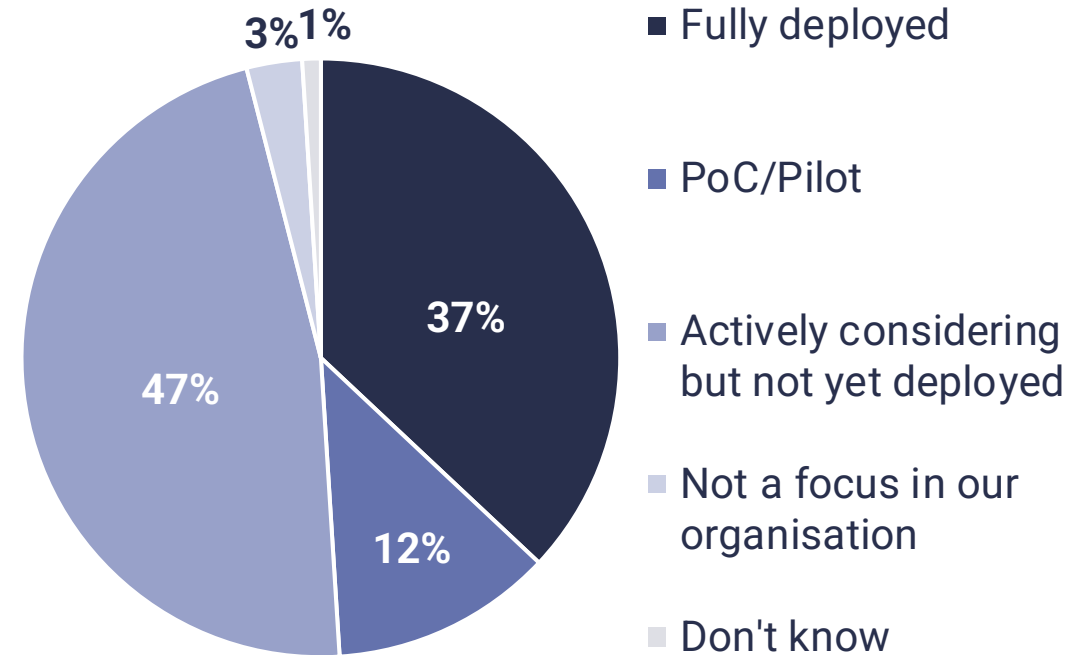
Source: STL enterprise survey 2024, n = 200

Over 60% of enterprises have started to counter increasing cloud costs by implementing cost optimisation strategies

Q: Have you started to implement strategies to try and optimise your cloud costs?



Q: What is your current level of interest in deploying a distributed hybrid compute solution?

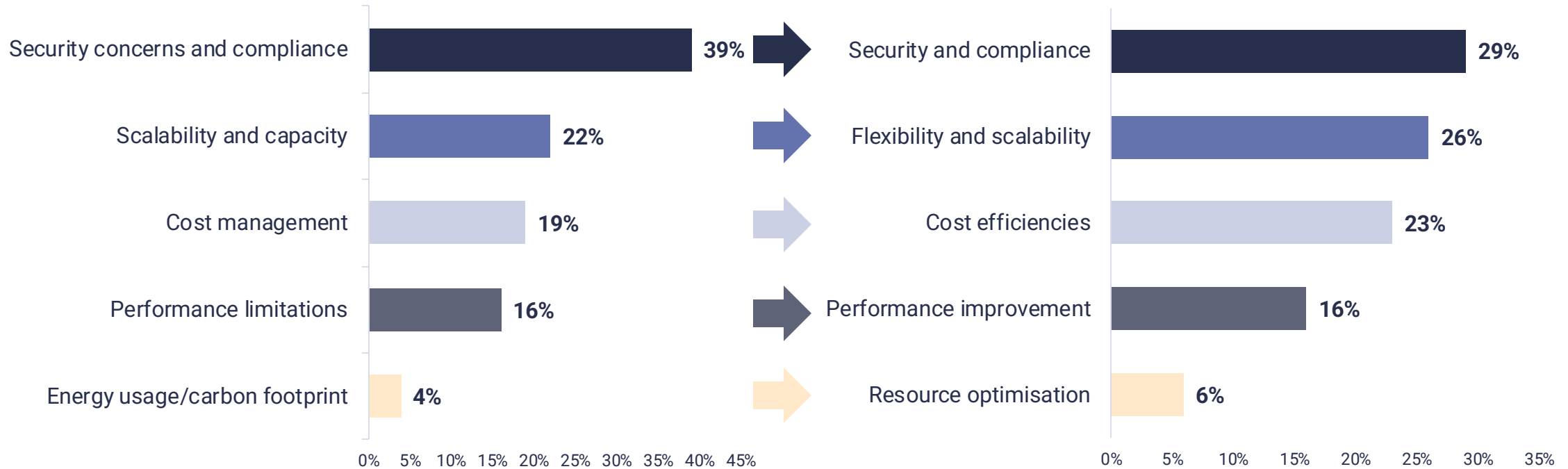


Source: STL enterprise survey 2024, n = 200

The benefits of distributed cloud solutions mirror the challenges that enterprises face with their IT architecture

Q: What is the main challenge you are experiencing with your current IT architecture?

Q: What do you see as the primary benefit for your enterprise in adopting a distributed hybrid compute solution?



Pursuing a distributed hybrid compute strategy enables enterprises to mitigate the current challenges they are experiencing with their IT architecture by providing increasing security and flexibility whilst driving cost efficiencies

Source: STL enterprise survey 2024, n = 200

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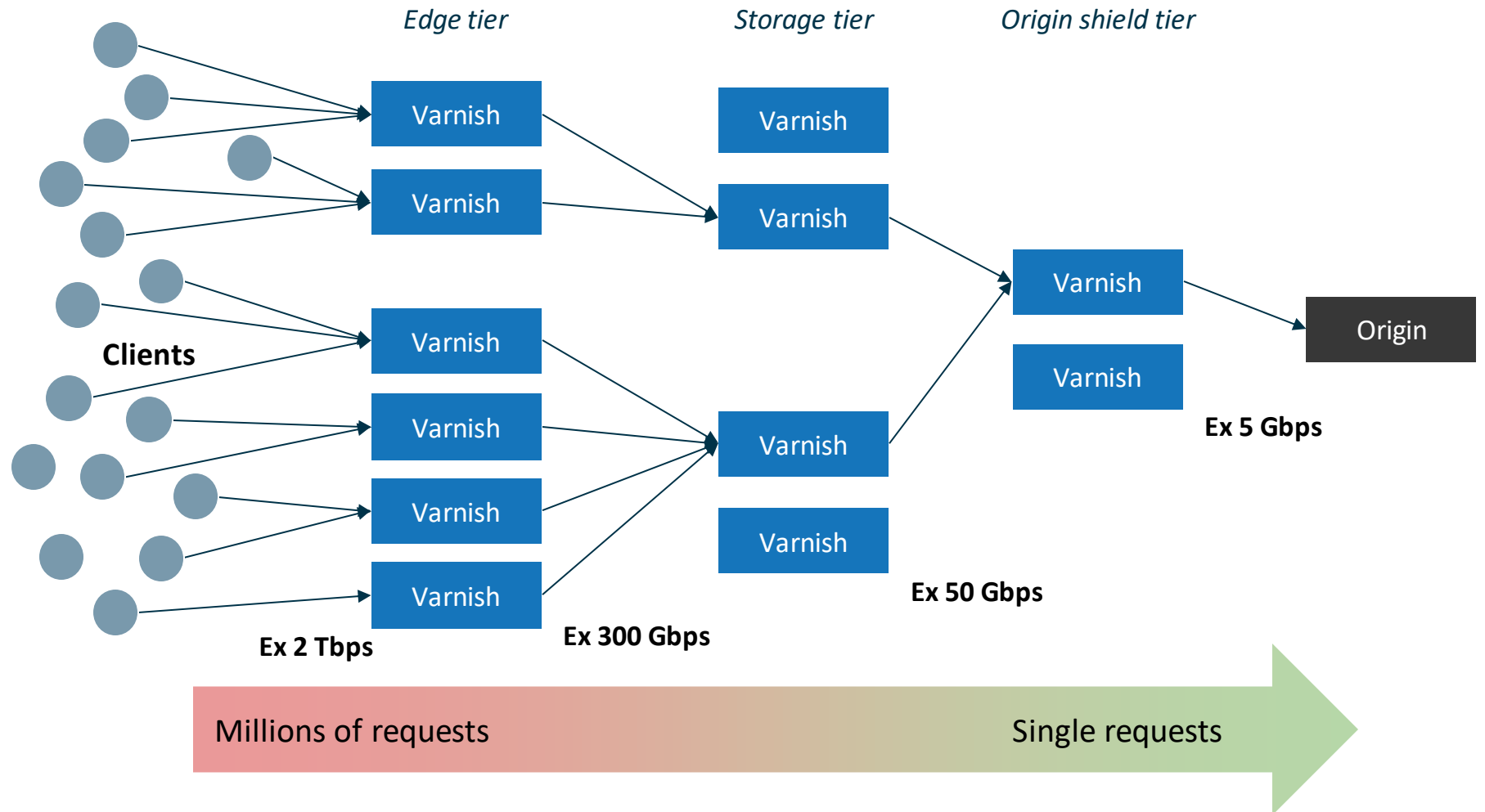
VARNISH
SOFTWARE

Caching Improves Hybrid Performance, Reduces Costs

Caching of objects in each hop to redistribute responses to similar requests, highly efficient.

Request coalescing collapses similar concurrent requests within single cache nodes.

Sharding uses consistent hashing to collapse similar requests between cache tiers.

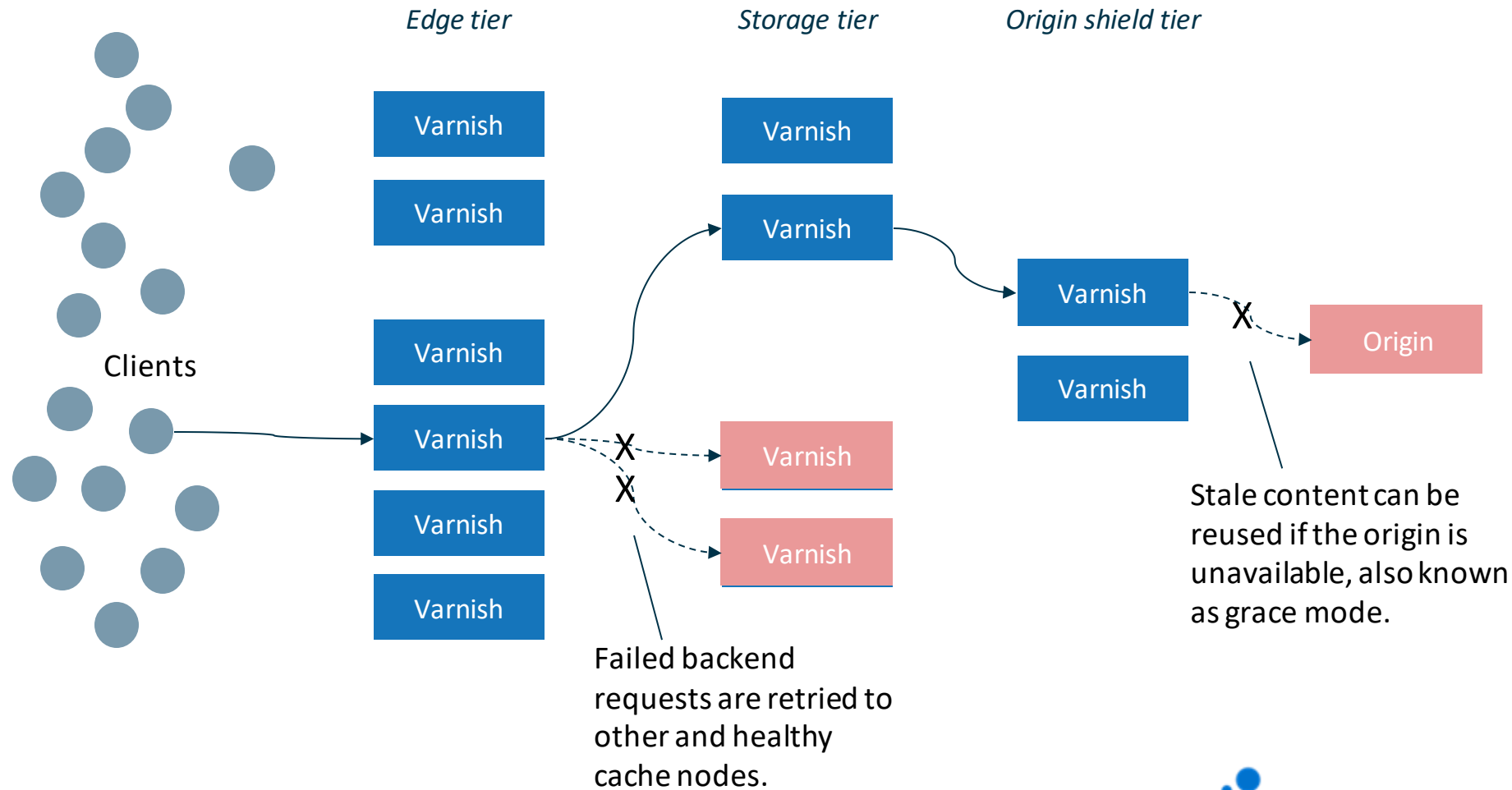


Best-in-class Caching Goes Even Further

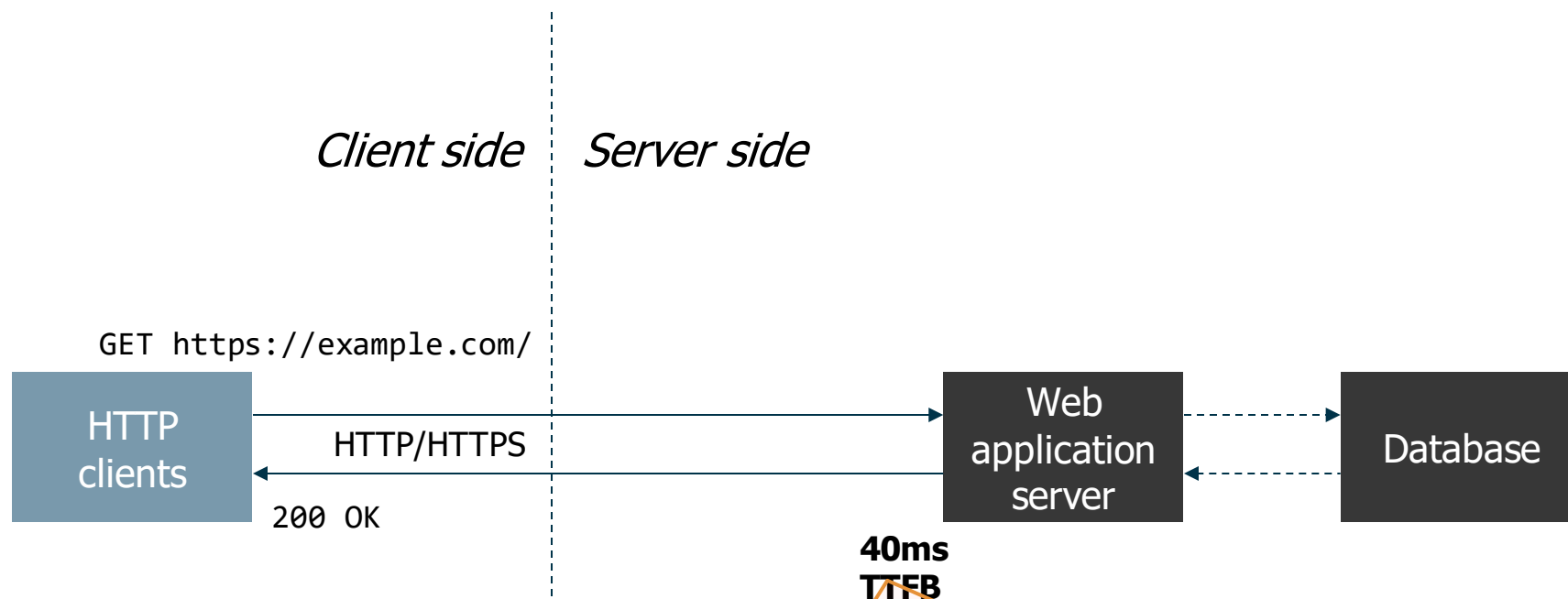
Health probes ensure updated knowledge about the state of network paths, cache nodes and origins.

Failed requests can be retried to other cache nodes and network paths, in-flight and transparent to the client.

Stale responses can be served on disruptive operational problems (*stale-if-error*).



Example environment **without Varnish**



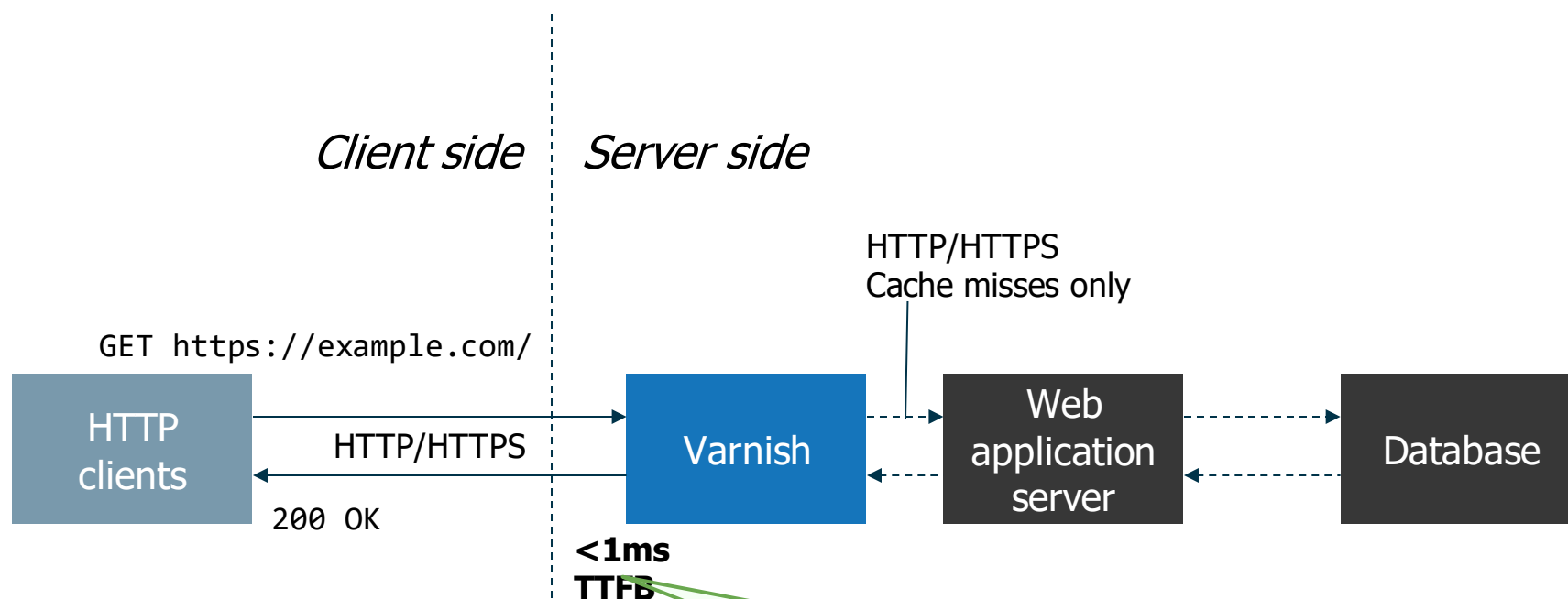
Time to first byte is typically in the **tens or hundreds of milliseconds**.

Due to:

- Each page view being generated.
- External resources, such as databases, adding latency.

TTFB is *Time To First Byte*, the time between receiving the request and serving the first response byte on the server side.

Example environment **with Varnish**



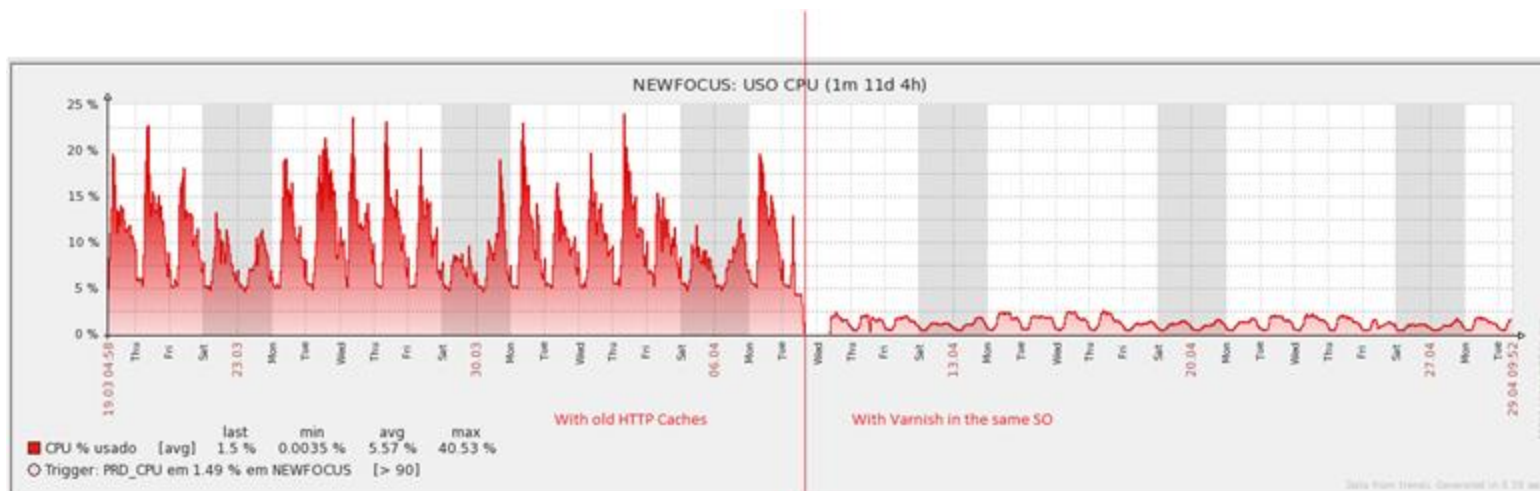
Time to first byte is typically **less than one millisecond** (on cache hits).

Due to:

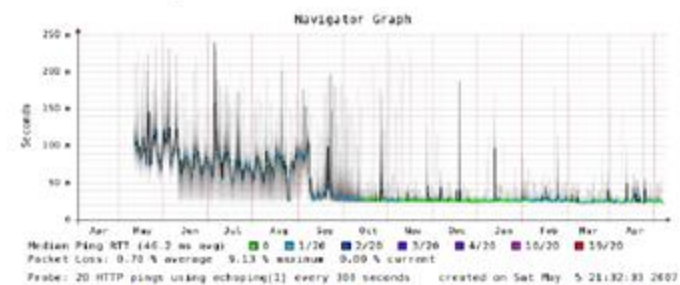
- Cached content served directly from memory.
- Highly optimized fast path.

TTFB is *Time To First Byte*, the time between receiving the request and serving the first response byte measured on the server side.

Varnish impact - actual screenshots

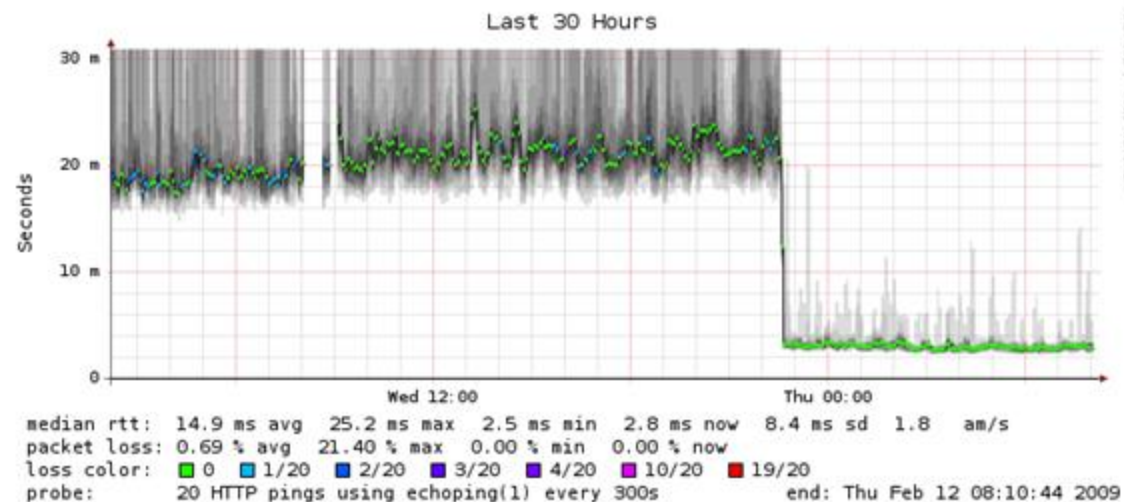
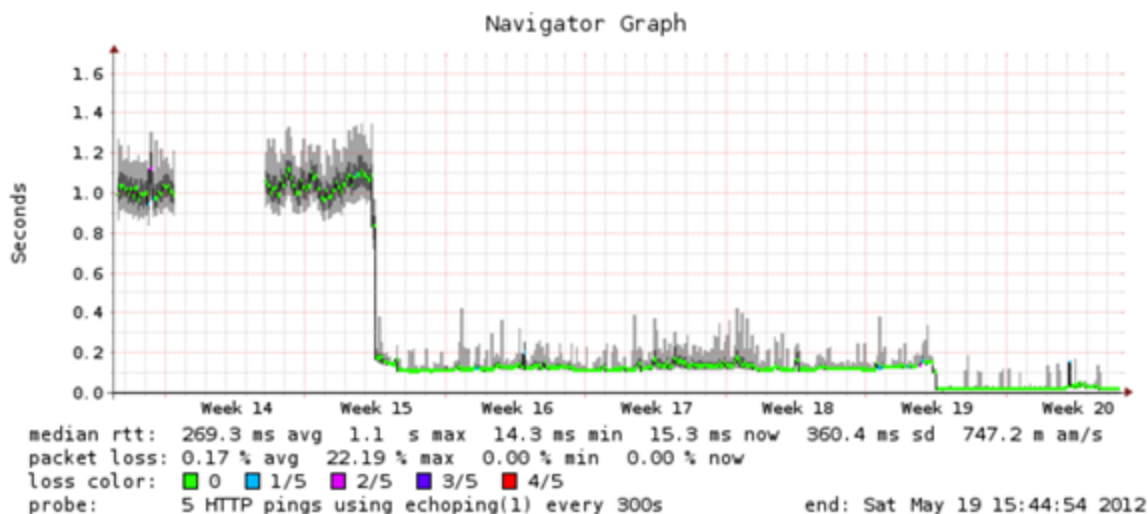


Real life performance



Squid
12 servers

Varnish
3 servers



Solutions and **use cases**

- **Content Delivery Network**
 - Private and public CDNs on the Internet.
 - Private content delivery in large intranets.
 - Private 5G MEC based CDN.
 - Origin shield behind public CDNs.
- **Web and API acceleration**
 - Frontend for web sites.
 - Gateway for API services.
 - Gateway for microservice architectures.
- **Video distribution**
 - OTT video-on-demand distribution.
 - Live video streaming distribution.



Benefits Achieved On-Prem and in Cloud by Companies Utilizing Varnish

99.998%

website availability
(Future Publishing)

100%

uptime during outage
(Cosmetics Brand)

80%

lower latency
(Zype)

81%

faster page loads
(Wuppertal)

60%

more
organic traffic
(Nikon)

30%

lower CAPEX/OPEX
(CBC)

15x

lower
Cloud costs
(Nowcom)

10x

more traffic on existing
hardware
(RTÉ)

46%

lower server costs
(Dos.al.Cuba)

12x

lower server load
(ETH Zurich)

10x

server efficiency
(Zype)

10hrs

of developer time
saved daily
(Motortrend)

Helping the World's Biggest Brands Scale

Our caching technology is used across every industry to accelerate digital delivery, reduce infrastructure load and increase productivity

 50%

of Top 10 global streaming providers

 25+

Global telcos





Thank you

varnish-software.com

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Our panel discussion

Moderator



HENRY OSBORNE
Senior Consultant

STL Partners

Panellists



TILLY GILBERT
Director, Consulting

STL Partners

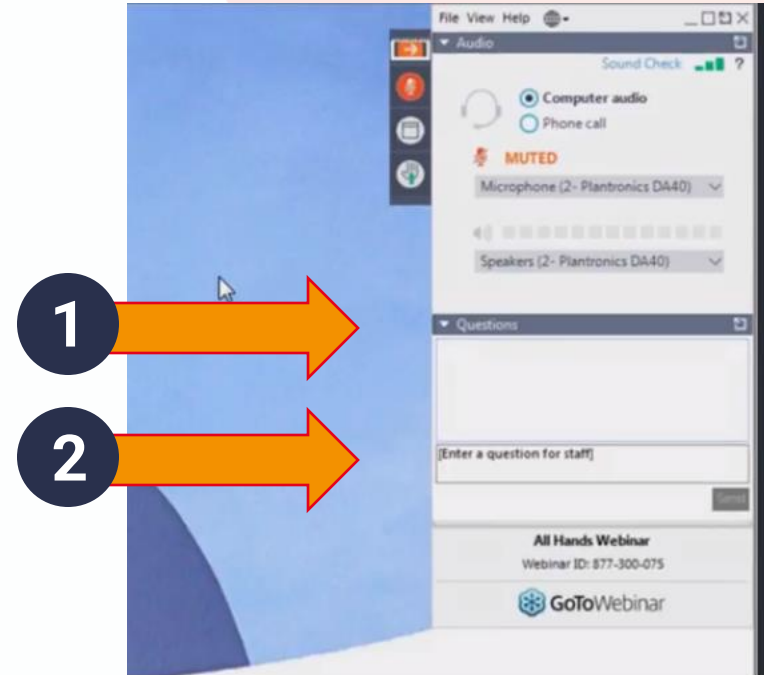


ADRIAN HERRERA
North America GM & CMO

Varnish Software

For our Q&A...

Please submit any questions using the GoToWebinar control panel



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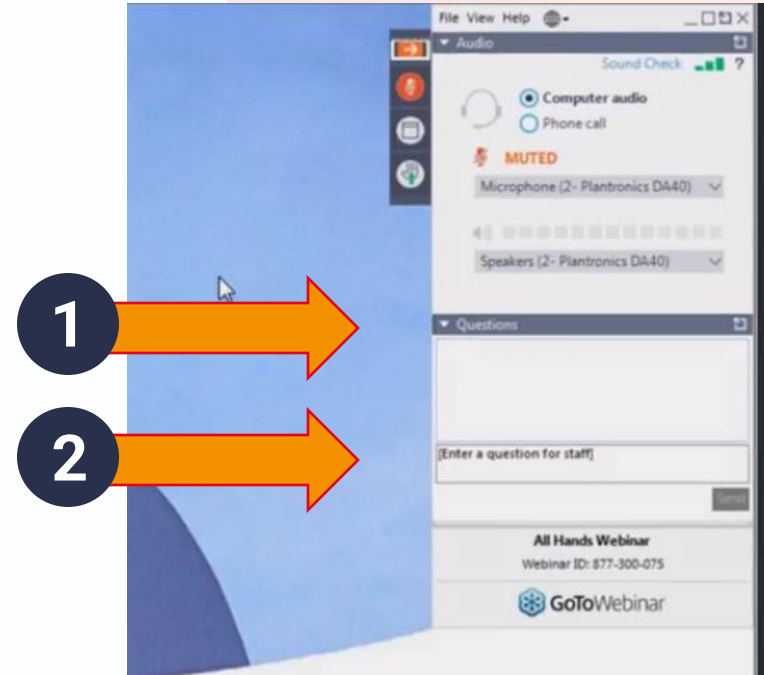
Poll: What do you see as the primary benefit in adopting a distributed hybrid compute solution?

What do you see as the primary benefit in adopting a distributed hybrid compute solution?

1. Security and compliance
2. Flexibility and scalability
3. Cost efficiencies
4. Performance improvement
5. Resource optimization

For our Q&A...

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For any other questions, please contact:

- Jack Hurley, jack.hurley@stlpartners.com
- Henry Osborne, henry.osborne@stlpartners.com

