SUSE

Understanding how enterprises can securely innovate with modern infrastructure –

A CXO Priorities survey in collaboration with SUSE

Contents

Introduction

The pace of innovation has never been more rapid. Organisations across all verticals are today digitalising to enable better experiences for employees and customers, while also enabling efficiencies, cost-savings and higher levels of productivity.

All these digital processes are underpinned by infrastructure which must be fit for today's businesses, enabling rapid scalability and innovation while also ensuring a high-level of security for the modern, distributed workforce.

Understanding the key priorities, challenges and trends shaping the decisions around infrastructure is paramount for organisations striving to optimise their operations, enhance security and drive innovation.

To find out more, we surveyed 250 CIOs, CISOs and IT decision-makers from across Europe and the Middle East to hear more about their experiences in the key areas of software security, enterprise container management, Edge Computing and Business Critical Linux.

The research aims to highlight how organisations are approaching the various elements of digital and cloud-native infrastructure adoption and provide strategic guidance as they move forward.

Summary of findings

➡ Application performance is the top consideration when looking at digital and cloud-native infrastructure, followed by security, agility, availability and cost reduction

➡ Respondents consider effective lifecycle management a challenge in maintaining a secure software supply chain within their organisation, followed by complexity of integrating security at various stages of the software cycle

➡ Complexity and vulnerability management are two of the key areas where organisations are focusing their attention when it comes to container security

➡ Almost half of respondents are of the view that accelerating Digital Transformation/ modernisation through the adoption of cloud-native technologies like Kubernetes is either very important or important

➡ More than a quarter of respondents say innovative DevOps and PlatformOps tools are 'essential for competitive advantage', while a further 16% state they are 'important for operational efficiency

➡ Organisations prioritise optimising their operations and ensuring rapid delivery of services when it comes to the top considerations when implementing an enterprise container and Kubernetes management platform

➡ Simplifying operations through automation was the most important consideration when considering an Edge Computing solution, followed by security and reliability

➡ Productivity is considered the top challenge for organisations when combining legacy on-premises infrastructure with cloud-based services, followed by security dilemmas

➡ Almost half of respondents are leveraging a mix of various Linux distributions for different purposes, while 34% use a single Linux distribution

➡ The most important factor when selecting a Linux solution is on-premise to cloud interoperability, with just under a quarter of the vote

➡ Respondents highlighted multiple use cases for Linux across their organisation's IT department, indicating a diverse set of organisational needs and the requirement of Linux to be adaptable to these.
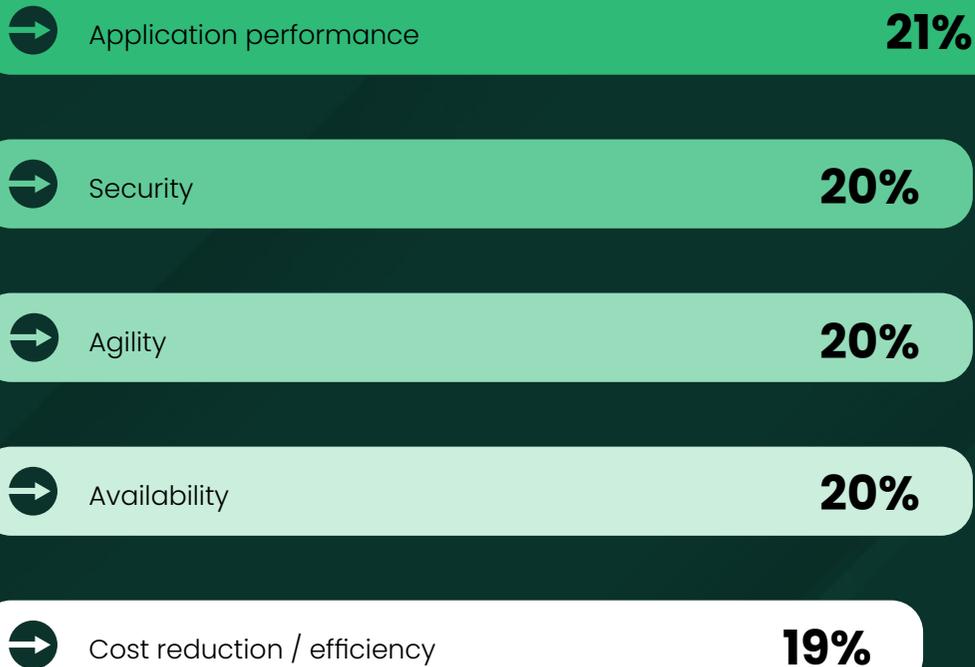
1. When considering your enterprise's digital and cloud-native infrastructure, please rank the following in order of importance:

Application performance	**21%**
Security	**20%**
Agility	**20%**
Availability	**20%**
Cost reduction / efficiency	**19%**

The findings show an almost equal split across all available options, highlighting that organisations are attempting to balance multiple key areas in their digital and cloud-native infrastructure. While application performance emerges with a marginally higher share of the vote (21%), security, agility and availability all take 20%. Cost-reduction/efficiency is considered least important suggesting that organisations are willing to make investments providing that these meet the wider organisational infrastructure requirements.
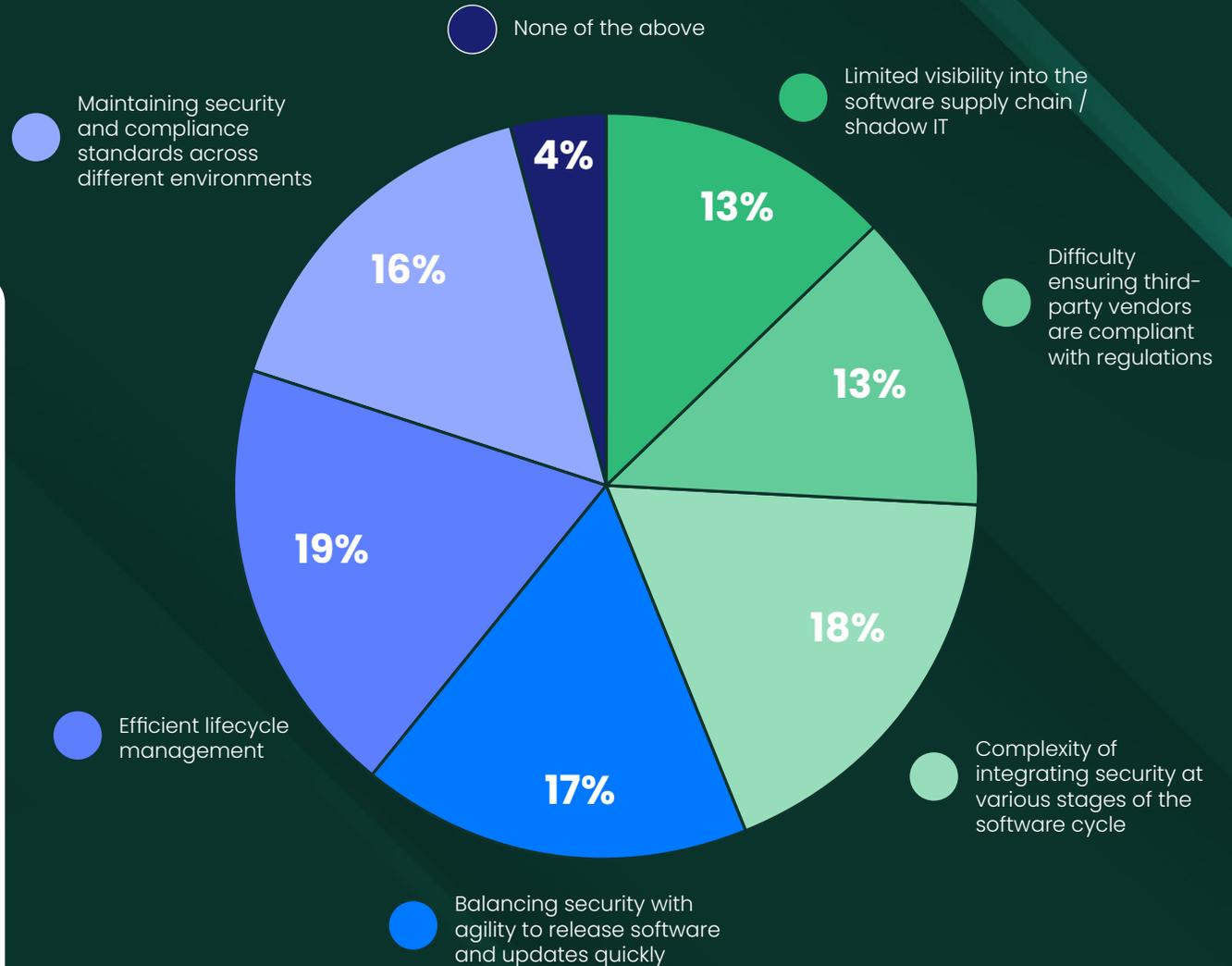
2. What challenges, if any, have you encountered in maintaining a secure software supply chain within your organisation?

Software supply chain security is a key focal point for enterprises in the current landscape, but it appears efficient lifecycle management presents the biggest challenge to organisations in maintaining a secure software supply chain. Closely following, with 18% of the vote, is the complexity of integrating security at various stages of the software cycle, while 4% of voters said none of the options covered their key security challenges, suggesting there are still some unknown challenges which need to be addressed in the way of maintaining a secure software supply chain.

None of the above

Limited visibility into the software supply chain / shadow IT

Maintaining security and compliance standards across different environments

Difficulty ensuring third-party vendors are compliant with regulations

4%

13%

16%

13%

19%

18%

17%

Efficient lifecycle management

Complexity of integrating security at various stages of the software cycle

Balancing security with agility to release software and updates quickly

3. When considering container security, please choose the top two factors that are most important to your organisation:

The top two results – complexity (22%) and vulnerability management (23%) – highlight where organisations are focusing their attention when it comes to container security. Organisations appear to be less concerned with configuration errors (18%) and even less concerned with visibility and monitoring (17%), a clear sign that the complexity of the container environment along with managing vulnerabilities are more important considerations for organisation's looking to secure this infrastructure.

23%
22%
20%
18%
17%

Vulnerability management
Complexity
Supply chain attacks
Configuration errors
Visibility and monitoring
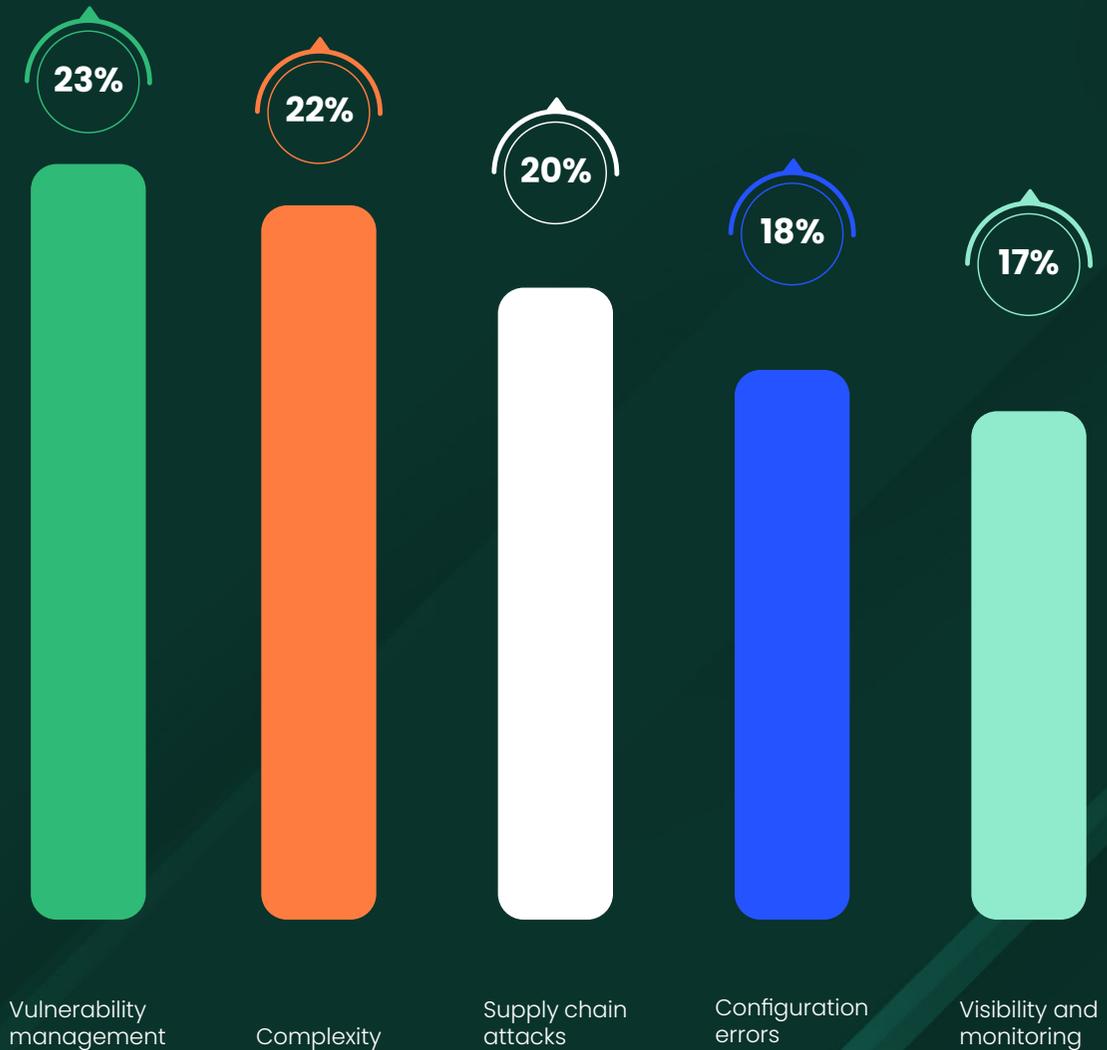
4. How important is it for your organisation to accelerate Digital Transformation/modernisation through the adoption of cloud-native technologies like Kubernetes?

|	
➡ Important	**23%**
➡ Not Important	**23%**
➡ Neutral	**20%**
➡ Very important	**19%**
➡ Not applicable	**14%**
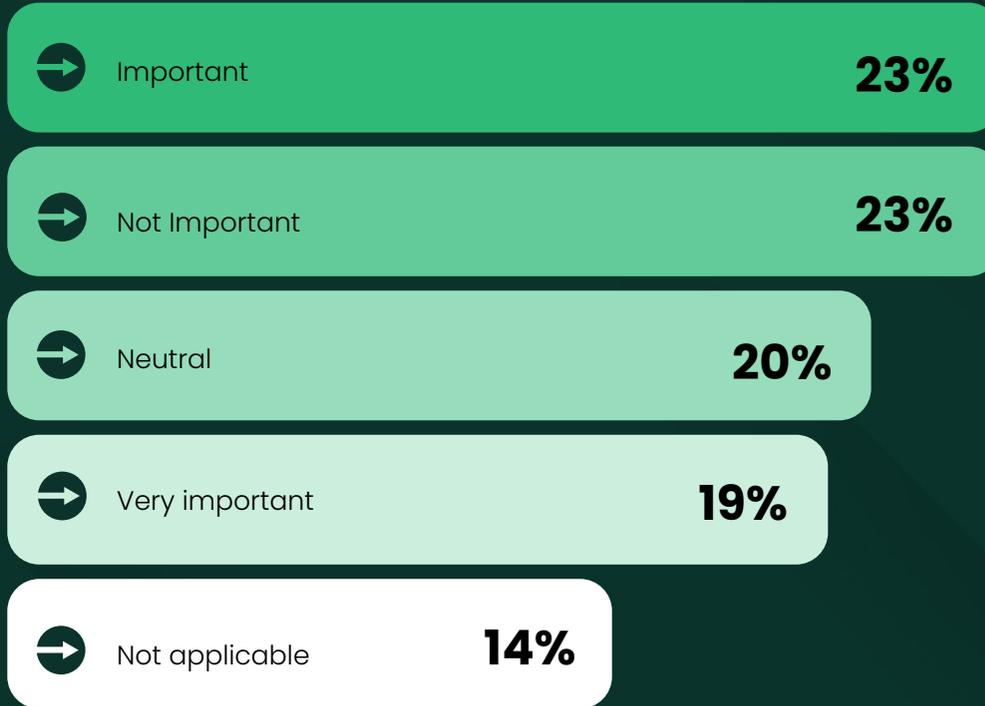
Almost half of respondents are of the view that accelerating Digital Transformation/modernisation through the adoption of cloud-native technologies like Kubernetes is either very important or important. However, the data shows that 20% of respondents took a neutral stance, suggesting organisations could be more proactive when highlighting the potential benefits of adopting cloud-native technologies for accelerating an organisation's transformation/modernisation capabilities.
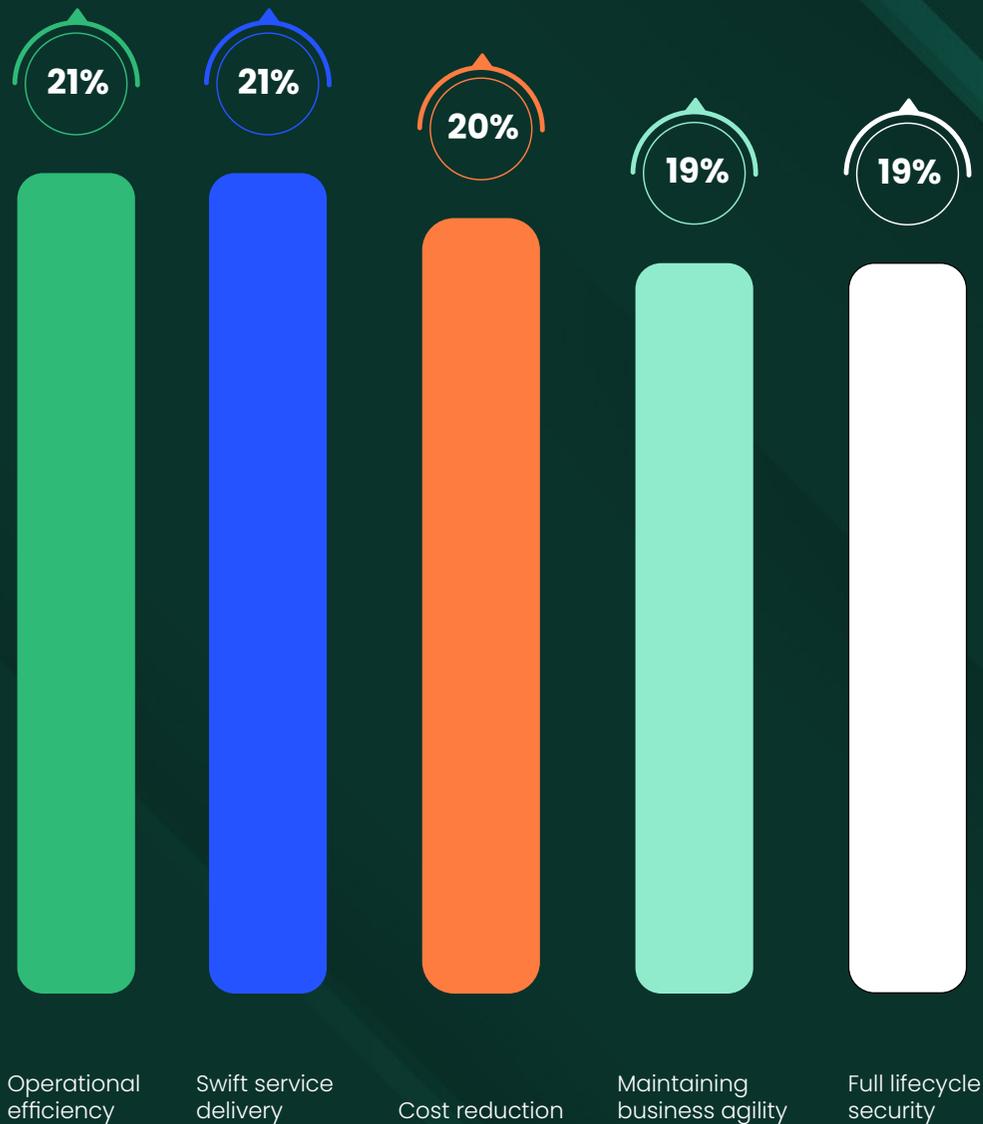
5. In the context of Digital Transformation/modernisation, how do you perceive the role of innovative DevOps and PlatformOps tools, particularly those facilitating containerised workload management?

More than a quarter of respondents say innovative DevOps and PlatformOps tools are 'essential for competitive advantage', while a further 16% state they are 'important for operational efficiency'. As organisations look to progress their Digital Transformation strategies, tools such as these will play an important role, offering benefits such as increased efficiency, improved collaboration, scalability, better use of resources, enhanced security and faster time to market. A further 21% of voters were 'neutral' and 15% of respondents stated they did not know, suggesting there is scope for education around the benefits of these technologies and how they can help organisations to modernise.
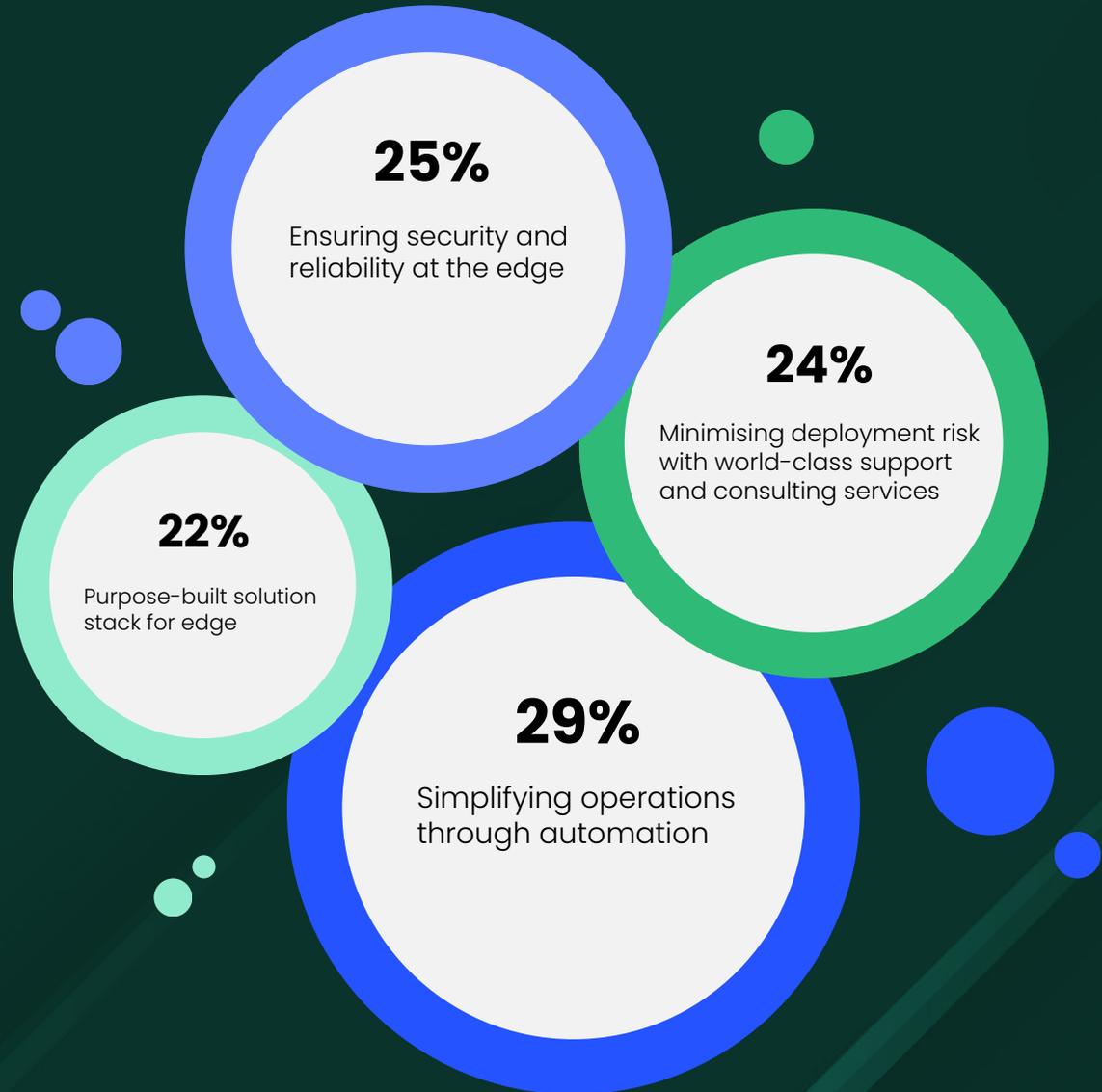

I don't know — 15%
Essential for competitive advantage — 28%
Important for operational efficiency — 16%
Neutral — 21%
Not a priority — 20%
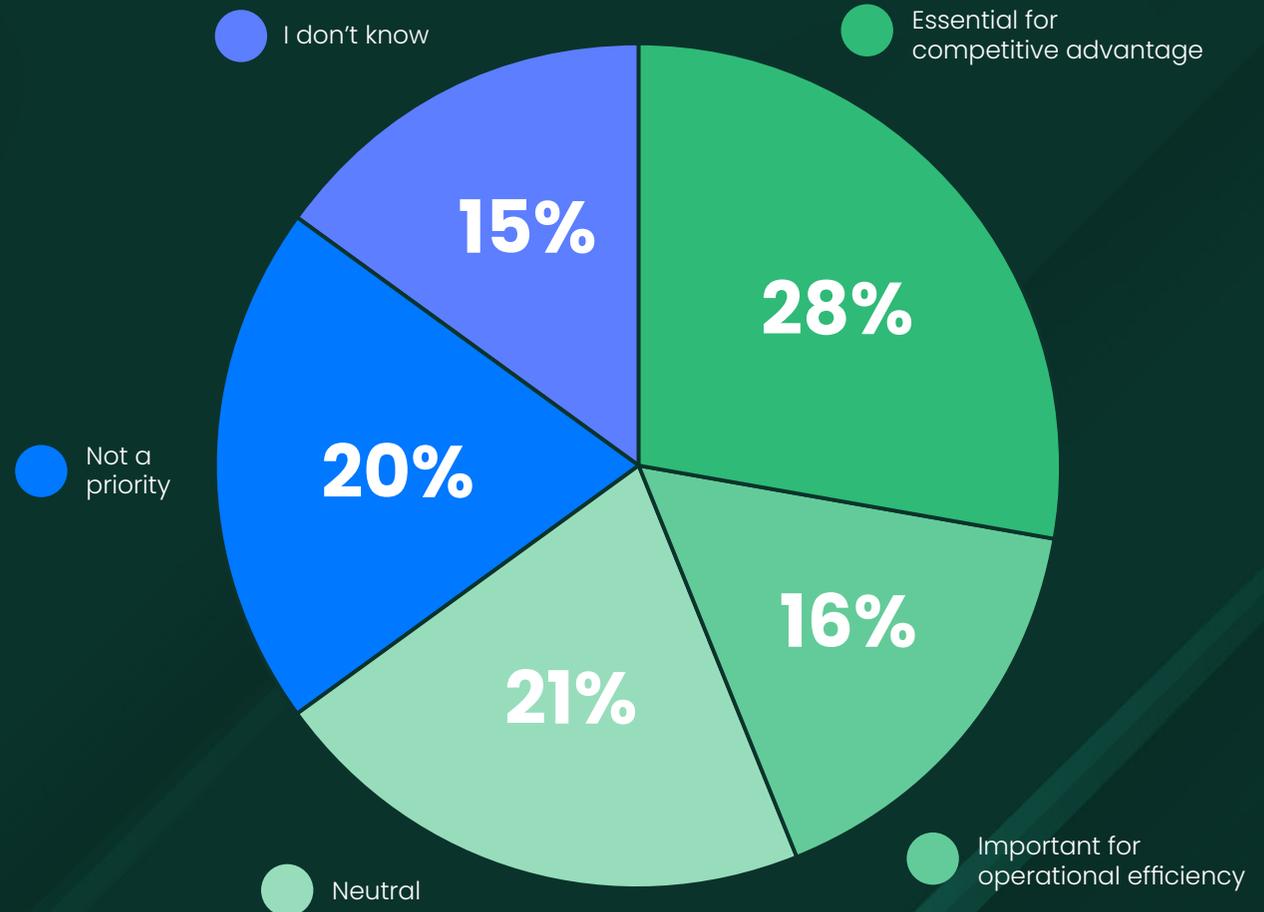
6. What would you consider the top two crucial factors when implementing an enterprise container and Kubernetes management platform?

21% Operational efficiency

21% Swift service delivery

20% Cost reduction

19% Maintaining business agility

19% Full lifecycle security

Results were split almost evenly across all responses, highlighting the diverse range of considerations for organisations regarding the implementation of an enterprise container and Kubernetes management platform. However, the data suggests that organisations do prioritise optimising their operations and ensuring rapid delivery of services.

7. Please choose the top two factors that are most important to your organisation when selecting an Edge Computing Solution:

As organisations look to Edge Computing solutions to minimise latency, along with a whole host of other benefits, simplifying operations through automation has been cited as the most important consideration. The data reveals an almost even split between all responses, though ensuring security and reliability was voted the second most popular answer (25%). What we can conclude from these results is that organisations are taking a holistic approach when selecting an Edge Computing solution and modernising their infrastructure.

25%
Ensuring security and reliability at the edge

24%
Minimising deployment risk with world-class support and consulting services

22%
Purpose-built solution stack for edge

29%
Simplifying operations through automation

8. How important is the ability to manage the full lifecycle of devices from a central pane of glass when evaluating Edge Computing solutions for your company?
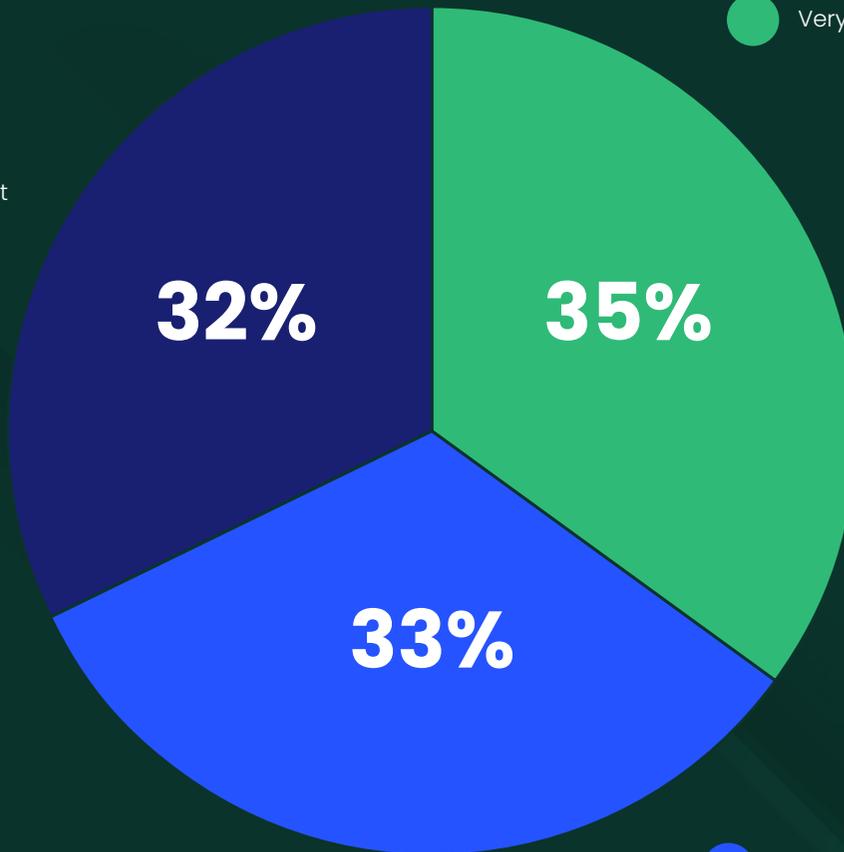
Very important

Not important

Important

32%

35%

33%

Respondents agree that it is either very important (35%) or important (33%) to be able to manage the full lifecycle of devices from a central pane of glass when evaluating Edge Computing solutions for their company.

Productivity (28%) is considered the top challenge for organisations when combining legacy on-premises infrastructure with cloud-based services, followed by security dilemmas (25%). However, integration complexity received 24% of the vote and 23% went to scalability concerns. With the vote split almost evenly across all options, it's clear to see there are myriad challenges for enterprises as they modernise with cloud-based services. With enterprises under increasing pressure to reduce costs and maximise efficiency – all while ensuring Business Continuity – many will look to cloud-native tools. However, it can be difficult to understand how to best combine legacy on-premises infrastructure with the flexibility and scalability offered by cloud-based services.

➡ Productivity   **28%**

➡ Security dilemmas   **25%**

➡ Integration complexity   **24%**

➡ Scalability concerns   **23%**

10. Which of these best describes the Linux environment within your organisation?

34%

We primarily use a single Linux distribution throughout the organisation

20%

We do not currently utilise any Linux operating systems

46%

We leverage a mix of various Linux distributions for different purposes

Almost half of respondents are leveraging a mix of various Linux distributions for different purposes, while 34% use a single Linux distribution, tapping into the benefits of flexibility, compatibility and risk mitigation. The survey results show the need for multi-Linux management solutions for the majority of respondents.

11. What are the most important factors
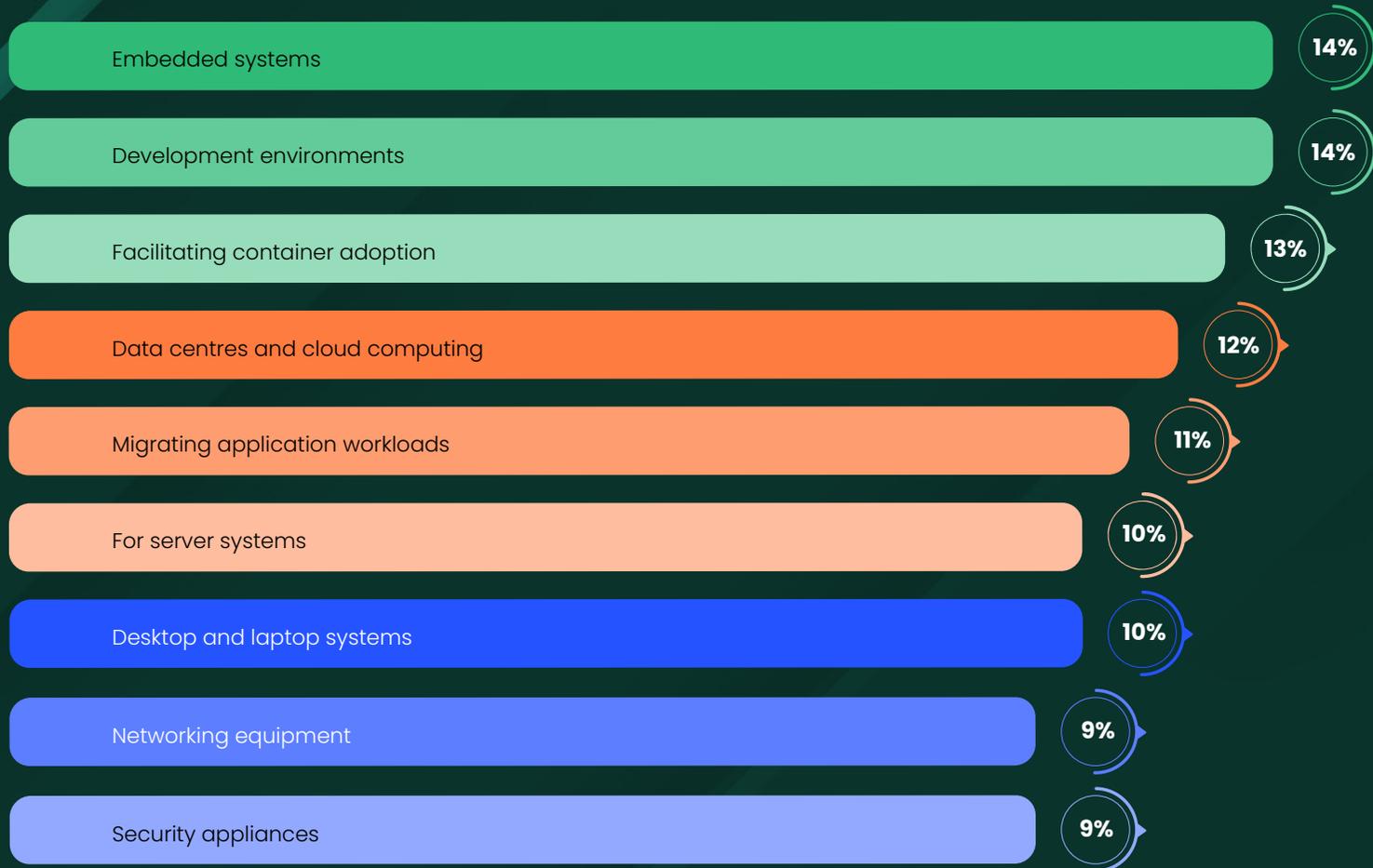when selecting a Linux solution?
Please select your top two:
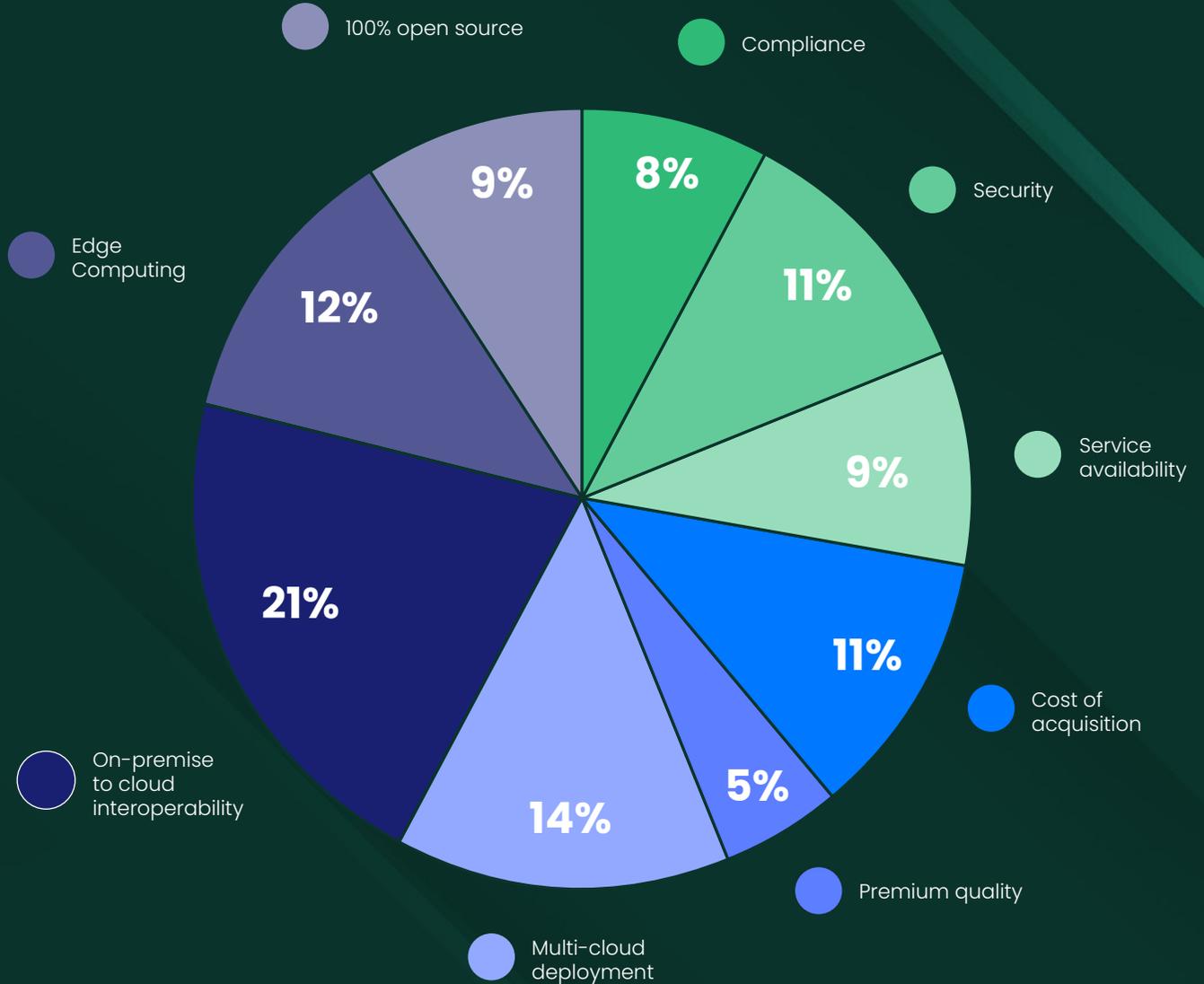
On-premise to cloud interoperability was selected as the most important factor when selecting a Linux solution. As organisations modernise, many are looking to cloud and hybrid cloud adoption to optimise resources, ensure scalability, simplify management and maintain security and compliance across diverse environments. In addition, the combined data for multi-cloud (14%) and on-prem to cloud interoperability (21%) indicates that supporting this span of deployment 'locations' is crucial.

100% open source — 9%
Compliance — 8%
Security — 11%
Service availability — 9%
Cost of acquisition — 11%
Premium quality — 5%
Multi-cloud deployment — 14%
On-premise to cloud interoperability — 21%
Edge Computing — 12%

12. What are the most common use cases for Linux within your organisation's IT department?
Please select the top two:

Embedded systems — 14%

Development environments — 14%

Facilitating container adoption — 13%

Data centres and cloud computing — 12%

Migrating application workloads — 11%

For server systems — 10%

Desktop and laptop systems — 10%

Networking equipment — 9%

Security appliances — 9%

Respondents highlighted multiple use cases for Linux across their organisation's IT department – from facilitating container adoption to data centres and cloud computing – indicating a diverse set of organisational needs and the requirement of Linux to be adaptable to these.

Conclusion

As organisations navigate the complexities of digital and cloud-native infrastructure, insights obtained via this research provide valuable guidance for strategic decision-making. By addressing challenges related to security, Edge Computing, containerisation and Linux, organisations can better position themselves to harness the full potential of digital technologies and drive sustainable growth.

The findings highlight a landscape where organisations are striving to balance various demands when it comes to their digital and cloud-native infrastructure.

Security

Security emerges as a focal point for many organisations, with challenges surrounding the secure software supply chain presenting hurdles. Efficient lifecycle management and integrating security across the software cycle are identified as primary concerns, while container security garners attention as organisations grapple with the intricacies of managing containerised workloads, highlighting the need to identify solutions and partners that can secure everything from the core to the cloud to the Edge, to address these complexities effectively.

Enterprise Container Management

The findings also recognise the transformative impact of cloud-native technologies such as Kubernetes, which was deemed important or very important by nearly half of respondents. Such technology supports organisations to optimise their operations and ensure rapid delivery of services – both critical factors for organisations accelerating their Digital Transformation efforts.

Innovative DevOps and PlatformOps tools are recognised as essential for gaining a competitive advantage and enhancing operational efficiency. Organisations acknowledge the range of benefits offered by these tools, including increased efficiency, improved collaboration, scalability and enhanced security.

Business-critical Linux

Organisations are also using Linux for multiple use cases to accelerate their digitalisation efforts. It's critical that they can access a secure, modern infrastructure platform that can facilitate the needs of both on-premises and multi-cloud environments as their businesses continue to digitally transform.

In an increasingly competitive business landscape, enterprises are shifting their focus towards modernising their infrastructure systems. For many, this involves a shift from legacy technologies towards adopting cloud-native tools, facilitating agility and rapid innovation. But security must be at the forefront of this transformation. Building a secure environment is imperative for organisations to foster genuine innovation and those enterprises that can navigate the balance between security and modern technologies that will thrive.
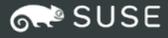
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CXO priorities

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