

# 2024

# Global Tech Trends

A Red Hat® report

Red Hat surveyed 706 information technology (IT) leaders to better understand where they are on their digital transformation journeys, their IT and non-IT funding priorities, and the challenges they are facing. It was conducted worldwide across a wide range of industries. Respondents included a subset of Red Hat customers together with others drawn from a broad industry panel who were all at least decision influencers for hardware, software, or cloud purchases at companies with a minimum of US\$10 million in revenue (and mostly significantly larger).

This is the 10th year we have conducted this research. While we are always probing new aspects of technology usage, many of our questions are consistent from year to year, allowing us to explore trends over time.

[Read more about the 6 key areas that we explored in our survey, conducted from August through September 2023.](#)

# 01

## Manual processes are a key digital transformation barrier

Automation can be an effective tool to help mitigate the top barriers to digital transformation. In addition to reducing employee workloads, it can improve quality and consistency.

### Note

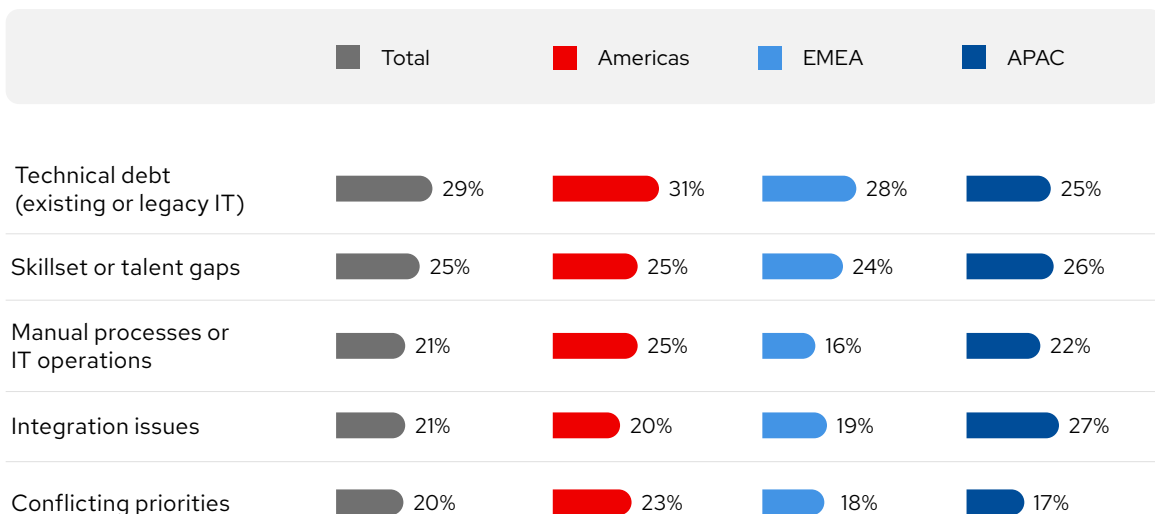
Original survey questions and answers have been condensed in the main text for readability. Please note that some charts highlight specific selections rather than all response options.

Automation is a pervasive trend we see across many areas of IT. It is increasingly necessary as hardware and software stacks scale up and grow more complex. Automation is becoming more widespread and more sophisticated—aided by better observability tools coupled with artificial intelligence (AI)-assisted analytics.

We see this trend reflected in this year’s survey. Manual processes or IT operations are now seen as one of the top 3 barriers to digital transformation; however, it was more often cited as a barrier in the Americas and less frequently in Europe, the Middle East, and Africa (EMEA).

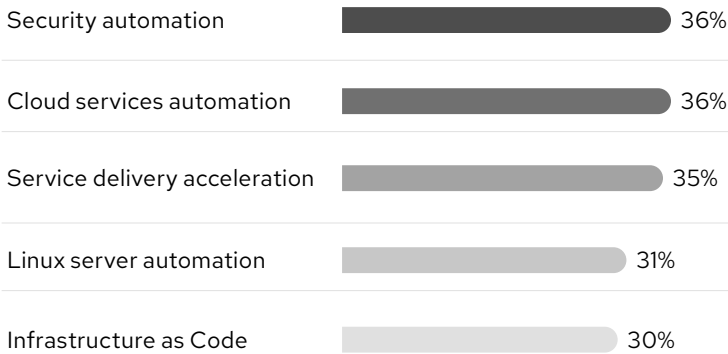
 Chart 1

*What do you think are the top barriers preventing your company from being successful in its digital transformation? (Showing top 5 results.)*



But even that data point does not tell the whole story. The other 2 top barriers were technical debt and skillset or talent gaps. While automation is not a panacea to deal with having too much work and too few hands, it is a powerful tool for not only reducing workloads, but improving quality and consistency as well.

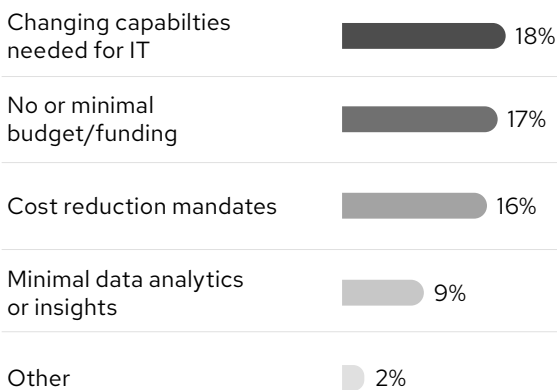
Companies are automating in many areas with security automation, cloud services automation, and service delivery acceleration prioritized when it comes to funding.



**Chart 2**

*Over the next 12 months, what are your company's top funding priorities for IT operations automation? (Showing top 5 results.)*

Digital transformation barriers have not shifted significantly over the past couple of years. The rank order has bounced around some, with manual processes rising from #5 to #3, but the top 6 barriers in 2022 and 2023 are persistent today. Notably, lack of funding and cost reduction mandates remain near the bottom of the list, despite uncertain economic sentiments and tighter budgets.



**Chart 3**

*What do you think are the top barriers preventing your company from being successful in its digital transformation? (Showing bottom 5 results.)*

# 02

## What are the IT management funding priorities?

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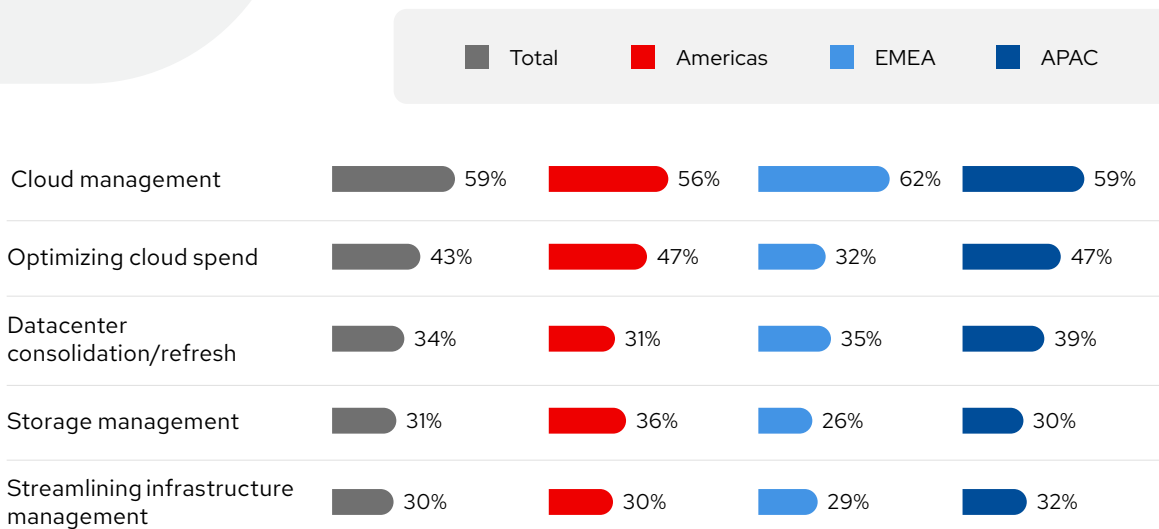
This year saw a big drop in migration workload management as a funding priority to 25%, likely reflecting that either migration work has already happened or is not a current priority.

Cloud management, which encompasses various forms of hybrid and multicloud management, remained the highest priority by far this year, with 59% identifying it as a top 3 priority. This figure is up 9 points from just 2 years ago. Hybrid cloud environments are the norm, with companies generally being neither private cloud-first (21%) nor standardizing on a single public cloud (9%), and reporting the importance of a thoughtfully managed hybrid approach.

This funding priority was similar across regions, with EMEA a bit higher at 62% and the Americas a bit lower at 56%.

 **Chart 4**

*Over the next 12 months, what are your company's top funding priorities for overall IT management? (Showing top 5 results.)*



Another funding priority worth noting includes optimizing cloud, as indicated by 43% of respondents. However, this category—commonly referred to as financial operations (FinOps)—is only going to become more important, especially to the degree that IT organizations become more focused on trimming unnecessary spending.

One year-over-year drop in funding priority is especially interesting—even if the reason for it is not clear. Workload migration management saw a full 9 point drop to near the bottom of the IT management funding priorities list. Perhaps it reflects that many organizations have settled on where their applications can most effectively run or, at least, are not prioritizing moving them at this time. In any case, neither widespread repatriation from public clouds nor the wholesale shutting down of datacenters for existing workloads is the norm.

# 03

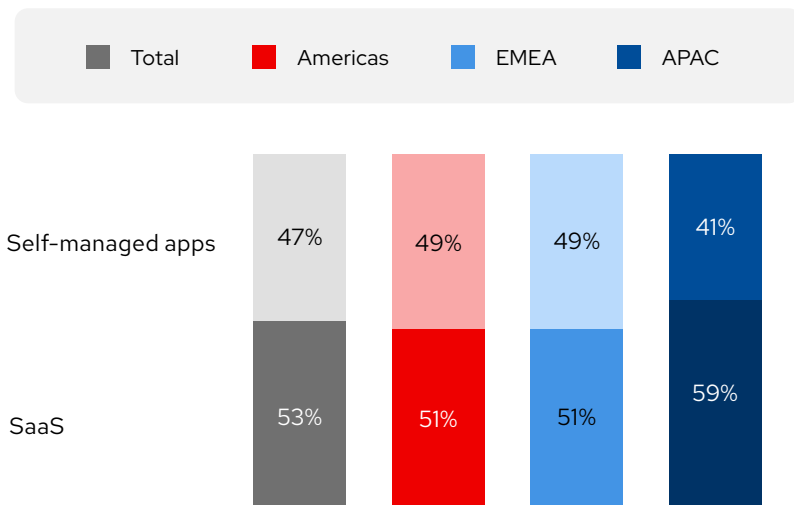
## In-house application development remains important

Although SaaS is a big part of modern enterprise software use, in-house application development remains very important as well, with half of all self-managed applications running in a hybrid cloud.

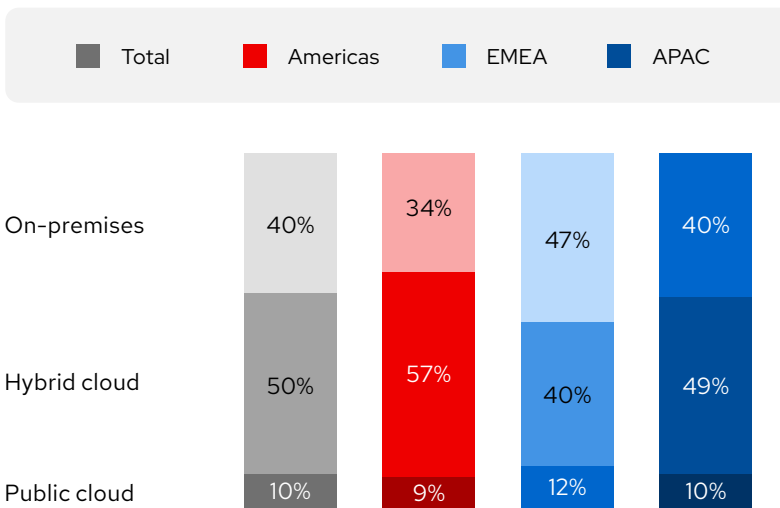
All regions, especially Asia-Pacific (APAC), lean towards Software-as-a-Service (SaaS) when asked “What percentage of your enterprise applications are you consuming as a service (SaaS) versus building and managing yourself?” But the lean is slight—only 53% overall with the balance building and running their own applications (53% is actually down a few percentage points from our 2022 and 2023 survey results).

**Chart 5**

*What percentage of your enterprise applications are you consuming as a service (SaaS) versus building and managing yourself?*



Half of the self-managed applications run in a hybrid cloud environment overall, with the Americas higher at 57% and EMEA lower at 40%. Only 10% of self-managed applications run in a public cloud overall, and the responses are similar across geographies. The 40% that do not run in a hybrid cloud or public cloud run in an on-premise environment only.



**Chart 6**

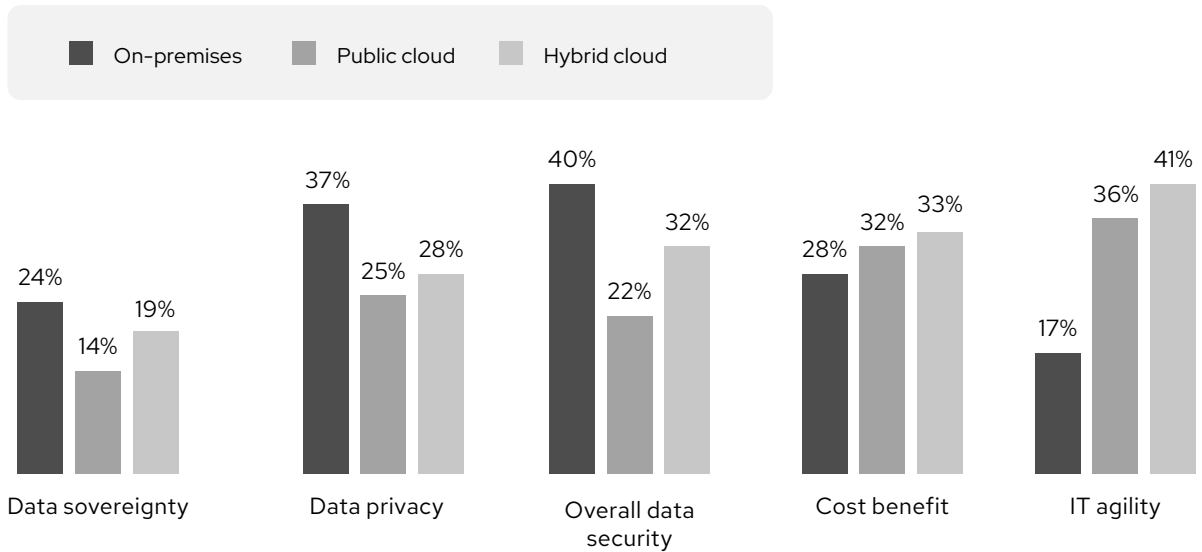
*Of the apps you're running yourself (not SaaS), what infrastructure do your applications run on?*

Respondents gave a number of reasons for choosing to run on 1 type of infrastructure over another. For on-premise, the main driving forces were around data: data sovereignty, data privacy, and overall data security. Cost benefits were cited by more than a quarter of on-premise respondents as well—although a slightly higher number of public cloud and hybrid cloud infrastructure users said cost benefit was a major reason driving their choice.

Those using hybrid clouds clearly prioritize IT agility, with 41% saying it was 1 of their main reasons for choosing as they did. Conversely, only 17% of on-premise-only users cited agility; other perceived benefits—such as those related to data—are apparently more important to them.

### Chart 7

What are the main reasons for having your applications run on public cloud/on-premises/hybrid only today?



## 04

Application modernization is big, but not everywhere

Modernizing existing applications is the top application development funding priority at 45%.

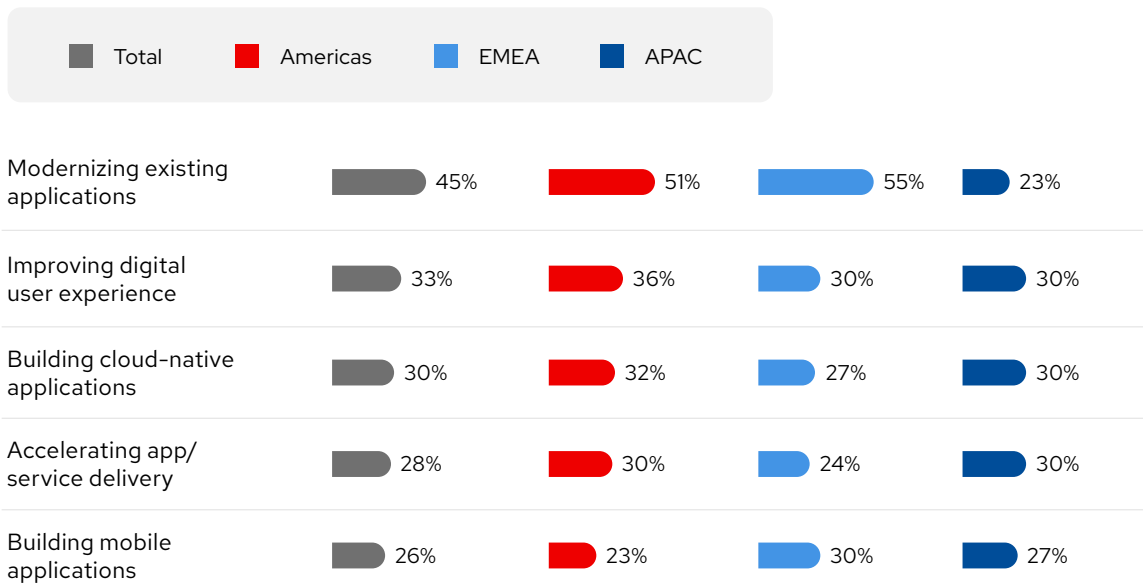
The Americas and EMEA have a fairly similar rank ordering of application development funding priorities. APAC is both more varied and places application modernization fairly far down its list of application development funding priorities. Given that APAC is also a larger SaaS consumer on a percentage basis than the other regions, it is reasonable to hypothesize—and other research has suggested—that replacing legacy software with a SaaS is a somewhat more common approach in APAC than elsewhere. (This is sometimes called repurchasing in the context of application modernization strategies, even though it does not involve rewriting existing software.)

In the Americas and EMEA, by contrast, more than half of respondents said that modernizing existing applications

was a top area of application development investment. This is well over twice the response given in APAC, a level of regional difference we do not often see in our surveys. Other top priorities include improving digital user experience, building cloud-native applications, and accelerating application and service delivery. The Americas placed more emphasis on providing new developer tools and EMEA a bit more weight on building mobile applications, but the 2 lists were more similar than different.

**Chart 8**

*Over the next 12 months, what are your company's top funding priorities for developing applications? (Showing top 5 results.)*



To the degree that there were surprises, it is that creating artificial intelligence and machine learning (AI/ML) applications and secure coding practices/tools were fairly far down the list in all geographies. Today's funding priorities do not always reflect the weight a company places on some categories, but secure coding practices/tools nonetheless reflects a multipoint drop in this category from the prior year which was, in turn, a multipoint drop from the year before that.



# 05

## Efficiency creeps up as a desired outcome

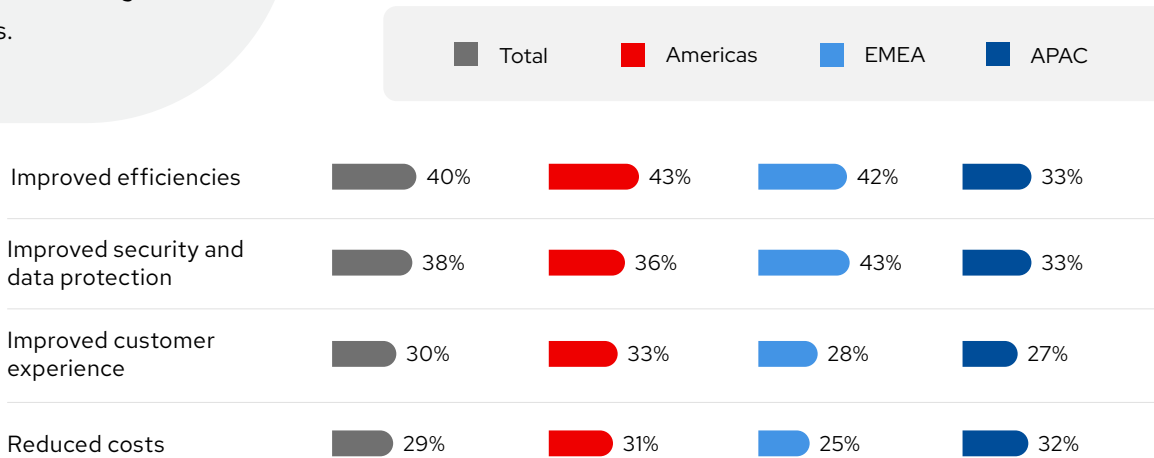
While we did not see a big tilt towards increased efficiencies and cost savings given today's broader economic and geopolitical climate, there were at least hints that these crept up as desired outcomes when it comes to allocating budgets.

We asked respondents, "What are the greatest outcomes you hope to achieve through your company's funding priorities?" This is a good way to get a view into what is important to the IT leaders we survey and, because we ask many of the same questions every year, whether their most important goals are shifting.

We can mostly report that not a lot has changed, whatever uncertainties there are given the broader economy and geopolitical landscape. Improved efficiencies, improved security and data protection, improved customer experience, and reduced costs fill the top 4 slots this year just as they did the prior 2 years.

**Chart 9**

*What are the greatest outcomes you hope to achieve through your company's funding priorities previously mentioned? (Showing top 4 results.)*



That said, there has been some movement in the percentage of respondents picking some of the categories. Most notably, while improved efficiency has been the top outcome for each of the past 3 years, this year it ticked up to 40% from 34% last year—although APAC remains lower at 33%. While not a seismic shift, it is at least enough to suggest that efficiency is more valued relative to other things than it was a year or 2 ago. Reduced costs also crept up but only by 1 point, emphasizing that the data does not show, at least not yet, a wholesale reordering of priorities.

# 06

## Are some aspects of security underfunded?

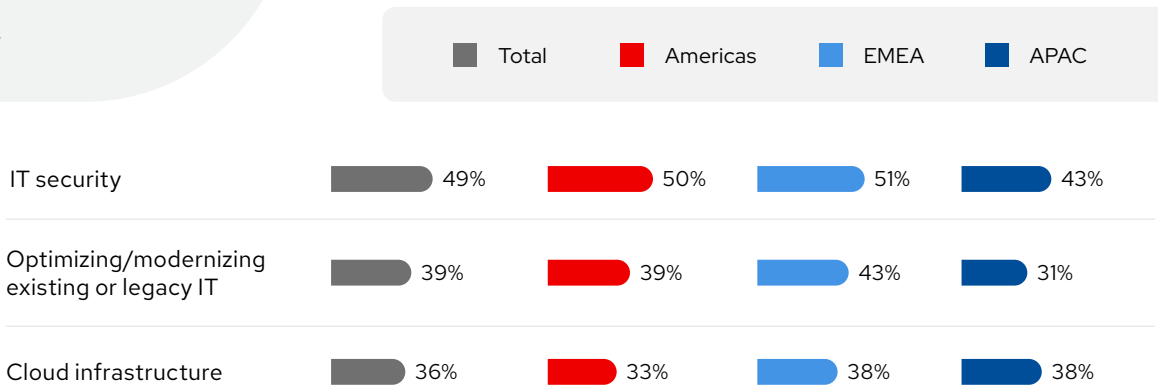
Security remains a top funding priority. However, specific aspects of security, including supply chain security and the talent needed to advance security work, remain a low funding priority, at least in most regions.

Security has also gained as both a desired outcome and a funding priority.

Improved security/data protection is another outcome that is a big gainer this year (also up 5 points year-over-year). In addition, although our data from past surveys has consistently shown IT security as the top IT funding priority, this year half the respondents said it was one of their top 3 funding priorities. That is a 5-point increase from last year—which is much larger than most changes we see from one survey to the next.

**Chart 10**

*Over the next 12 months, what are your company's top IT technology funding priorities? (Showing top 3 results.)*



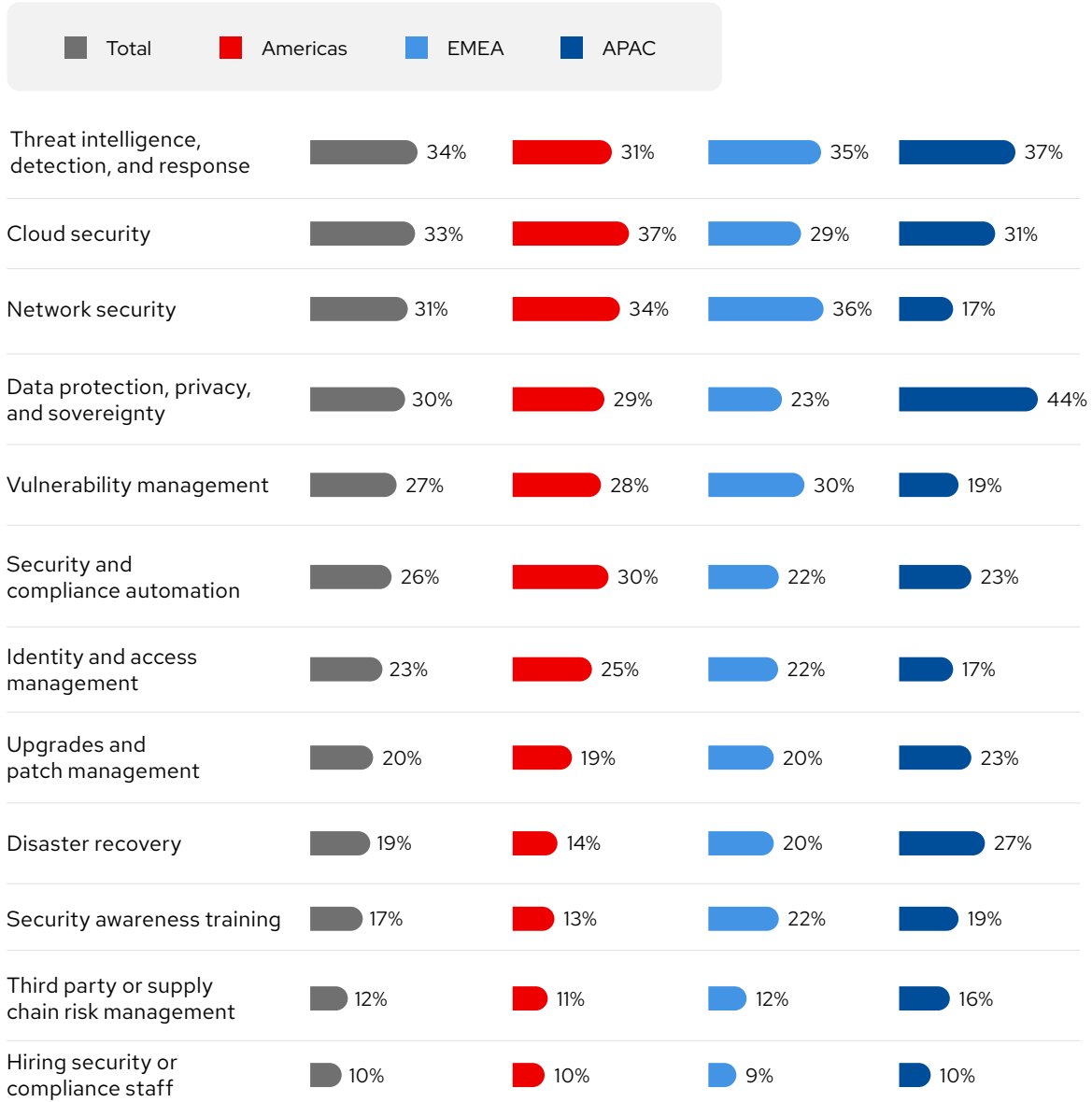
However, if we look inside the security category, we see some of the same seeming inconsistencies we have seen in the past. Some of it may reflect that certain security categories represent investments in expensive but critical resources, such as specialized hardware or proprietary software, while others may be viewed as important security elements that just do not need a lot of incremental funding.

But it is still hard to reconcile threat detection, intelligence, and response being the top IT security funding priority, with security awareness training and hiring security or compliance staff being among the lowest priorities. As we have also seen before, for all the attention it gets from some segments of the IT industry and even the U.S. federal

government, third-party or supply-chain security also remains near the bottom when it comes to funding. (While still low, supply-chain security was more in line with other security funding priorities in APAC relative to the other regions.)

**Chart 11**

*Over the next 12 months, what are your company's top funding priorities for security?*



Regions varied quite a bit in their priorities. For example, APAC ranked data protection, privacy, and sovereignty considerably higher than the other regions—while, perhaps surprisingly, EMEA ranked it lower.