BLOCKS & FILES.

WHITEPAPER

DATA MANAGEMENT IS STILL MANUAL LABOR FOR MOST REGISTER READERS

WE ALL KNOW THAT ORGANIZATIONS ARE STORING EVER MORE DATA. REGISTER READERS TOLD US AS MUCH EARLIER THIS YEAR.

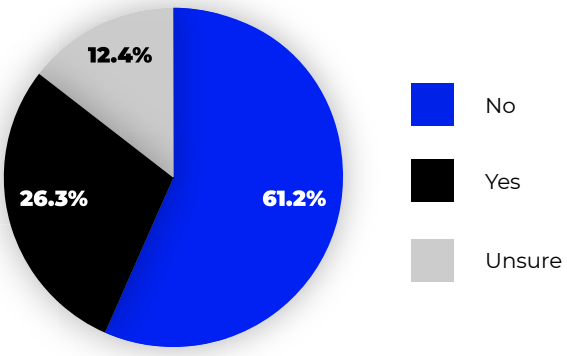
But a mountain of data means nothing unless it's easily available and ready to pour into applications. Even though we have ever more of it, state of the art storage is expensive, and it makes no sense to clutter it up with aging data just … because.

So how are organizations really managing their data and storage? What are they doing to ensure that they have the right information ready for their applications and to ensure they are not piling up data that has little ongoing value.

We turned to our readers to find out. We heard from over 750 IT pros, half of them in Europe, a quarter in North America, and the balance spread across Asia Pacific and Latin America.

FIGURE 1:

DO YOU USE DATA MANAGEMENT SOFTWARE TO PLACE DATA ON THE MOST COST-EFFECTIVE STORAGE TIER?

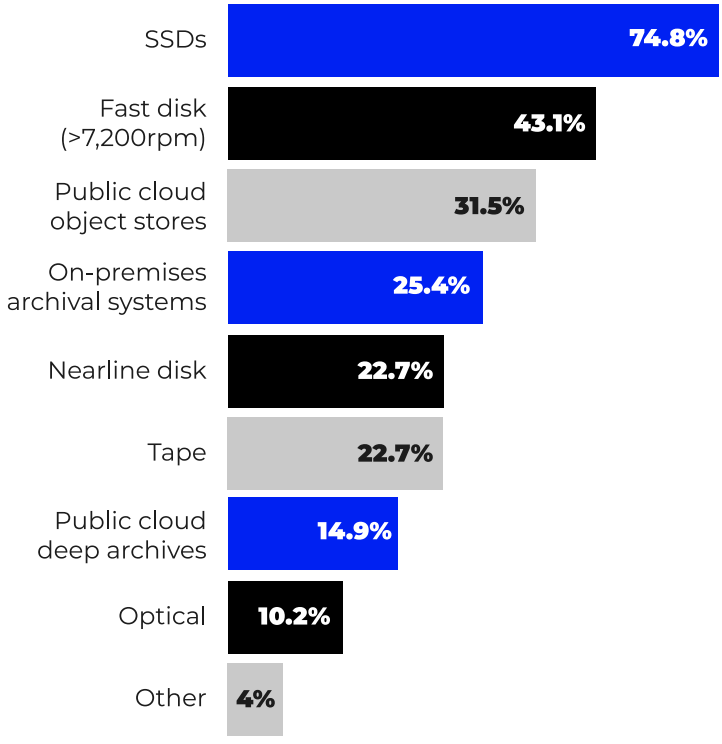


Different types of storage vary wildly in price – and in their ability to serve up data quickly. So, it makes sense to use data management software to ensure data is placed on the most cost-effective tier. Yet, our figures show just over a quarter of respondents overall (26.3 per cent) are doing so. The figure drops very slightly once tech and telco firms are excluded.

While 61.2 per cent of respondents said they were not using data management software, perhaps a bigger surprise is the 12.4 per cent who don't seem to know either way. Looking at the largest firms, those with 10,000 or more employees, the proportion using data management software jumped to 38.5 per cent.

FIGURE 2:

WHICH TIERS OF STORAGE DO YOU USE?



This might be all the more surprising given the wide range of storage types our readers are using. It's clear that SSDs have pretty much won the battle to become the default storage medium, with three quarters of respondents reporting using the technology. Fast disks – i.e. traditional hard disks spinning at 7200rpm or more – were used by 43.1 per cent of respondents.

Just over a quarter said they use an on-prem archival system, while 22.7 per cent use nearline disk and the same amount reported using tape. One in ten reported using optical systems. We can probably assume these three technologies are used for backup/archive rather than serving production data.

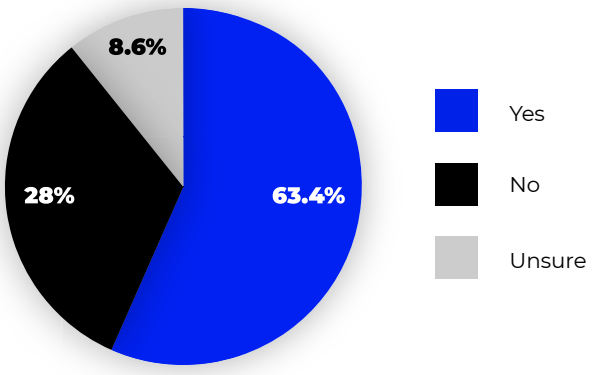
The third most reported platform was public cloud object stores, used by 31.5 per cent of respondents, while 14.9 per cent reported using public cloud deep archives – substantially less than were using on-prem archive systems or even tape.

We might expect storage to be complex, but this highlights just how many platforms and locations our readers are using to store their precious – and not so precious - data. If it's fair to assume that each platform will present its own management challenges, we can be sure that moving data between them will present even more.

Yet it seems that for now, the majority of organizations are NOT using software and automation to meet these challenges.

FIGURE 3:

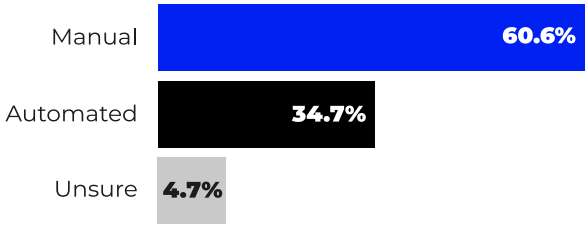
DO YOU DELETE DATA?



Is data piling up on this myriad of systems? For some, yes. Overall, 63 per cent of respondents said they do make an effort to delete data, with 28 per cent saying no, and 8.6 per cent being unsure. Once tech and telcos were excluded the proportion saying "yes" slipped slightly to 61.2 per cent. For larger companies the proportion deleting data slipped slightly further to 56.7 per cent. It may be that larger organizations have more concerns over regulations around data retention. It may also be that they hope to be able to somehow exploit that ever growing data pile – even if that hope is largely theoretical for now.

FIGURE 4:

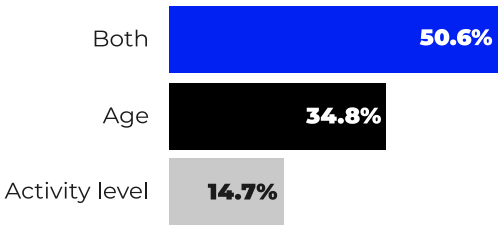
IS DATA DELETION AUTOMATED OR MANUAL?



If it's clear that many organizations are making an effort to delete data, it's also clear that software is not taking the strain. Of those deleting data, 60.6 per cent said this was done manually, with 4.7 per cent not being sure. Just 34.7 said data deletion was automated. Once tech companies were excluded, the proportion automatically deleting data slipped very slightly to 33 per cent. Looking at the largest organizations, the proportion using automated deletion was just over half.

FIGURE 5:

IS THE DELETION CRITERIA AGE, ACTIVITY LEVEL OR BOTH?

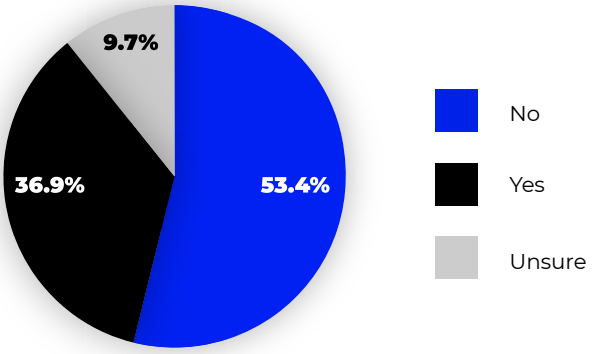


When it comes to deciding whether to delete data, age comes before activity level. Just 14.7 per cent of organizations said they based deletion on activity levels, while 34.8 per cent cited age alone. A touch over half said they used a combination of the two. Age is fairly straightforward to pin down, even

if you're not using automation. Monitoring activity levels manually is just making life hard for yourself.

FIGURE 6:

DO YOU MOVE DATA BETWEEN THE ON-PREMISES AND PUBLIC CLOUD ENVIRONMENTS?

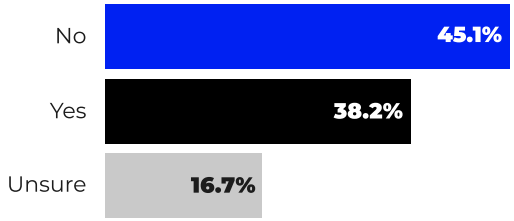


As we've seen, the public cloud was the third most cited storage platform, after SSDs and fast disk. Asked whether they moved data between on-prem and the cloud, just over half of our respondents said no, while 36.9 per cent said yes. The figure saying yes dropped slightly to 35.3 per cent when tech and telcos were excluded.

Just focusing on the bigger organizations, the proportion using cloud jumped appreciably to 45.7 per cent. As we've seen, larger outfits are less likely to delete data, but it still has to go somewhere, so why not the cloud. We might also guess that even if they're just experimenting with more sophisticated data tooling and analytics, it often makes sense to do this in the cloud.

FIGURE 7:

HAVE PUBLIC CLOUD EGRESS CHARGES CAUSED ANY DATA REPATRIATION?

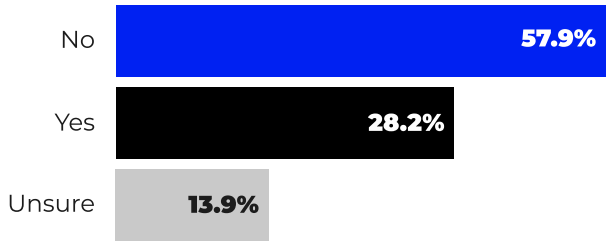


But the cloud presents its own challenges. Moving data into – and out of – the cloud often results in ingress and egress charges, as can replicating data between regions. This means some organizations might conclude it makes sense to pull some or all of their data out of the cloud and back on prem.

This certainly appeared to be a concern for some readers. Asked whether public cloud egress charges had prompted data "repatriation", 38.2 per cent of respondents said it had. When it came to larger firms, the proportion taking this view increased to 50 per cent, though it should be noted this was a smaller sample.

FIGURE 8:

HAVE PUBLIC CLOUD EGRESS CHARGES CAUSED APPLICATIONS TO MOVE TO THE PUBLIC CLOUD?

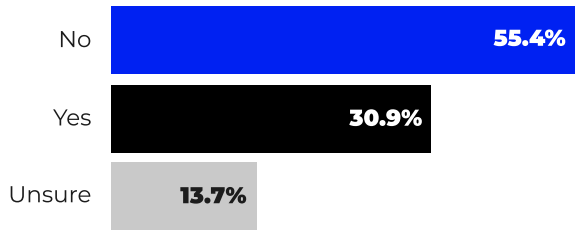


Looked at another way, the prospect of painful egress charges could be seen as a good reason for an organization to move applications off prem and into the cloud. Just under 30 per cent of respondents said "yes", they'd chosen this path, a proportion that dropped a couple of percentage points once tech companies were excluded.

Moving data AND/OR applications is not a trivial undertaking though. When it came to bigger firms, the proportion who answered "yes" jumped to 46.7 per cent. Again, this was a relatively small sample. But as we've seen, larger firms are more likely to use the cloud, and to have more data they need to manage. Having both data and applications in the same place would, on the face of it, go some way to unraveling the complexity.

FIGURE 9:

DO YOU USE DATA OPERATIONS SOFTWARE TO PREPARE AND DELIVER DATA TO OTHER APPLICATIONS?

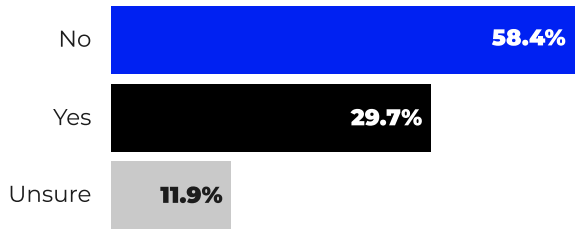


Data on its own doesn't deliver any value. It has to be in the right format, in the right application, and in the right place to do that. Asked whether they use data operations software to prepare and deliver software to applications, just 30.9 per cent of our readers said yes, with 13.7 per cent unsure, and 55.4 per cent unequivocally saying no. Once tech and telcos were excluded, the proportion saying yes dropped further, to a shade under one quarter.

Larger firms, again, seemed to be a touch more sophisticated here, with 41.9 per cent saying they were using data ops software to process and deliver data to applications.

FIGURE 10:

DO YOU USE A CLOUD DATA WAREHOUSE OR DATA LAKE?

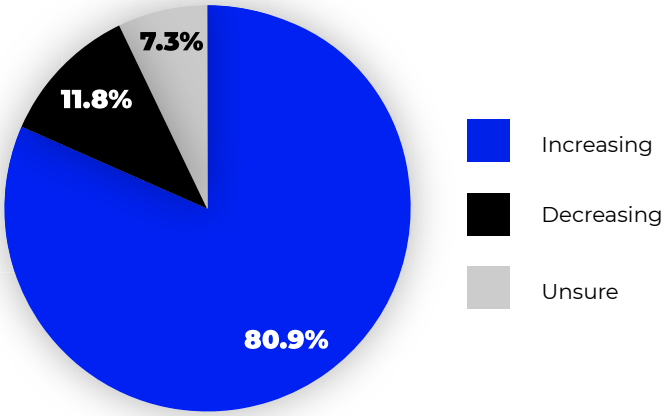


When it came to using a cloud data warehouse or data lake, the proportion of respondents saying yes was virtually identical to the proportion using data ops software to prep and deliver data to applications, at 30 per cent. The number using a cloud data warehouse or data lake also corresponded to the number who said they used public cloud object data stores. Excluding tech cos saw the proportion slip slightly to 28.3 per cent. Just looking at the largest firms, the number saying yes jumped to 48.7 per cent.

And these data warehouses and lakes are still filling up. Four fifths of respondents using such platforms said their warehouse or lake was increasing.

FIGURE 11:

IS YOUR DATA WAREHOUSE OR DATA LAKE INCREASING OR DECREASING?



Just over one in ten respondents said their use was decreasing. This was a very small subset of the respondents overall, but notably they were also far more likely to say data egress charges were a factor in data repatriation or moving data to the public cloud.

CONCLUSION

Our readers are clearly using a wide range of storage platforms and technologies to hold an ever increasing amount of data. SSDs are widely used, as is the cloud, while tape, archiving and optical all still have a role alongside these more modern platforms.

So it might be surprising that large numbers of respondents are not using data management software and automation to keep on top of their growing data piles and increasingly complex hardware stacks. This could be seen as an impediment to their ability to deliver the right data to the right platforms, in the right locations, and to the right applications. And it could impair their ability to make optimal use of their storage investments, whether on prem or in the cloud.

There are clearly some rumblings of concern about costs, at least when it comes to cloud egress charges. The question is will this translate to wider angst about the complexity and costs of managing storage over time.

Blocks & Files is a storage news, information and analysis site covering storage media, devices from drives through arrays to server-based storage, cloud storage, networking and protocols, data management, suppliers and standards.

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