Cloud Disaster Recovery Survey Report

The Most Up-to-Date Benchmarks, Trends, and Best Practices

CloudEndure
An AWS Company

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Executive Summary

CloudEndure's Disaster Recovery Survey Report reviews the challenges and best practices of companies that are currently using or considering implementing disaster recovery. The results are based on responses from over 375 IT professionals from around the world, collected through an online survey conducted in March 2018.

Key findings from this survey include:

- Almost half (47%) of the enterprises surveyed, and 38% of all companies surveyed, use disaster recovery for at least half of their production machines.

- A vast majority (71%) of respondents experienced a downtime event in the previous year.

- Only 23% of companies use a disaster recovery solution that provides continuous data protection (CDP), which means 72% of companies are at a high risk of data loss.

- Service availability goals continue to rise. 20% of all companies and 15% of enterprises aim for five-nines (99.999%) availability or better.

- Only 7% of companies manage to do monthly disaster recovery drills, and 28% conduct drills quarterly. Surprisingly, 15% of companies admit that they never conduct disaster recovery drills.

- The majority of respondents expect RTOs and RPOs of 4 hours or less (69% and 74%, respectively).

- Almost half (47%) of all companies surveyed use a public cloud as their disaster recovery target site, while only 15% use physical machines and 39% use private clouds.

Production Machines in the Organization

Almost half (49%) of survey respondents have more than 100 production machines throughout their organization – with 22% reporting over 1,000 production machines.

Organizations with over 1,000 productions machines are considered enterprise companies for the purpose of this report.

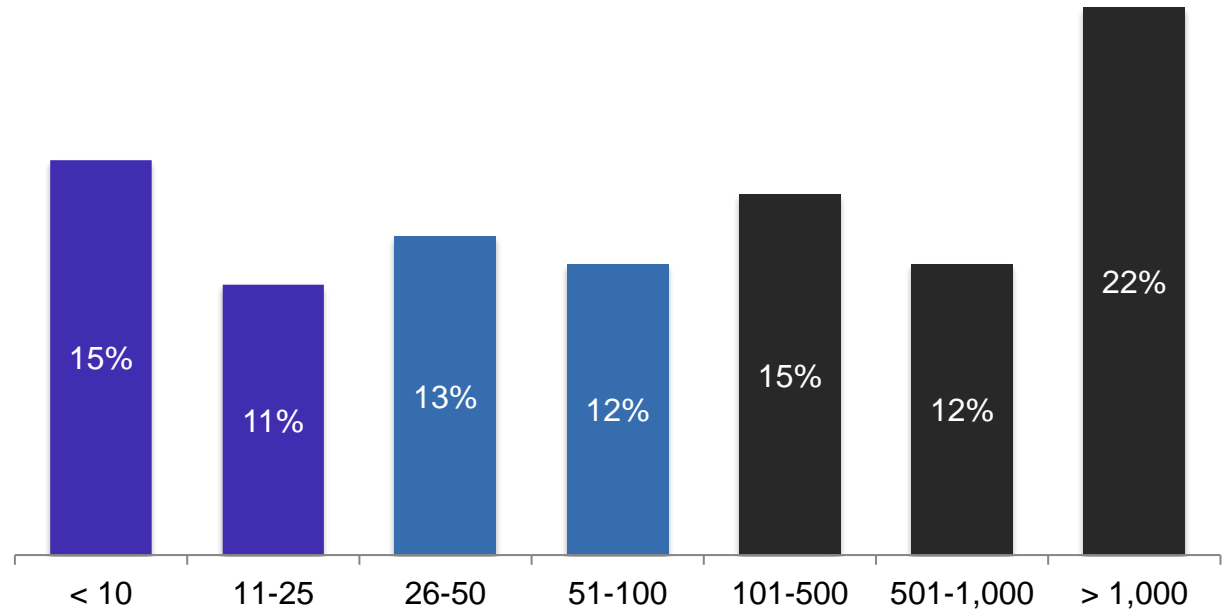| < 10	11-25	26-50	51-100	101-500	501-1,000	> 1,000
15%	11%	13%	12%	15%	12%	22%

Figure 1: Number of production machines in the organization

Production Machines Using Disaster Recovery

Forty-seven percent (47%) of enterprises surveyed currently use disaster recovery for more than half of their organization's production machines – with 15% of enterprises utilizing disaster recovery for ALL of their production machines.

Among all the companies surveyed (enterprises as well as small and medium-sized businesses), 38% currently use disaster recovery for more than half of their production machines and 14% use disaster recovery on ALL of their machines.
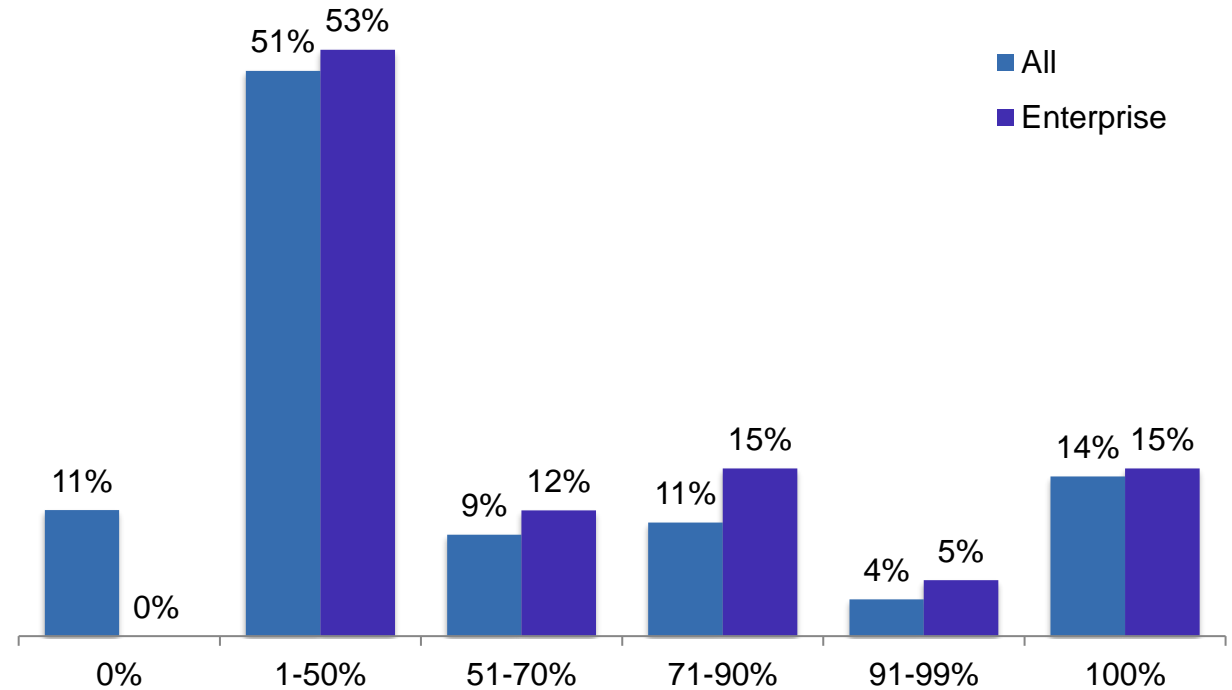

Figure 2: Percentage of production machines using disaster recovery today

Workloads Primarily Covered by Disaster Recovery

Survey respondents reported a wide range of primary workloads covered by disaster recovery, but databases (20%) were the most common.

The top four workloads – databases, file servers, web apps, and custom business applications – comprise half (49%) of the production servers covered by disaster recovery.
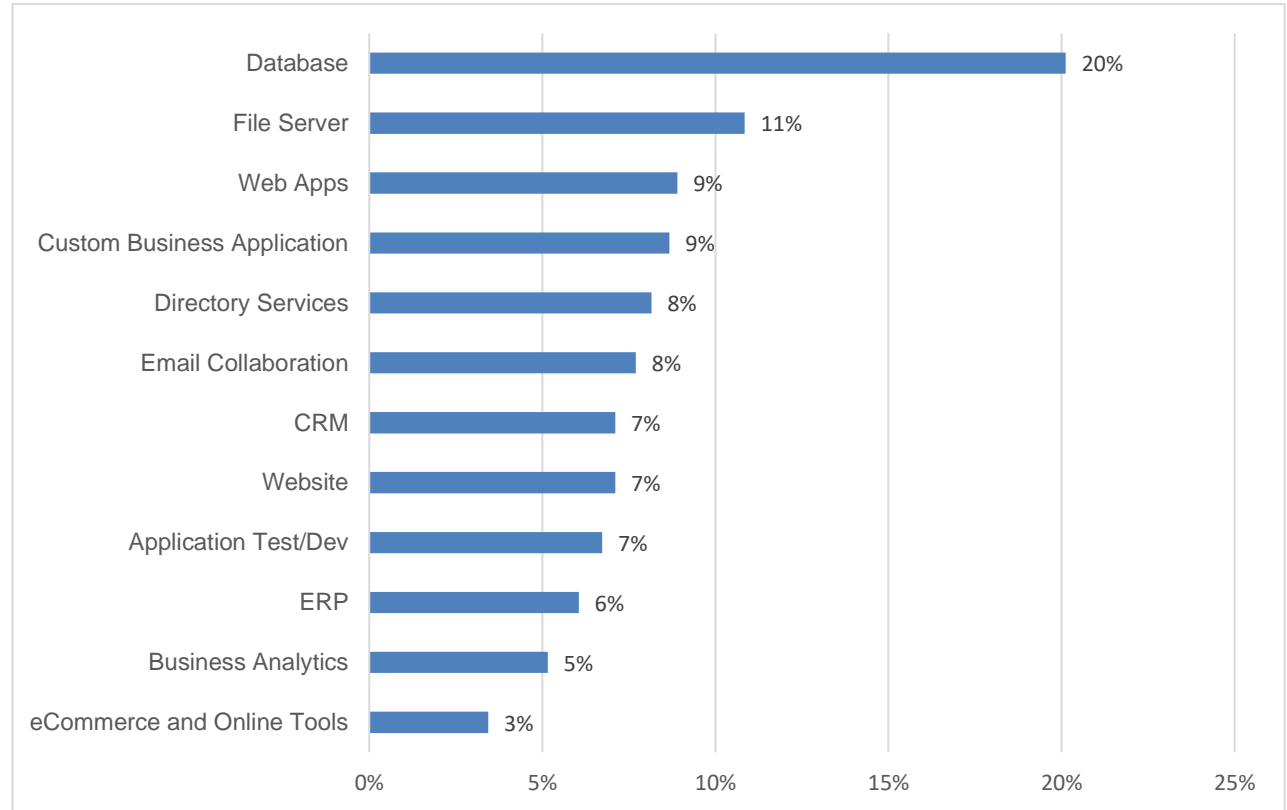

Figure 3: Workloads primarily covered by disaster recovery

Current Approaches to Disaster Recovery

Companies are using diverse strategies for their IT ecosystems. The majority (55%) of survey respondents from companies of all sizes use self-maintained disaster recovery — whether it's with third-party tools (35%) or without them (20%).

The remaining options are split fairly evenly between traditional disaster recovery providers (17%) and Disaster Recovery as a Service (22%). However, 6% of survey respondents from companies of all sizes don't have any disaster recovery solution.

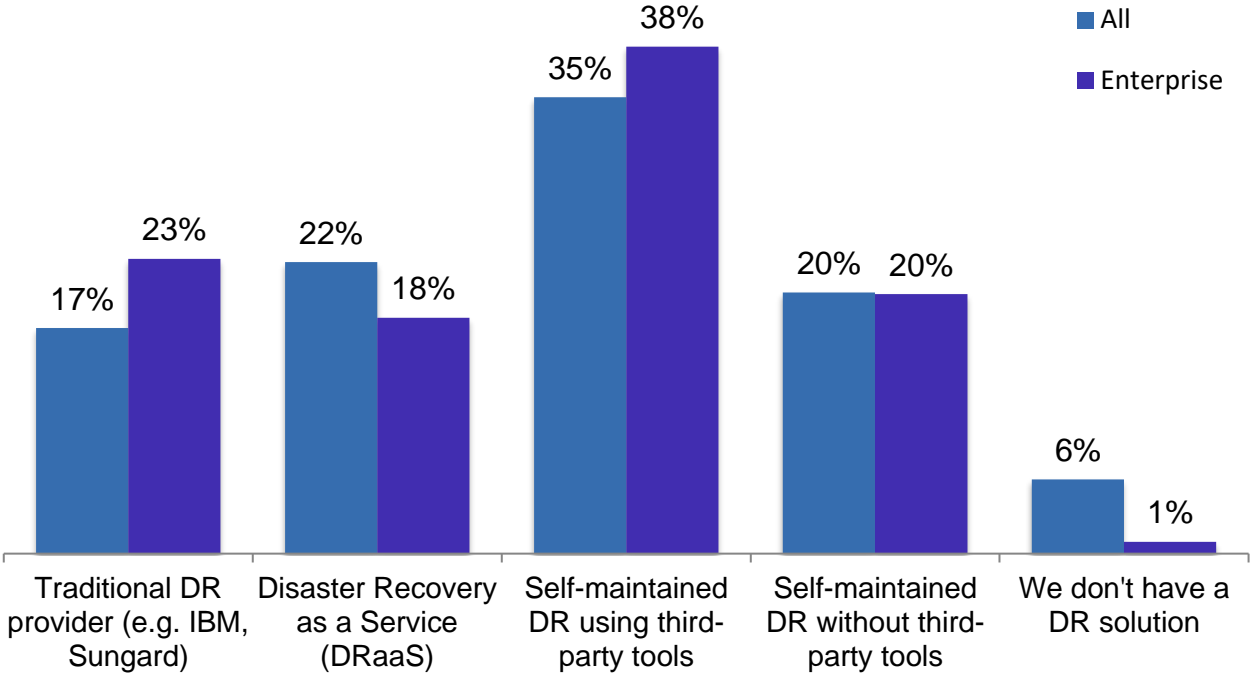Respondents chose as many approaches as applied to their company.

Figure 4: Current approaches to disaster recovery

The different disaster recovery technologies used by survey respondents are split quite evenly. Periodic snapshots (24%) and continuous data protection (23%) are the most common.

As compared with the 2017 survey results, there was a slight rise in companies choosing to protect machines with continuous data protection (CDP). Hourly snapshots (16%) are the least-utilized of disaster recovery technologies reported.
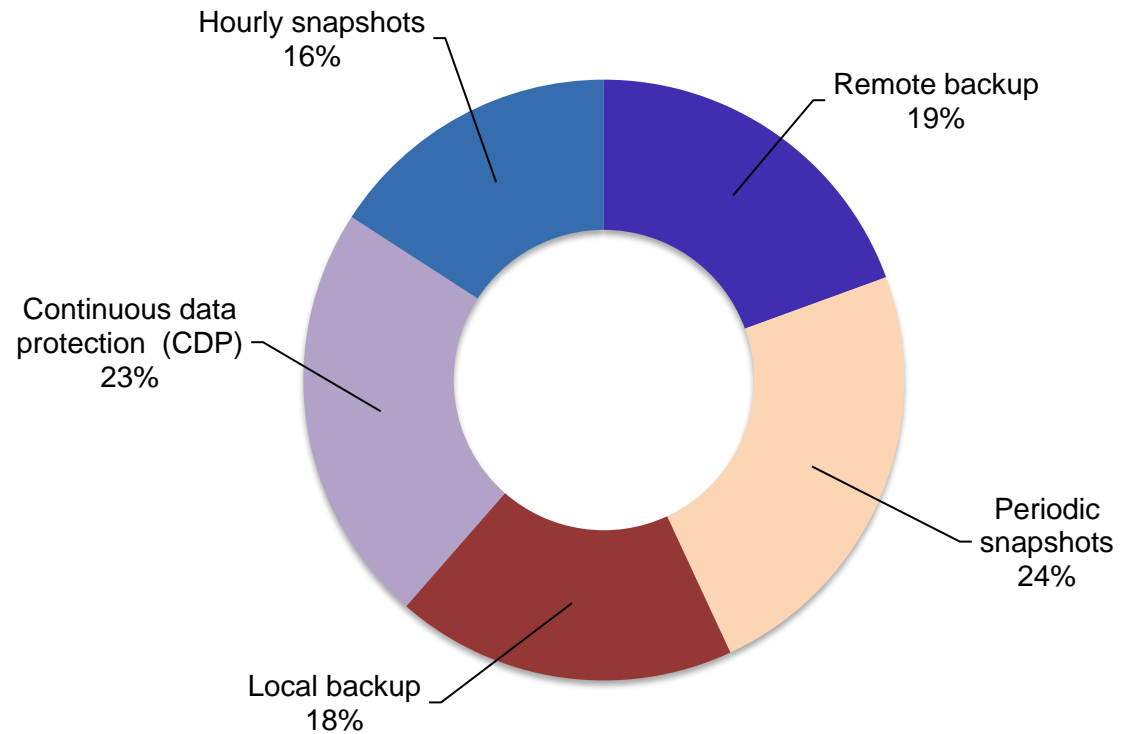

Figure 5: Different disaster recovery technologies

Disaster Recovery Site Infrastructure

The public cloud continues to be the most popular disaster recovery site, with 47% of companies using it. This is followed closely by private cloud infrastructure (39%).

Only 14% of companies use physical machines for disaster recovery, which is a lower percentage than reported in the previous survey (17% physical machines were reported in 2017).
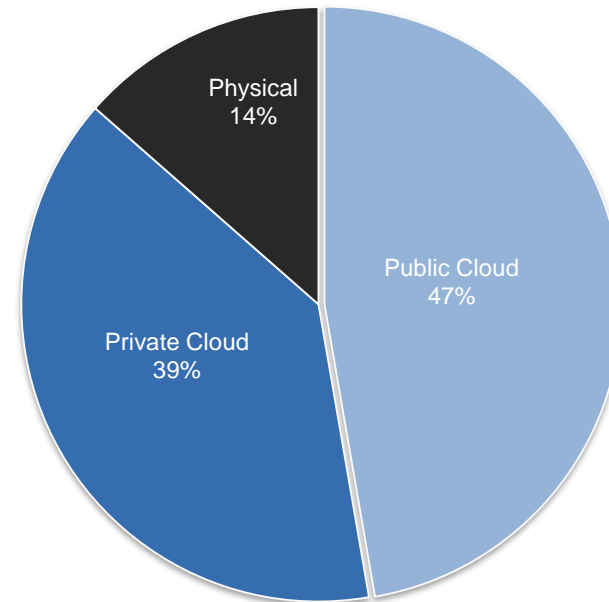

Figure 6: Disaster recovery site infrastructure

Service Availability Goals

The vast majority (79%) of enterprise companies surveyed expect service availability of 99.9% or better ("three-nines," or no more than 9 hours of downtime a year).

Overall, 69% of all companies expect service availability of 99.9% or better. About one-fifth of all companies expect the highest level of service availability – 99.999% ("five-nines," or less than 5 minutes of yearly downtime).
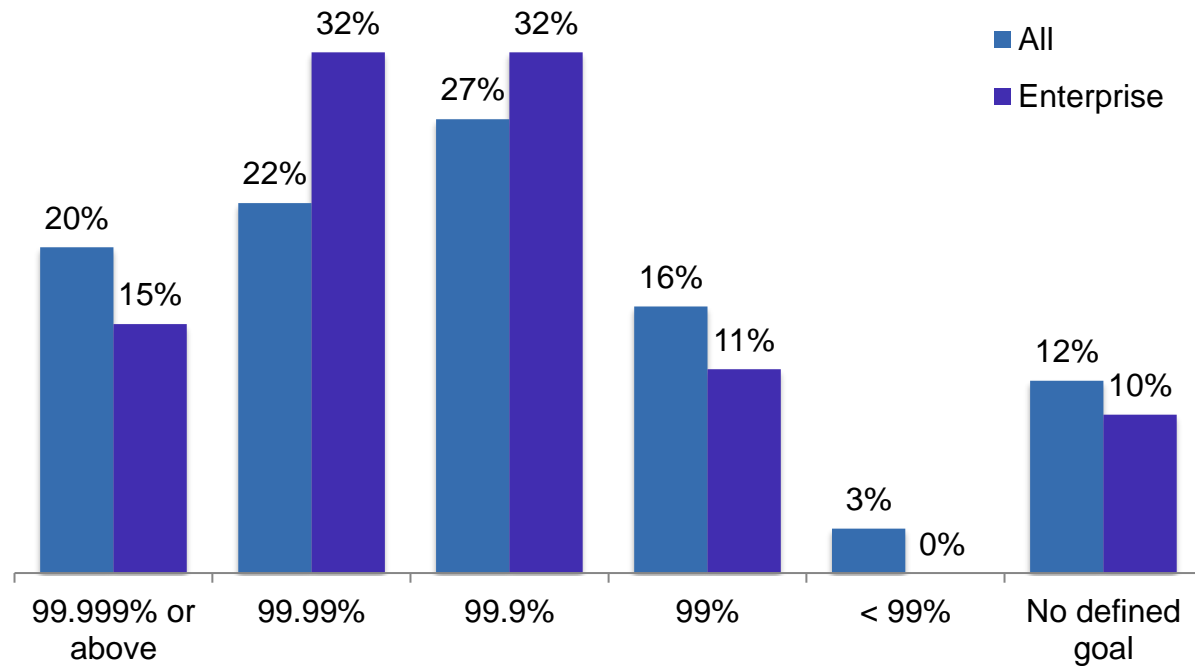

Figure 7: Service availability goals

Meeting Service Availability Goals

Only 38% of survey respondents meet their service availability goals consistently, confirming the difficulty of organizations to consistently maintain high availability.

Companies still seem to struggle with meeting their service availability goals, with 58% admitting to meeting their goals only some or most of the time.
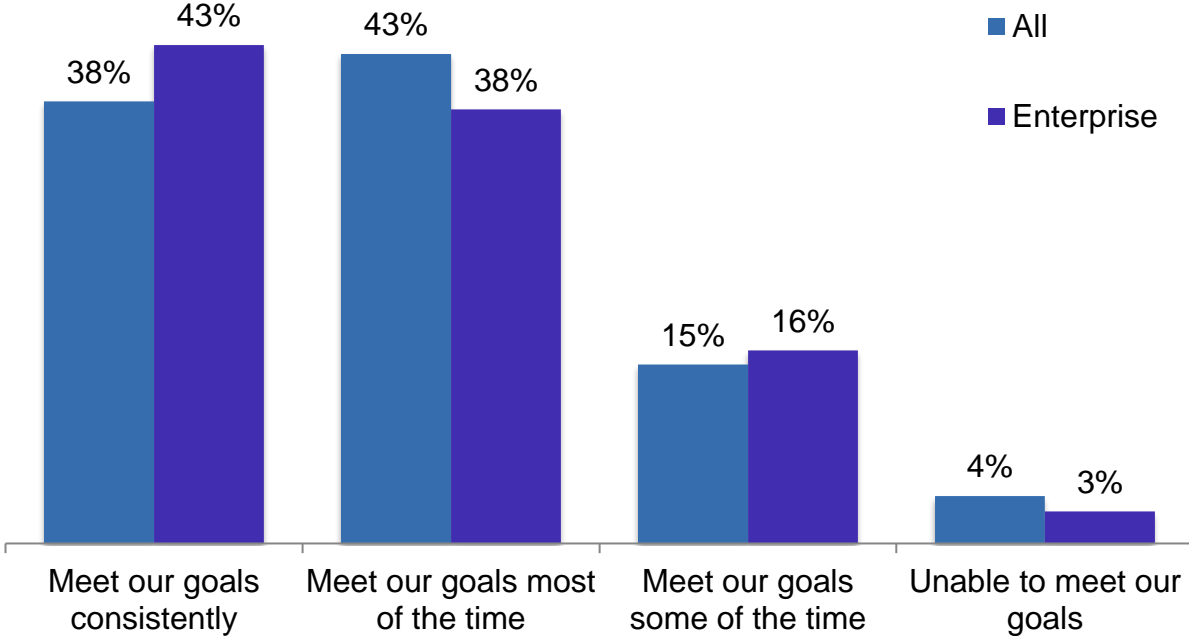

Figure 8: Meeting service availability goals

Last Downtime Event

The vast majority (71%) of respondents experienced downtime in the past year, with 21% reporting outages in the past month.
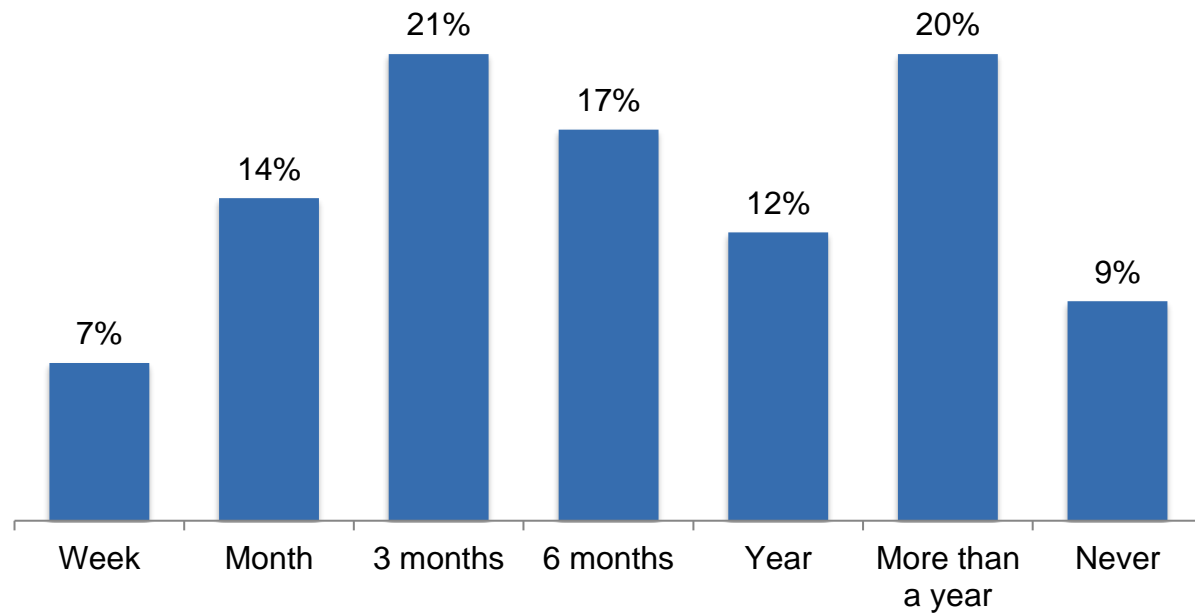

Figure 9: Last downtime event

Recovery Point Objective

Close to a quarter (21%) of this year's survey respondents report Recovery Point Objectives (RPOs) of under 1 minute.

As compared with the 2017 survey results, the number of companies expecting zero RPO grew. RPOs of 4 hours or less are expected by 74% of companies. A surprising 8% admit to not having determined RPOs at all.
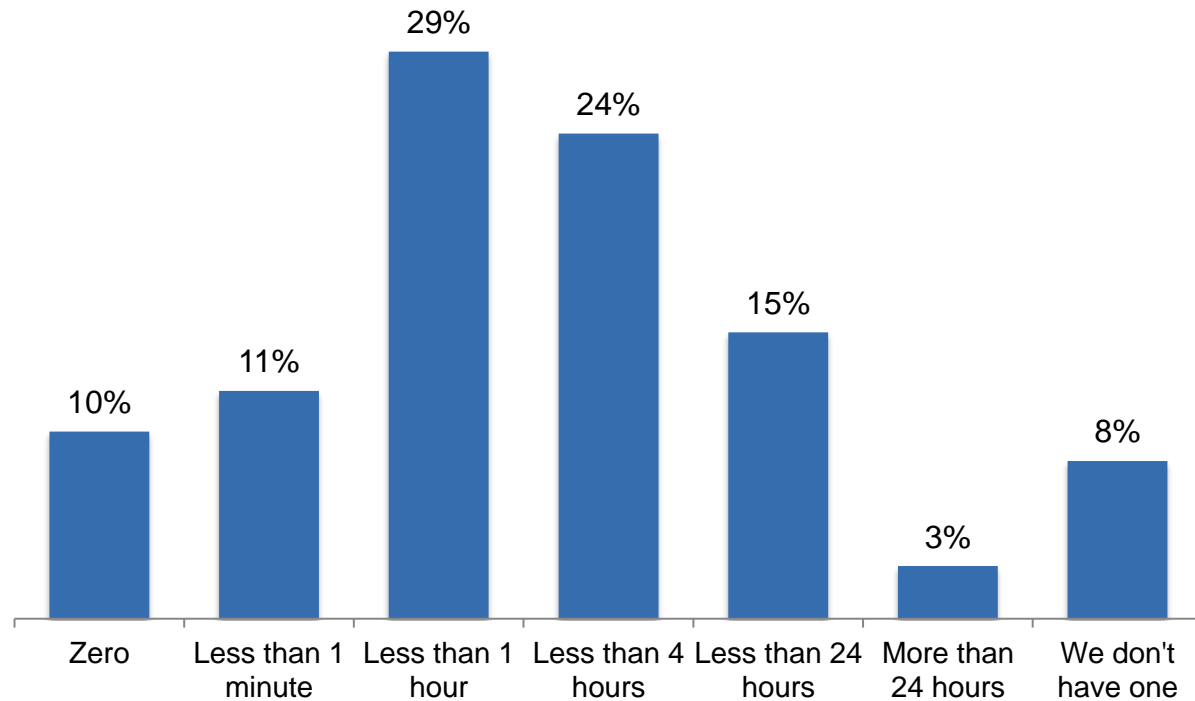

Figure 10: Recovery point objectives

Recovery Time Objective

The majority of respondents (69%) report a Recovery Time Objective (RTO) of 4 hours or less, with 6% of survey respondents having an RTO of zero. An additional 6% have an RTO of under 1 minute.

A surprising 13% of respondents report being able to accept an RTO of more than 24 hours or no determined RTO at all.
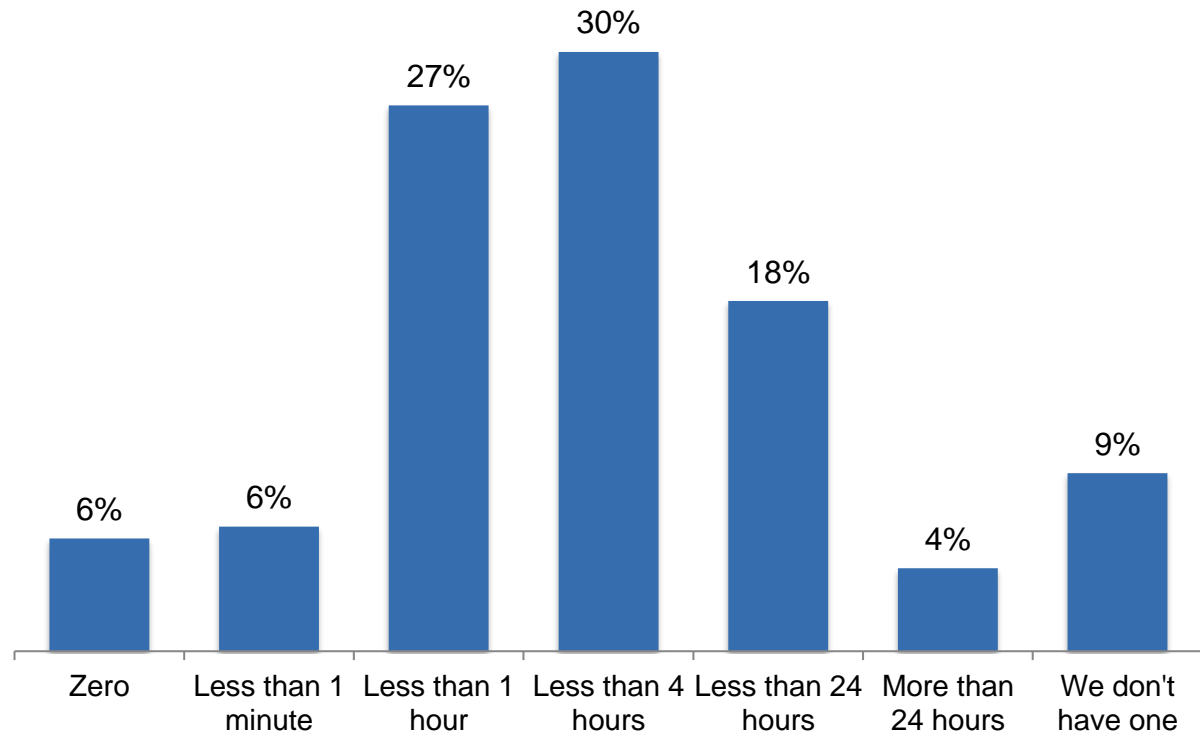
Figure 11: Recovery time objectives

Meeting RPO and RTO Goals

Less than half (43%) of the organizations surveyed meet their Recovery Point Objective (RPO) consistently.
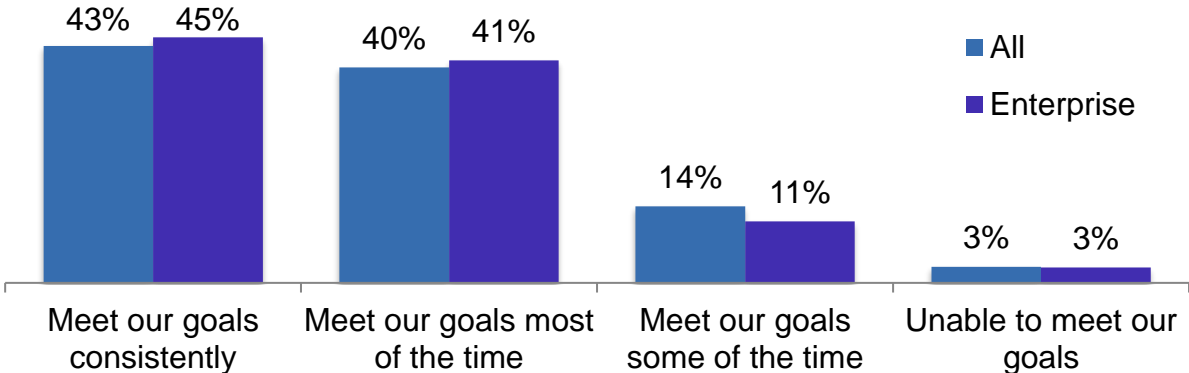

Figure 12: Meeting RPO goals

Even fewer organizations (37%) meet their Recovery Time Objective (RTO) consistently.
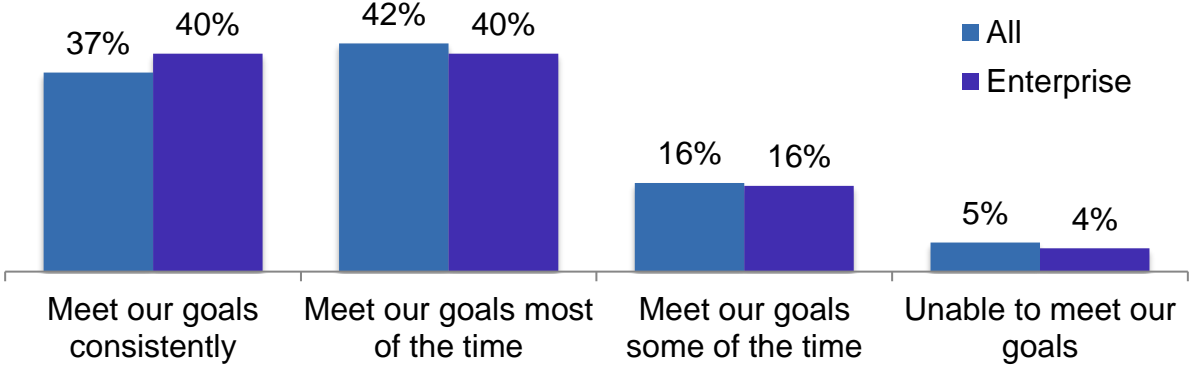

Figure 13: Meeting RTO goals

How Often Do You Conduct Disaster Recovery Drills?

The vast majority of survey respondents (73%) conduct disaster recovery drills at least once a year.

While 12% conduct drills less often than once a year, 15% admit to never running these tests, meaning that that they do not know how their DR solution will perform in a disaster.
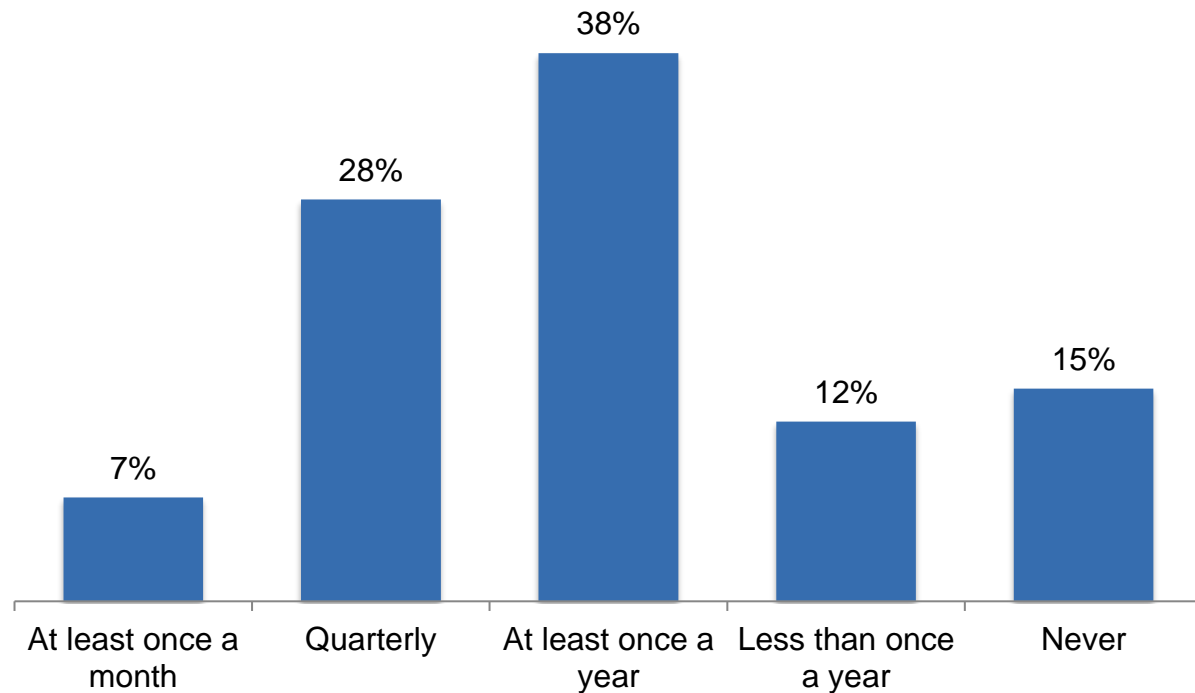

Figure 14: Frequency of disaster recovery drills

Top Risks to Service Availability

Human error (19%) remains the top risk to system availability, as it was in 2017, followed by:

- **Network failures (17%)**
- **External threats (13%)**
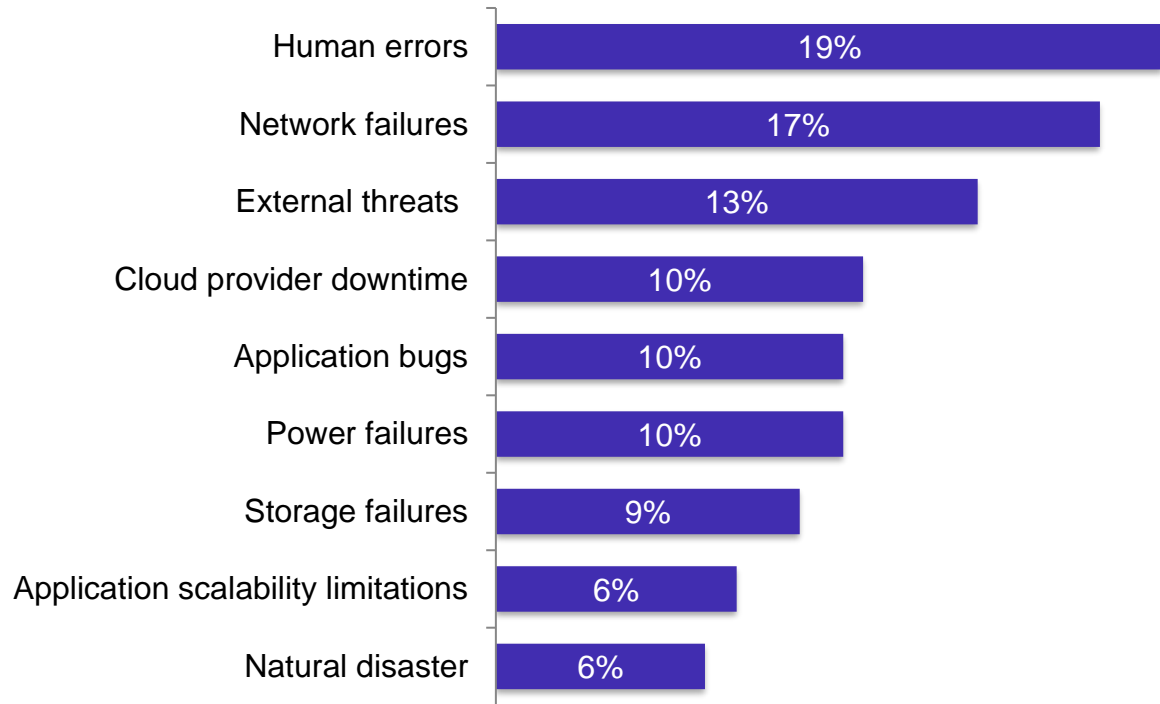- **Cloud provider downtime (10%)**

Figure 15: The top risks to service availability

Who Is Responsible for Disaster Recovery?

In the majority of businesses (52%), the IT department is responsible for disaster recovery processes and management.

Enterprises are more likely (18%) to have a dedicated business continuity / disaster recovery (BC / DR) team, while only 13% of all companies have a dedicated BC / DR team.
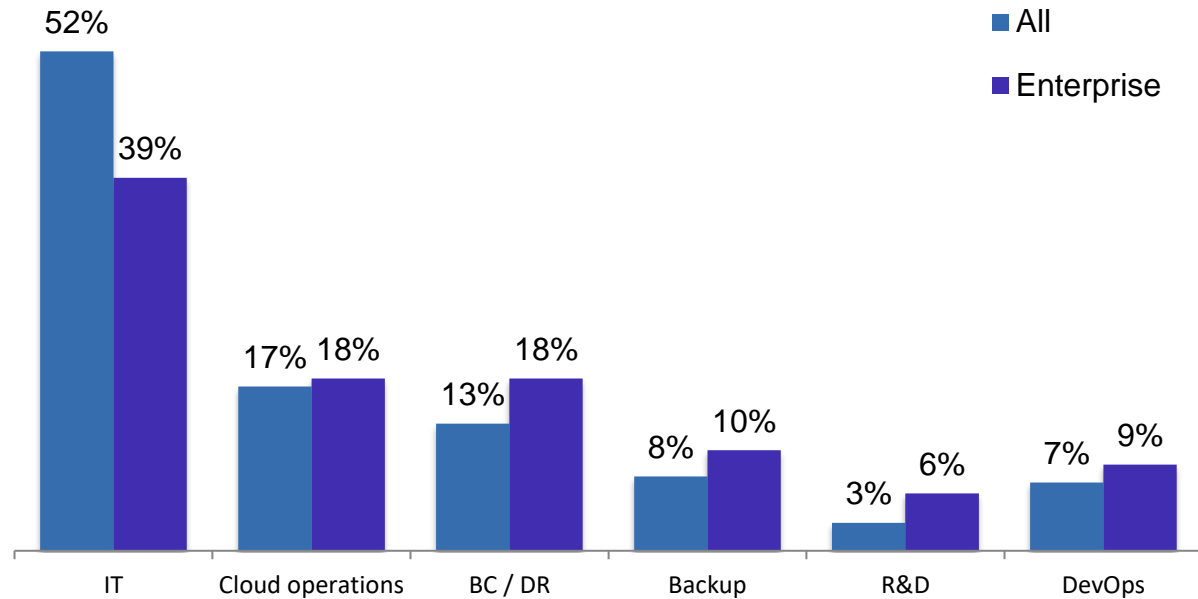

Figure 16: Who is responsible for DR?

Hours Invested in Disaster Recovery per Week

Enterprise company respondents are more likely (30%) to invest over 10 hours per week in disaster recovery. But for companies overall, the most common response (41%) is 1-5 hours per week.

Over a quarter of companies (27%) report getting by with less than 1 hour per week.
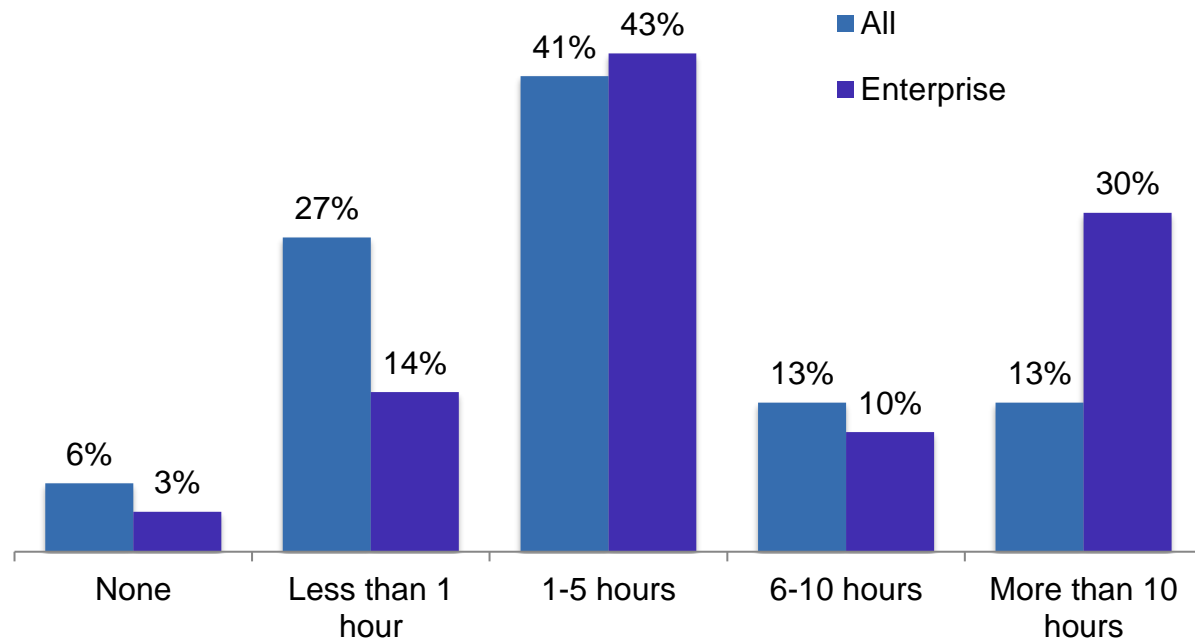

Figure 17: Hours invested in DR per week

Estimated Annual Cost of Backup/DR

Enterprises spend much more on backup/disaster recovery than smaller companies. Almost half of enterprises (47%) spend at least $100K, with 13% spending over $1 million per year, which includes internal resources as well as acquired products and services.

Overall, the trend as compared with the 2017 survey results is lower annual disaster recovery costs for companies of all sizes. This might be explained by new-generation DR technologies now emerging, which might make the same level of DR more affordable for some organizations.
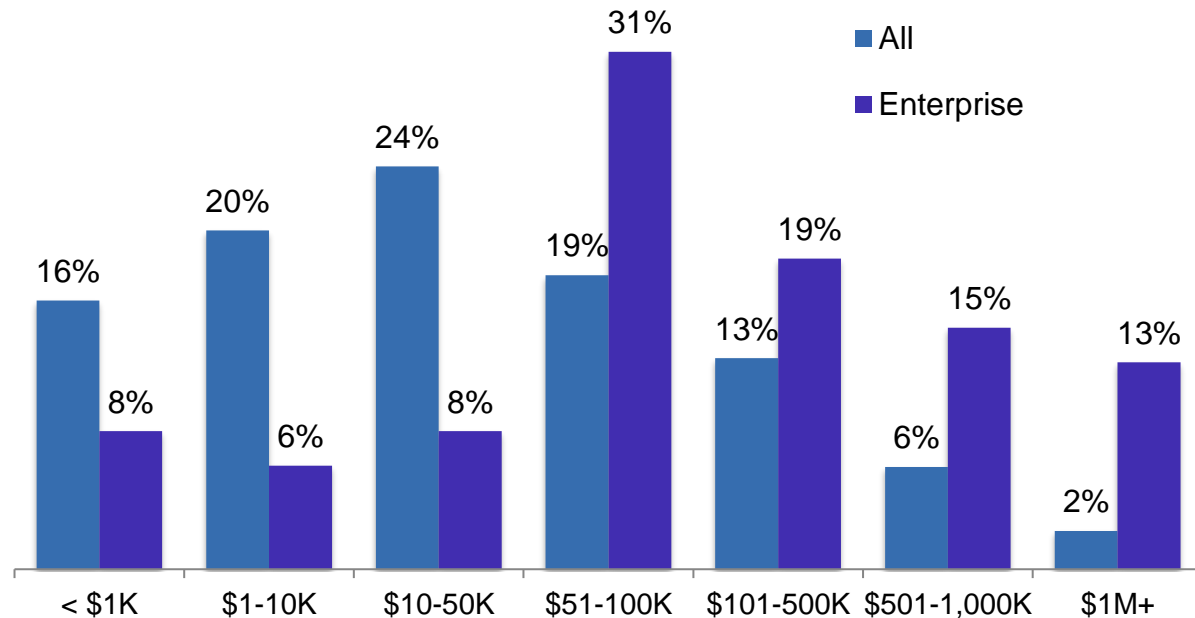

Figure 18: Estimated annual cost of backup/DR

Estimated Cost per Day of Downtime

About a quarter (26%) of enterprise respondents estimate that a day of downtime would cost them over $1 million. Among companies of all sizes, 31% estimate downtime costs to be $100K or more per day.

Financial consequences of downtime include costs associated with lost revenue and productivity, damage to company image, and customers moving to competitors that are perceived as being more stable.
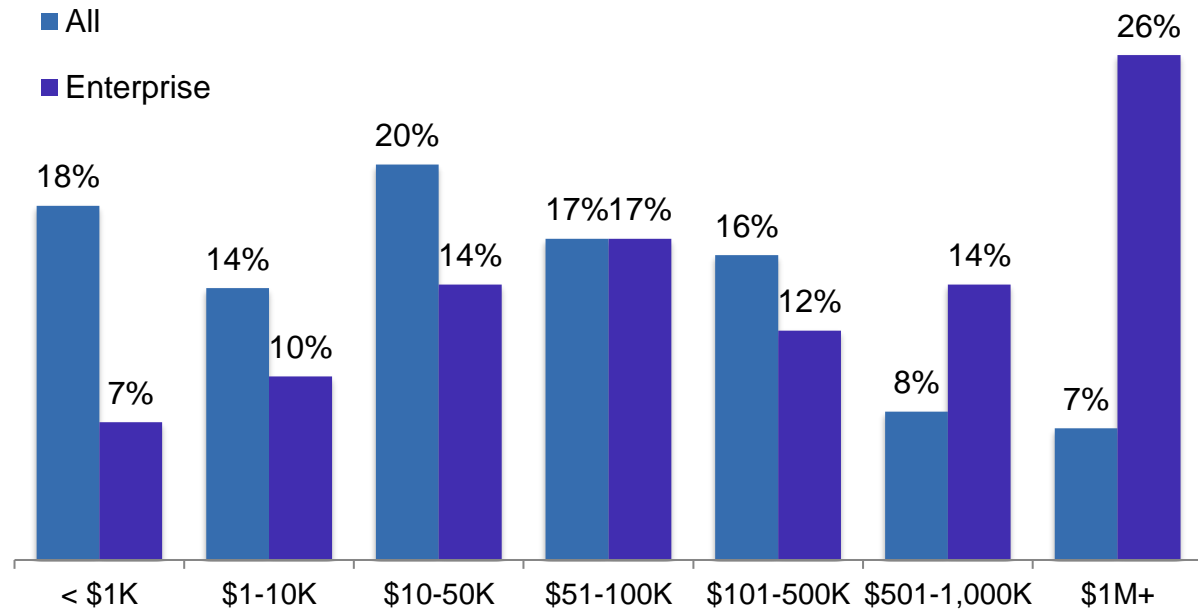

Figure 19: Estimated cost per day of downtime

Current Satisfaction With Disaster Recovery Solutions

Despite the fact that only 37% of survey respondents report meeting their RTO consistently, 55% say they are very satisfied with their disaster recovery solutions overall.

A greater number of companies (16%) report a lack of satisfaction with their DR solutions as compared with the 2017 survey results (10%).
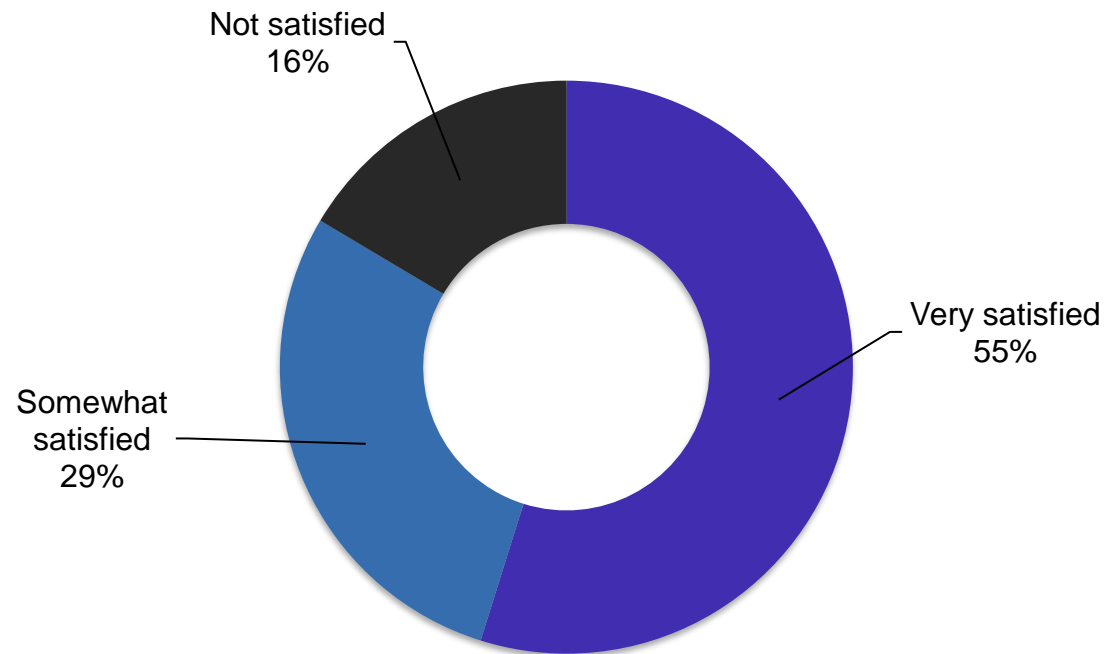

Figure 20: Are you satisfied with your DR solutions?

Respondent Demographics: Annual Company Revenue

Almost a quarter (21%) of respondents work at companies with annual revenues of over $1B, 53% work at companies with annual revenues of between $10M - $1B, and 26% work at companies with less than $10M in annual revenues.
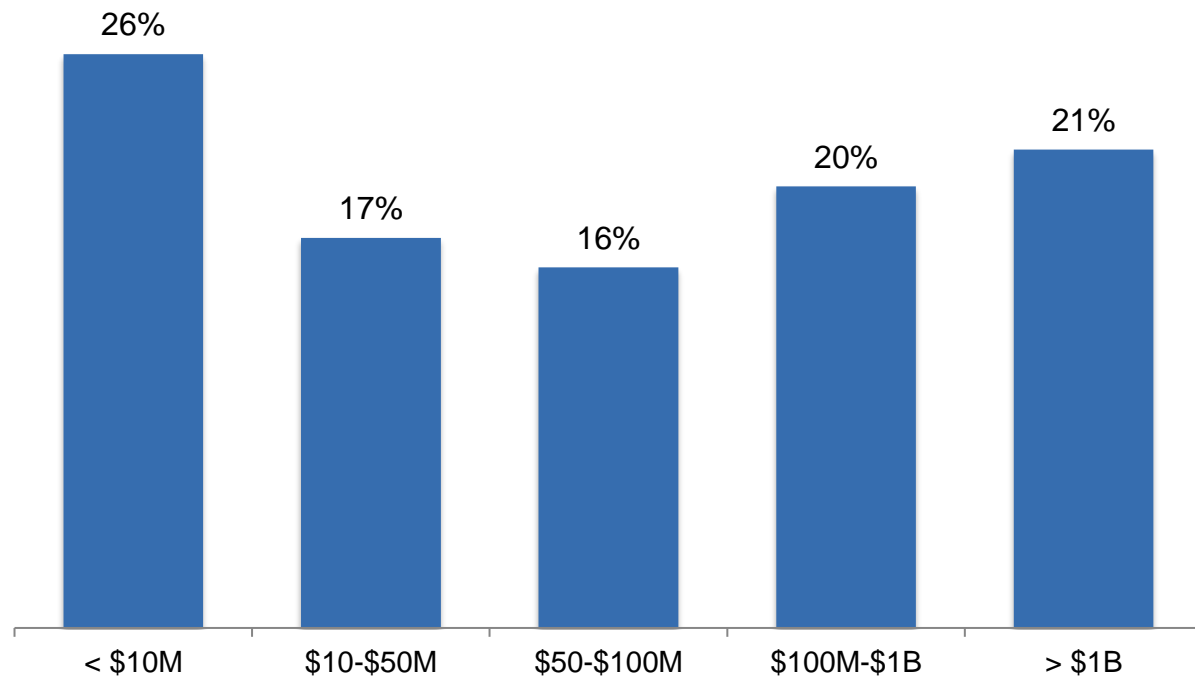

Figure 21: Annual company revenue of respondents

Respondent Demographics

Over a third (38%) of this year's respondents are responsible for IT. The next most common job responsibility was cloud operations and architecture, at 27%.

Figure 22: Job responsibility

About a third (27%) of this year's respondents hold C-level, VP, Department Head, or Director positions. Forty-six (46%) hold Manager, Supervisor, or Team Leader positions while 21% are team members.
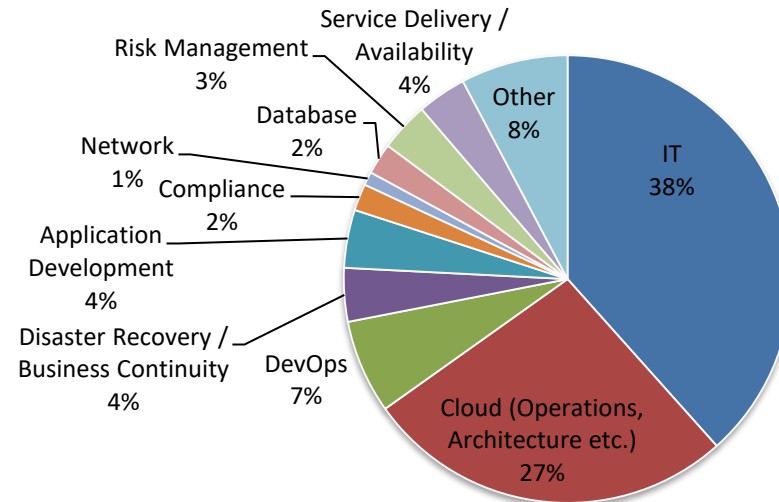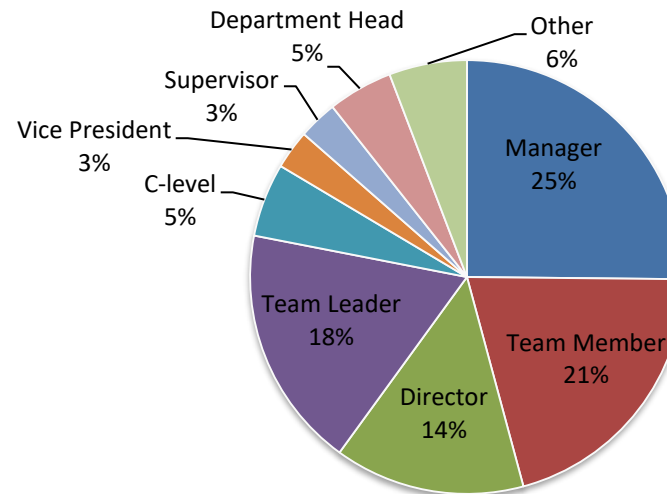

Figure 23: Position in the organization