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Cloud Poised to Be Most Popular Backup Medium

In This Paper

- The most popular backup solutions are local disk to tape and local disk to remote disk services

- About 40 percent of enterprises surveyed use some sort of cloud backup

- 18 percent of enterprises plan to purchase cloud backup and recovery services within the next six months

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Executive Brief

Backup is serious business. A well-executed and effective backup strategy can make or break a business. The backup medium of choice, while not the only element of a backup strategy, is a foundational component. For years, the battle waged between tape and disk. Several years ago, however, a new option emerged: cloud-based backup.

Cloud backup refers to backing up data to a remote, cloud-based server. A form of cloud storage, cloud backup data is stored in a format accessible from the multiple distributed and connected resources that comprise a cloud.

Cloud computing is revolutionizing all aspects of the business, and storage is no exception. Storage vendors, like other IT vendors, have found the cloud well suited for many opportunities. All facets of storage, from real-time backup to cold archives, can benefit from the cloud.

Enterprises can now find myriad enterprise-grade cloud backup solutions that deliver essential features, such as security and disaster recovery features that help to satisfy an enterprise's legal requirements for data retention. When part of a company's disaster recovery plan, the remote off-site storage provided by cloud backup helps ensure data remains safe should the enterprise's local data be jeopardized by a disaster such as a fire, flood, hacker attack or employee theft.

For many enterprises, cloud backup offers a cost-effective alternative that deploys and scales more easily than do disk or tape legacy mainstays. In addition, because most enterprises opt for a variety of backup solutions, they can start slowly with cloud and scale upward to meet their needs and comfort level.
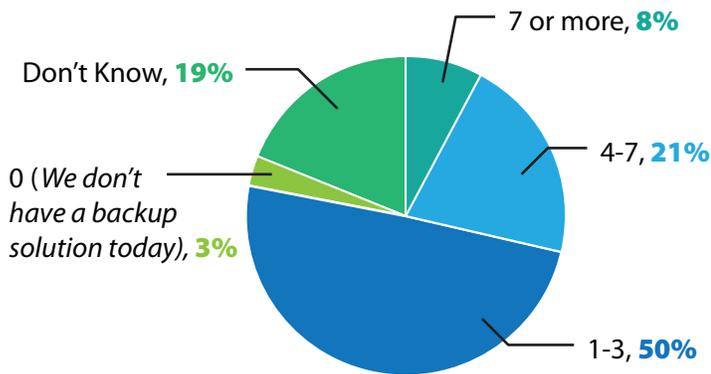
Although cloud storage offers the advantages of greater accessibility and reliability; rapid deployment; strong protection for data backup, archival and disaster recovery purposes; and lower overall storage costs as a result of not having to purchase, manage and maintain expensive hardware, it also carries with it the potential for security and compliance concerns. While no doubt these issues will be worked out in the long term, presently they remain significant issues for many enterprises.

When choosing how and what to back up, IT decision makers are faced with myriad choices. To find out what IT decision makers are choosing and why, Palmer Research and QuinStreet Enterprise, the publisher of well-known IT media brands that include eWeek, Datamation and CIO Insight, surveyed 198 IT decision makers in organizations with 500 or more employees. Their answers provide a great deal of insight about the state of data backup and recovery as well as the benefits and issues IT decision makers are confronting.

The survey found enterprises to employ a variety of combinations of solutions to address their backup needs. Half of the respondents are using between one and three solutions to address their backup needs. On average, enterprises surveyed were using between three and four solutions to address their backup needs.
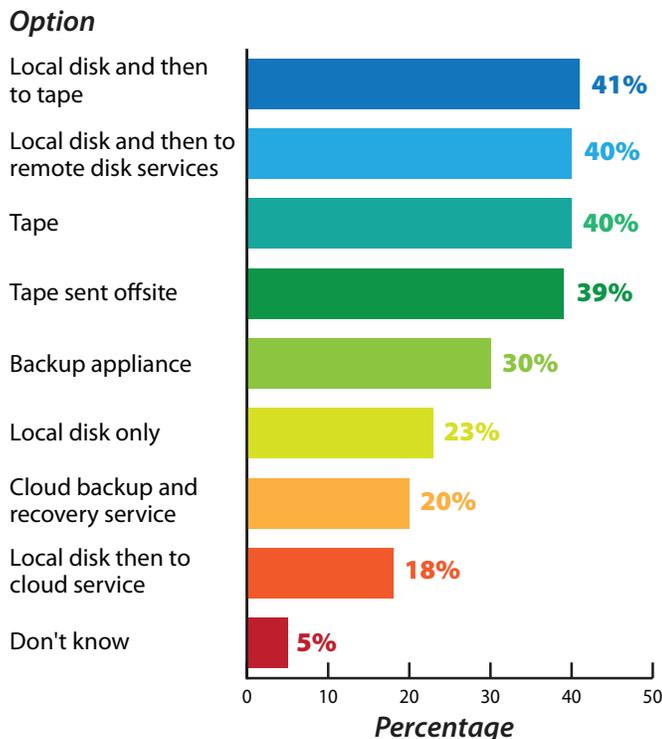
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Number of Backup Solutions Currently in Place

Don't Know, **19%**

0 (*We don't have a backup solution today*), **3%**

7 or more, **8%**

4-7, **21%**

1-3, **50%**

The most popular solutions were backing up to local disk and then to tape (41 percent) and backing up to local disk and then to remote disk services (40 percent). Tape alone was equally popular at 40 percent, and tape sent offsite trailed slightly at 39 percent.

About 40 percent of enterprises surveyed are using some sort of cloud backup: 20 percent are using a cloud backup and recovery service, while 18 percent are backing up to local disk and then a cloud service.

Backup Solutions Currently Deployed

Option

Option	Percentage
Local disk and then to tape	41%
Local disk and then to remote disk services	40%
Tape	40%
Tape sent offsite	39%
Backup appliance	30%
Local disk only	23%
Cloud backup and recovery service	20%
Local disk then to cloud service	18%
Don't know	5%

Percentage

Despite this growing popularity of cloud storage, only 29 percent of the organizations surveyed are using cloud backup and recovery services from a local service provider. As noted previously, about half of those who are using cloud backup are backing up first to local disk then to a cloud service. As most enterprises surveyed are using multiple backup solutions, it's unsurprising that those using cloud backup are evenly split between using one and three solutions and four and seven solutions for private and hybrid cloud. For public cloud, the variance is wider, with 67 percent of enterprises between four and seven backup solutions opting for public cloud, and only 17 percent of enterprises with between one and three solutions opting for the public cloud.
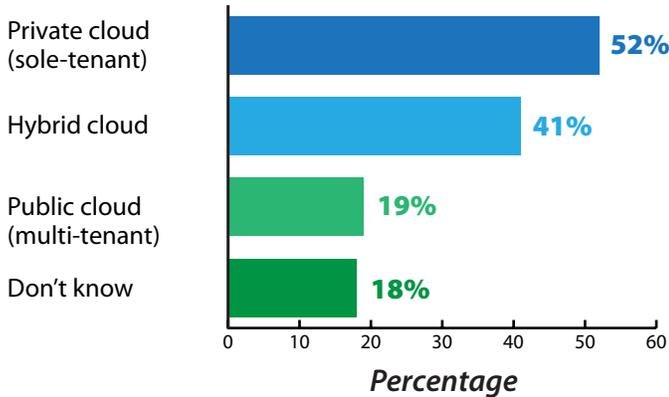
Most noteworthy, however, is that an additional 18 percent of enterprises plan to purchase cloud backup and recovery services within the next six months. Also noteworthy is that of those planning to purchase cloud-based services in the next six months, 26 percent are investing in cloud backup.

With this increase, well over 50 percent of enterprises will be using cloud to address at least some of their backup needs. This growth will render cloud the most popular backup medium, far exceeding tape and disk, and bringing it to the tipping point of technology standardization.

These enterprises lean heavily toward using a private cloud. More than half are seeking sole-tenancy, while slightly fewer will be satisfied with a hybrid environment that uses sole-tenancy in some circumstances and multi-tenancy in others. Fewer than one-fifth of respondents were planning to deploy cloud backup in only a multitenant environment.

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Cloud Types Used for Cloud Backup

Type of Cloud

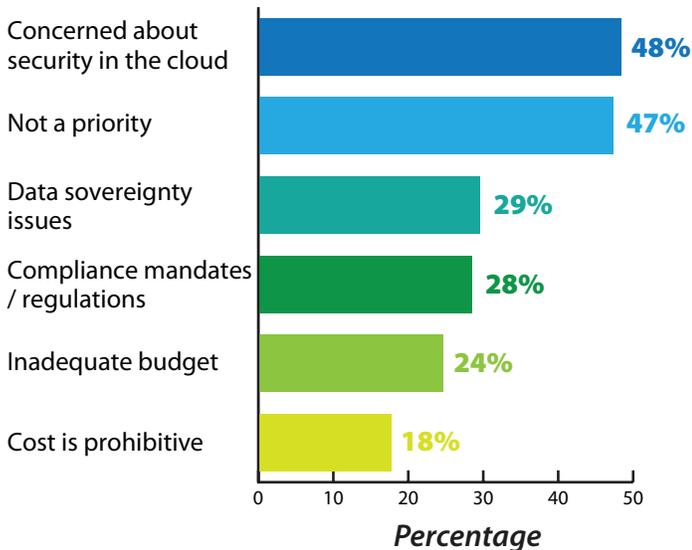|	
Private cloud (sole-tenant)	52%
Hybrid cloud	41%
Public cloud (multi-tenant)	19%
Don't know	18%

Percentage (0, 10, 20, 30, 40, 50, 60)

The remaining 53 percent of the organizations, which are not using or are not planning to use cloud backup and recovery systems, offer the following reasons in the chart below.

Reasons for Avoiding Cloud Storage

Reasons

Concerned about security in the cloud	48%
Not a priority	47%
Data sovereignty issues	29%
Compliance mandates / regulations	28%
Inadequate budget	24%
Cost is prohibitive	18%

Percentage (0, 10, 20, 30, 40, 50)

Selecting a Backup Medium

When deciding on a storage medium, a variety of factors come into play. Among the considerations is the enterprise's primary reason for backing up data. The most frequently cited primary reasons to back up data are user error or accidental data deletion (63 percent), data loss because of a hardware malfunction (63 percent) and data corruption (60 percent).
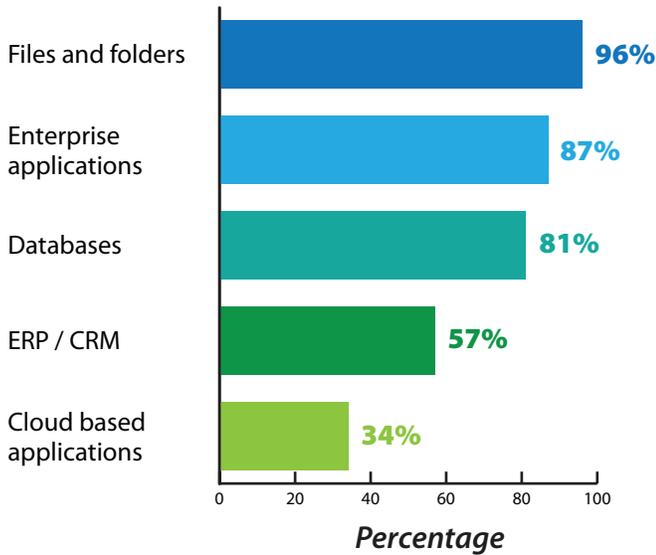
Interestingly, these fairly mundane day-to-day occurrences trumped the more high-profile reasons vendors often tout, such as a power outage (33 percent), natural disaster (31 percent) and other disasters like fire or theft (27 percent). Backing up for compliance reasons also ranked low, with only 30 percent of respondents claiming that as a key driver.

The types of data being recovered is also important, and our survey found that there is little variance in what enterprises are backing up. Not surprisingly, nearly all respondents (96 percent) say their enterprises are recovering files and folders — chiefly documents, spreadsheets and presentations. Enterprise applications and databases are also recovered by the vast majority of enterprises (87 percent and 81 percent, respectively). When it comes to enterprise applications, Microsoft Exchange (both individual emails and folders) and SharePoint were most often recovered. For databases, Microsoft SQL Server and Oracle Database led the way, with more than half of database-recovered data coming from them.

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Types of Data Being Recovered

Types of data recovered

Files and folders	96%
Enterprise applications	87%
Databases	81%
ERP / CRM	57%
Cloud based applications	34%

Percentage (0 20 40 60 80 100)

Cloud-based applications have been recovered by just over one-third of enterprises. Google Apps were recovered by 20 percent of respondents. Salesforce.com recovery was nearly as common, with 18 percent of respondents typically recovering. Amazon Web Services trailed, with a mere 10 percent of respondents recovering its apps.
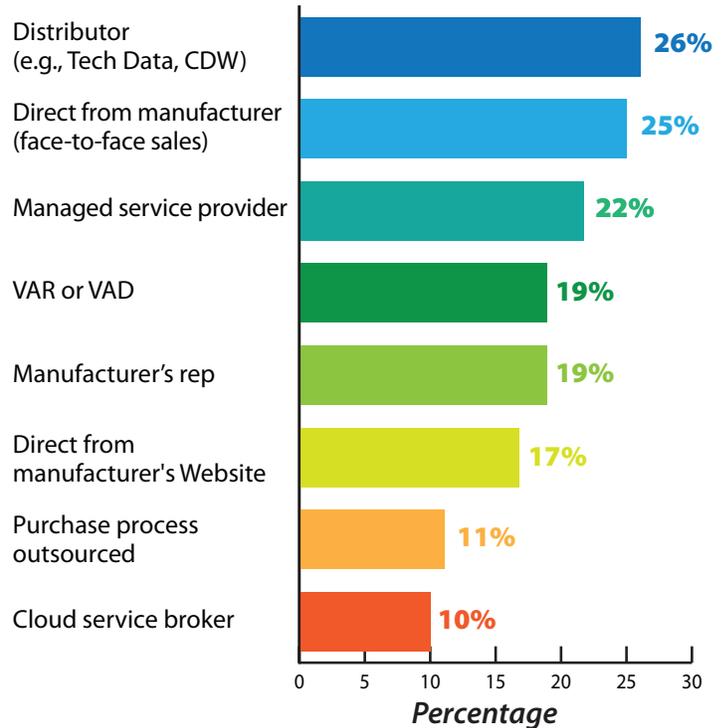
Data Backup and Recovery Services

Enterprises have a variety of choices as to the type of vendor and process from which they can purchase their backup and recovery solution. Distributors, OEMs and managed service providers were the most popular, with about one-fourth of respondents purchasing from each of them. VARs/VADs and manufacturers reps were also popular with those surveyed.

Cloud service brokers, a new type of service provider that enables enterprises to manage their cloud use, performance and delivery thorough a single interface, thus allowing data and apps to be moved easily from private cloud to public or from one public cloud to another and sometimes integrating the various services that will make up a user's cloud environment, were used by 10 percent of enterprises.

Types of Backup Vendors

Source

|	
Distributor (e.g., Tech Data, CDW)	26%
Direct from manufacturer (face-to-face sales)	25%
Managed service provider	22%
VAR or VAD	19%
Manufacturer's rep	19%
Direct from manufacturer's Website	17%
Purchase process outsourced	11%
Cloud service broker	10%

Percentage (0 5 10 15 20 25 30)

Restoration Rates

Enterprises back up their data and apps with the expectation that it will be available when they need it. Recovery is the true business value of backup. The average percentage of backup data that was needed to be recovered in the past six months for survey respondents was 35 percent. The average percentage of backup data restored in the past 12 months was 41. It seems that most companies need to recover and restore only 35 percent to 41 percent of their data in a year. Very few companies actually restore 100 percent of their data.

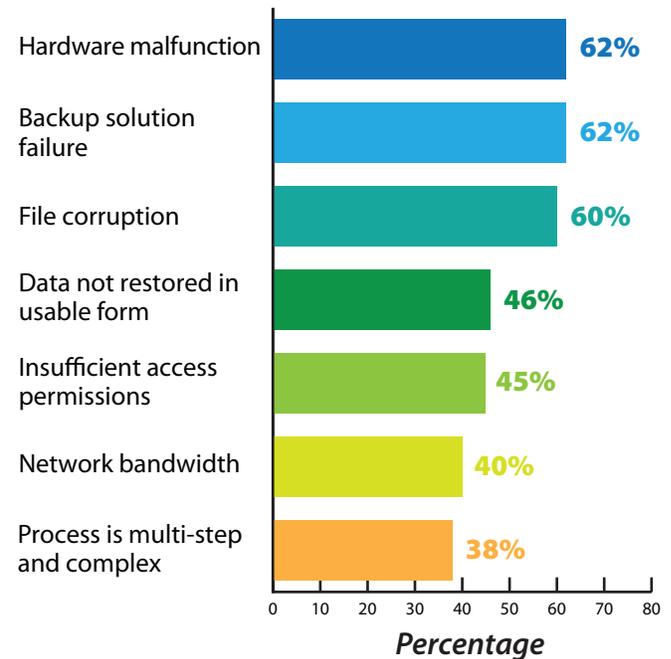The following pie charts break down the data recovery percentages.
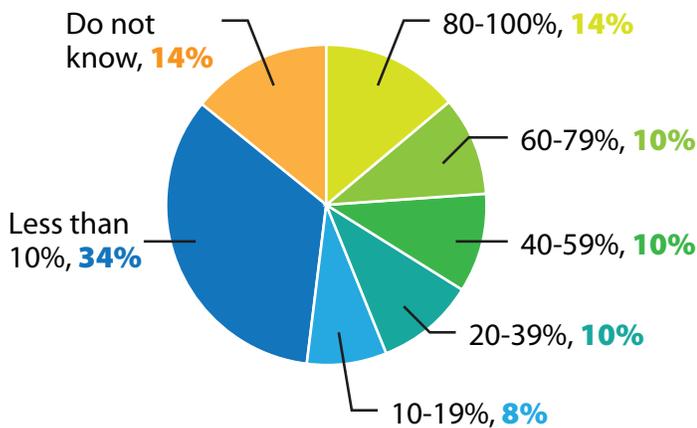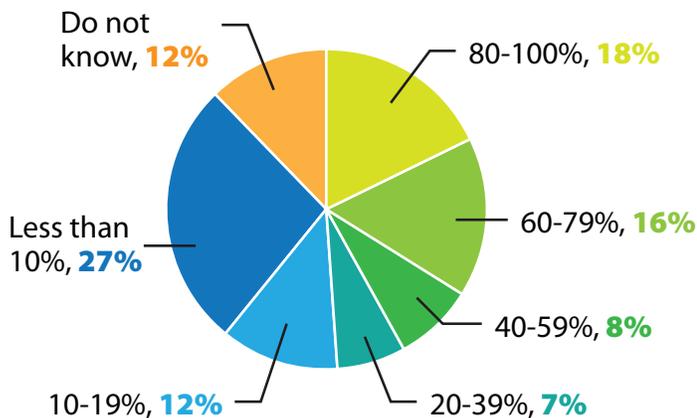
It is surprising that most enterprises recover less than 10 percent of their data. In the past six months, 34 percent of those surveyed recovered less than 10 percent of their backed up data; in the past year, 27 percent recovered less than 10 percent.

Reasons for Recovery Failure

When asked about the culprits behind backup recovery rates, those surveyed cited a wide range of inhibitors. The three most common are hardware malfunctions (62 percent), backup solution failures (62 percent) and file corruption (60 percent).

Inhibitors to Successful Data Recovery

6 Months Recovered Data

Do not know, **14%**
80-100%, **14%**
60-79%, **10%**
40-59%, **10%**
Less than 10%, **34%**
20-39%, **10%**
10-19%, **8%**

12 Months Recovered Data

Do not know, **12%**
80-100%, **18%**
60-79%, **16%**
Less than 10%, **27%**
40-59%, **8%**
10-19%, **12%**
20-39%, **7%**

Inhibitors

Inhibitor	Percentage
Hardware malfunction	62%
Backup solution failure	62%
File corruption	60%
Data not restored in usable form	46%
Insufficient access permissions	45%
Network bandwidth	40%
Process is multi-step and complex	38%

Percentage

Conclusion

There are many reasons for the growth in cloud backup. For starters, today's enterprises are no longer monolithic entities housed in a single building or office park, where workers report for duty every day, five days a week, eight hours a day. In today's enterprise, employees and contract workers may be operating side by side or completely remotely, or some variation. The growing trend of BYOD is also impacting enterprise backup needs.

Complementing this shift is a rise in enterprises relying more on cloud-based applications. In particular, they are putting greater workloads into software-as-a-service applications, such as Salesforce.com and Google Apps. This is changing the nature of the types of data being recovered. As more enterprises turn to the cost efficiencies of cloud-based apps like Salesforce.com and Google Apps, they will require cloud-based backup and recovery services available to back up the corporate data residing in these apps.

As fears of the cloud's security and compliance issues are mitigated, cloud backup and recovery has the potential to be more secure and accessible than if it were to be backed up locally. There's no turning the clock back on backup and recovery in the cloud.

Methodology

This survey was conducted online between July 2 and July 10, 2013, on QuinStreet Enterprise business-to-business websites. Respondents were initially contacted via email, with the first 100 participants to complete survey receiving a $10 Starbucks gift card. The 198 respondents who completed the survey are IT decision makers working at organizations with 500 or more employees. This survey carries a + / - 7.1 percent at the 95 percent confidence level. ■