

# UK CLOUD SNAPSHOT SURVEY 2017

## RESULTS PAPER

# Introduction

The use of cloud technology has become a central component of many business' infrastructure, with increasing numbers expanding into the cloud each year. According to research produced by the IDC<sup>1</sup>, over 68% of businesses currently use some form of cloud service and of those surveyed in our research project 93% of respondents used some form of cloud technology. It is projected that by 2018 close to half of total IT spending will be on cloud-based technology.<sup>2</sup>

At the same time, the uncertainty regarding cloud adoption is rising due to the multitude of problems currently facing businesses in the UK. Such challenges include the implementation of GDPR (General Data Protection Regulation), the uncertainty of Brexit and the unprecedented increase in cyber-security attacks. Although not an exhaustive list, these factors present a significant challenge to businesses in the UK and may have a subsequent effect on the way in which the cloud is used.

GDPR aims to modernise the data protection laws currently in place in the EU with the ultimate aim of providing consistency between the privacy laws in nations within the EU. It works to directly replace the Data Protection Act that is currently in operation. Any organisation using EU citizen's data must be found to comply with GDPR, irrespective of where they are located.

Many are worried how organisations will be affected by the implementation of GDPR in 2018, as there are doubts regarding the ability of firms to fully comply with this regulation. In the past this was never a problem for firms as the majority of their data was held on-premise. With the adoption of the cloud however this has all changed, as a company's data may be stored all over the world with the exact location unknown to many. This privacy law will hold penalties of up to 4% of global annual turnover, which aims to ensure that firms make the necessary changes to comply with this legislation.

Brexit presents a challenge to businesses currently due to the uncertainty of Britain's future position in Europe. A representative from the company Analysys Mason commented that 'anything to do with Brexit is uncertain'. There is huge potential for changes in the UK as a result of Brexit, and these changes may have a subsequent impact on the IT plans of UK firms.

Finally, cyber-security has become a prevalent issue in the news over the past 12 months, with major cases such as the NHS WannaCry attack being a prominent feature in the news. The results of the government's Cyber Security Breach 2017 Survey<sup>3</sup> found that cyber-security remains a priority for the leaders of businesses, with 74% of respondents expressing cyber-security as a very high or fairly high priority.

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1<https://www.cisco.com/c/dam/en/us/solutions/collateral/trends/cloud/bca-china.pdf>

2<https://www.forbes.com/sites/louiscolombus/2017/04/29/roundup-of-cloud-computing-forecasts-2017>

3[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/609186/Cyber\\_Security\\_Breaches\\_Survey\\_2017\\_main\\_report\\_PUBLIC.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/609186/Cyber_Security_Breaches_Survey_2017_main_report_PUBLIC.pdf)

Serviceteam IT, in partnership with Doogheno, conducted a study to reveal the most significant challenges facing UK businesses and the trends of the use of cloud in the UK. After extensive research, Serviceteam IT are unaware of any report that specifically addresses the challenges facing UK businesses and the state of the cloud in the UK. Although cyber-security and GDPR affect more countries than simply the UK, Brexit is an issue that will have an impact on UK firms in particular. Given the specificity of Brexit to the UK, we believe this report provides an important insight into the challenges facing UK businesses and therefore fills an important gap in previous research publications.

## Methodology

In order to obtain the data necessary for the completion of this research, a combination of in-depth interviews and a questionnaire was used, giving both scope and depth to the research. Respondents to the survey were located across the UK, making this a nationwide survey of UK businesses.

The questionnaire, entitled 'The UK Cloud Snapshot Survey', comprised of an online questionnaire completed over a four-week period between the 14th of July and the 11th of August 2017. The sampled population of over 1,100 included individuals from a multitude of sectors including Insurance, Advertising, Technology, Marketing and Scientific research. The variety of sectors included in the survey allowed for a more diverse range of answers and enabled comparisons to be drawn between different sectors of the economy.

The organisations that were included in the sample ranged in size, with annual turnovers of up to £850 million. All those that responded to the survey held positions in relation to IT, including IT managers, directors and operations managers. The decision to narrow down the occupations included in the survey enabled the collection of the best possible data, as these individuals would be likely to have the greatest knowledge of the use of the cloud in their business.

In addition to the survey, a total of four in-depth interviews were conducted in order to gain a more detailed understanding of the reasoning behind responses. The interviewees were also from a range of different industries giving an insight into the challenges specific to certain companies and industries.

## Key findings

60% of respondents listed GDPR as the biggest challenge to their IT plans over the next 3 years.

Survey  60%

Over a third of participants said that they have experienced an increase in cyber-security incidents within the past 12 months.

Survey  34%

62% of participants believe data sovereignty may be an issue after the UK has left the EU.

Survey  62%

40% of respondents have moved 20% or fewer of their applications and services to the cloud.

Survey  40%

14% of respondents have moved more than 80% of their applications and services to the cloud.

Survey  14%

69% of respondents said that they are considering moving additional applications and services to the cloud.

Survey  69%

46% of respondents highlighted security as a barrier to further cloud expansion.

Survey  46%

The following sections of this report will outline the key findings from each of the questions asked in the questionnaire and analyse the results of these findings in relation to previous research conducted. The findings have also been broken down in order to show the diversity of responses between individuals from the different industries included in the survey.

## Which external factors do you feel will have the biggest impact on your IT plans for the next 36 months?

62% of respondents listed GDPR as the biggest challenge to their IT plans over the next 3 years, making this the most popular answer amongst respondents to the survey. Despite the prevalence of this issue in the media, only 21.2% of respondents to the survey highlighted an increase in cyber-crime as the greatest challenge. In addition, only 19.2% of respondents highlighted Brexit as the greatest challenge to their IT plans, despite the huge changes this

*'In the insurance sector for example, 61.9% of respondents highlighted GDPR as posing the greatest threat to their IT plans over the next 3 years'*

is likely to have in the UK. When divided into the individual sectors however, a divergence in opinion as to which external factor would be the most challenging for firms could clearly be identified.

In the insurance sector for example, 61.9% of respondents highlighted GDPR as posing the greatest threat to their IT plans over the next 3 years. This was therefore marginally higher than the average for the survey as a whole. Additionally, of the respondents from the technology sector, 62.5% of respondents expressed GDPR as the greatest threat to their IT plans over the next 3 years. GDPR was also seen by 61% of respondents from the utilities sector as the greatest challenge to their IT plans over the next 3 years.

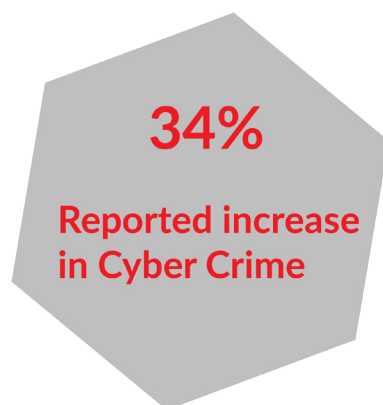
One interviewee from a fleet management company, commented that the sheer volume of data that the company holds makes GDPR the greatest challenge for the company at this time. Ensuring that the data is held for the correct amount of time and adheres to the particular regulations of specific countries is a huge task and is therefore adherence with GDPR in his opinion was 'bigger than anything else the company has to deal with'.

Conversely, of the respondents from the marketing and advertising sectors, 68% of respondents highlighted Brexit as the biggest challenge to their IT plans over the next 3 years. Similarly, Brexit was seen as the greatest challenge to IT plans by close to 70% of the respondents from the scientific research sector.

*'...the IT Infrastructure Manager from Sanderson House commented that they have not only experienced an increase in the frequency of attacks, but also the nature in which they are carried out '...the type of attack has 'changed from phishing to ransomware attacks'. 'Companies need to be aware and have a plan to deal with it when you do get caught'.*

## Has your company experienced an increase in cyber security incidents within the past 12 months?

A third of respondents to the survey had experienced an increase in cyber-security breaches in the last 12 months, compared to 66% who had not experienced an increase.





When broken down into the individual sectors, half of the marketing sector said they have had an increase in cyber-security incidents within the past 12 months, which contrasts significantly to the overall findings of the survey. 60.9% of the scientific research sector and three quarters of the utilities sector said they have not experienced an increase in cyber-security incidents, while 60% of both the technology and insurance sectors also said they also haven't experienced an increase.

When interviewed, the IT Infrastructure Manager from Sanderson House commented that they have not only experienced an increase in the frequency of attacks, but also the nature in which they are carried out. He commented that the type of attack has 'changed from phishing to ransomware attacks'. 'Companies need to be aware and have a plan to deal with it when you do get caught'. It is this increase in the frequency of attacks that has been the primary focus for Sanderson House over the past year.

However, the opinion that cyber security incidents are becoming more frequent is not shared by all. When interviewed, one interviewee commented that 'there is now just more attention on attacks'. Due to the fact that it is now mandatory to inform people when there has been a cyber attack, 'this is where the visibility has come from'. There is now a greater awareness of the scale of cyber crime as a result of the availability of this information.

While it is clear that from the survey not all respondents have experienced an increase in cyber -security incidents, the interview with Sanderson House illustrates that for some UK firms cyber-security is a major priority and has become increasingly important over recent months.

*'...businesses in the UK may need to be made more aware of the problems relating to data sovereignty in light of the future changes in Europe.'*

## Where are your cloud services hosted?

The results from this question revealed that 71% of all respondents utilise cloud services hosted in the UK. Only a third of respondents have cloud services hosted in Ireland, 30% have services hosted in the rest of Europe and 25.8% use cloud services hosted in North America. This therefore highlights that the UK is the most popular location for cloud services to be hosted amongst respondents.

When broken down into the individual industries, 73% of respondents from the insurance sector have cloud services that are hosted in the UK. Of these respondents 26.1% have cloud services hosted in Ireland and 30.4% have services hosted in the rest of Europe. These results are therefore consistent with the general findings across all sectors.

69% of respondents from the technology sector had cloud services hosted in the UK, whilst 37% of respondents had cloud services hosted in Ireland. Similarly, 78% of respondents from the utilities sector had cloud services hosted in the UK whilst almost half (48%) had services hosted in Ireland.

When interviewed, the head of Systems at Gandlake, a provider of corporate print solutions, commented that it is important to keep in mind that 'Brexit and GDPR don't affect us now but may do in the future'. It is for this reason that Gandlake use a data center located in London and ensure backups remain within the UK.

## **Do you believe that there will be a data sovereignty issue as a result of Brexit that may require you hosting all relevant services in the UK?**

*'It is clear to see that many companies are a long way from achieving 100% migration to the cloud and there is therefore potential for expansion in the future'*

When divided into the individual sectors, a great diversity of responses can be identified. For example, all of the respondents from the marketing and advertising sector said that there may be a data sovereignty issue as a result of Brexit. In addition to this, 58% of the utilities sector also answered in this way. The results further revealed that 78% of the respondents from the insurance sector believe there may be a data sovereignty issue as a result of Brexit. Similarly, amongst respondents from the scientific research sector, 96% of respondents felt the same way.

Uncertainty was a common feature however of the interviews conducted as part of the research for this report. Out of all the interviews conducted there was no clear idea of the impact of Brexit regarding this particular issue. This suggests that businesses in the UK may need to be made more aware of the problems relating to data sovereignty in light of the future changes in Europe.

## **What percentage of your applications and services have you moved to the cloud?**

Overall the results from this question revealed that 40.4% of respondents to the survey had moved 20% or less of their application and services to the cloud. Over 60% of respondents had moved less than 40% of their IT services to the cloud. However, 14% of respondents had migrated a larger proportion of their IT services to the cloud. This 14% had already migrated over 80% of their services to the cloud.

When analysing the data on a sectoral basis, 52.4% of respondents from the insurance sector had moved 40% or less of their applications and services to the cloud. Of this group, 38.1% had moved less than 20% of their applications and services to the cloud. However, close to a quarter (23.8%) of the respondents to the survey had moved between 80 and 100% of their applications and services to the cloud.

Amongst respondents from the technology sector 44.4% of respondents had moved less than 20% of their applications and services to the cloud, whilst only 11.1% had moved more than 80% of their applications and services to the cloud. Similarly, of the respondents from the utilities sector more than 2 out of 3 of respondents had moved less than 40% of their applications and services to the cloud. However, of the respondents from both utilities and the marketing companies, no respondents had moved more than 80% of their applications and services to the cloud.

The response to this question therefore corresponds to the findings of the CIF. It is clear to see that many companies are a long way from achieving 100% migration to the cloud and there is therefore potential for expansion in the future. The extent to which firms in the UK are considering further migration to the cloud is addressed later on in this report.

*'Amongst respondents from the marketing and advertising companies surveyed, 68% of respondents listed increasing computing capacity and business performance as one of the main reasons that they moved to the cloud.'*

## What were the reasons you moved to the cloud?

55.4% of respondents to the survey chose this as one of the reasons why they moved to the cloud. In addition, 48.2% of respondents highlighted business continuity and disaster recovery capabilities as one of the main reasons why they migrated to the cloud. 46.2% and 37.5% of respondents highlighted speed of deployment and increasing computing capacity respectively as factors influencing the move to the cloud. These results therefore support the findings of Accenture<sup>4</sup>, in that increasing flexibility and responsiveness can be seen to have a significant influence on the decision to move to the cloud.

Flexibility and scalability of IT resources was the most popular response for the insurance, technology and utilities sectors. 57.1% of respondents from the insurance sector listed flexibility and scalability as a primary reason for migration to the cloud. Amongst respondents from the marketing and advertising companies surveyed, 68% of respondents listed increasing computing capacity and business performance as one of the main reasons that they moved to the cloud.

The IT Infrastructure Manager from Saunderson House when interviewed for this project commented that moving to a private cloud has increased the 'flexibility' of the company. Since moving to the cloud solution, 'upgrading hardware is easier' and can be done 'without bringing the whole environment down'. This therefore highlights the benefit of flexibility that is provided by the cloud and was one of the driving factors stimulating Saunderson House to migrate some services to the cloud.

<sup>4</sup>[https://www.accenture.com/\\_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Dualpub\\_25/Accenture-cabu-position-paper-cloud-concerns-us-web%20\(1\).pdf](https://www.accenture.com/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Dualpub_25/Accenture-cabu-position-paper-cloud-concerns-us-web%20(1).pdf)



## How satisfied are you that you were able to achieve what you wanted?

On average respondents were 70% satisfied that they were able to achieve all that they wanted to in moving to the cloud. The result of this question did however vary between sectors sampled in the survey. Respondents from the insurance sector were 79% satisfied whilst those from marketing and advertising companies were only 47% satisfied on average that they were able to achieve their objectives. In addition, respondents from the technology, utilities and scientific research sectors were 67%, 72% and 55% satisfied respectively. These results therefore demonstrate the diversity of responses between the different industries included in the survey.

When interviewed, one interviewee commented that moving to the cloud 'solved the immediate issues' but wasn't without problems. He commented that moving to the cloud brought with it 'a steep learning curve and a financial burden'. This therefore demonstrates that migration to the cloud can bring many advantages for companies but can also create a number of problems. It is for this reason that not all companies are 100% satisfied that they were able to achieve everything they wanted to by moving to the cloud.

*'VPN was the most popular method of interconnection between cloud services. 39% of those surveyed answered that they used a VPN in order to connect their networks'*

## Which cloud services are you currently using?

Many of the respondents to the survey selected that they use more than one cloud service. In addition to the use of third-party data centres, 37.5% of respondents stated they used AWS and 35.7% currently use Microsoft Azure. This supports the research conducted by Enterprisetech, where it was found that the most popular cloud service was Microsoft Azure, closely followed by Amazon Web Services.

The most popular response regarding the technology, utilities and insurance sectors is a third-party data centre with the response rate of 51.9%, 46% and 50% of respondents saying they use them respectively. This supports the idea that more companies are seeking to find alternative ways to host their IT services and many are beginning to turn third-party data centers.

In relation to the marketing and scientific research sectors, there is a slight variation when compared to the other sectors. The most popular service in relation to the marketing sector is Google Cloud with 50% response rate. Within the scientific research sector, 60.9% of respondents said that they have their own data centre, which was far higher than in any of the other sectors. Despite this, a quarter of the marketing sector and over a half of the scientific sector had also chosen a third-party data centre.

## How are these interconnected?

Of those surveyed, VPN was the most popular method of interconnection between cloud services. 39% of those surveyed answered that they used a VPN in order to connect their networks, whilst 32% connected via the public internet and 28.3% through a direct connection.

When broken down into the different industries, a diverse range of results can be seen. From the insurance sector, 40% of respondents used a VPN, 40% used a direct connection and only 20% connected via the public internet. However, of those from the technology sector, 50% of respondents connected their networks via the public internet and only 11% connected their networks using a direct connection. Two in three of the respondents from the marketing and advertising companies surveyed connected their networks using a VPN whilst the other third used a direct connection.

*'69% of the respondents from all sectors included in the survey are considering moving additional applications and services to the cloud.'*

## Which cloud services do you use?

From our results we found that Productivity (Office 365, Google Apps etc.) was the most widely used service, with a 76.7% response rate. This finding can be seen to correlate directly with the findings from the report by Netskope. The responses from the individual sectors also correlates with this, as productivity was selected by a large number of respondents in each of the sectors surveyed.

64% of the respondents from the marketing and advertising sector selected productivity as one of the cloud services they currently used, whilst 56% selected analytics and 60% selected database. This therefore correlates with the overall findings of the survey as productivity is again shown to be one the most used cloud services available. The scientific research sector differs somewhat as only 18% of respondents from this group selected database and only 12% selected analytics. However, productivity was again a popular service with more than 90% of the respondents saying they utilise this service. Utilities and technology seemed to be the only sectors where all cloud services were chosen by at least 20% of respondents. Correspondingly, productivity was again chosen by utilities and tech respectively with a 79% and 75% response rate.

Finally, the insurance sector most commonly chose productivity and storage and delivery as their most commonly used services within the cloud. Again, we can see that productivity has been chosen by more than three quarters of the respondents indicating a common theme between all sectors.

As we can see from the results, there was some variation in terms of the different sectors and their cloud services as some services which were used extensively in some sectors are not used at all in others. Despite this, the common theme which ran throughout was the extensive use of productivity cloud services within businesses, highlighting the usefulness of this service to all businesses and sectors included in the survey.

## Are you considering moving additional applications and services to the cloud?

Our research found that 69% of the respondents from all sectors included in the survey are considering moving additional applications and services to the cloud. Less than a third of respondents answered that they would not be moving any additional applications to the cloud in the future.

Of those surveyed from the marketing and advertising sector, 66.7% of respondents said they will not be moving additional applications and services to the cloud which contrasts against numerous reports in which it is shown a general increase in the migration to the cloud. The response from this group correlates with the results from question seven in the survey that addressed how satisfied the company was with their migration to the cloud. As marketing and advertising companies were only 47% satisfied on average that they were able to achieve their objectives by moving to the cloud, this may explain the unwillingness to move additional applications. Equally, half of the utilities sector also responded that they would not be moving additional applications and services to the cloud, which correlates with the average findings from this question.

Of those surveyed in the insurance sector, 79% said they were considering moving additional applications to the cloud which is marginally higher than the average finding from this question. When contrasted against question seven, it is clear that there is a direct link between the two as this sector were on average 71% satisfied they were able to achieve what they wanted using the cloud. For the utilities sector, 53% of respondents were considering moving additional applications and services to the cloud despite an average of 72% satisfaction in question seven.

*'...the location of data was a significant barrier to further expanding the use of the cloud. This ...demonstrates that some businesses are aware that the location of data is likely to become more significant in the future as a result of changes in legislation such as the implementation of GDPR.'*

## Do you feel there are any barriers halting further expansion of the use of the cloud in your business, if so, what are these barriers?

50% of respondents to the survey felt that there were not any barriers preventing them from moving additional applications to the cloud, whilst the other 50% thought that there were. 45.7% of respondents to the survey highlighted security as one of the main barriers to the expansion of the use of the cloud in their business. This therefore correlates with the findings of previous reports on the use of the cloud. In addition to concerns regarding security, a third of respondents highlighted uncontrolled variable cost as a further barrier to cloud adoption and 24% and 25% of respondents listed reliability of data and latency respectively as potential barriers.

The format of this question allowed respondents to be able to input their own response in addition to the multiple-choice options given. Looking at these individual responses produced some interesting information. One of the answers given was customer acceptance. This therefore suggests that some companies are reluctant to make greater use of the cloud due to a lack of trust from customers.

Additionally, another response given was that the location of data was a significant barrier to further expanding the use of the cloud. This therefore demonstrates that some businesses are aware that the location of data is likely to become more significant in the future as a result of changes in legislation such as the implementation of GDPR.

The responses to this question did however vary between sectors, although security concerns came out on top in all groups. In the insurance sector, 50% of respondents listed security as a barrier to further cloud adoption, whilst 38% of respondents highlighted lack of internal staff experience as a barrier to further use of the cloud. Amongst respondents from the technology sector, 41.7% of respondents listed security as a barrier and 37.5% highlighted the loss of control of data as an obstacle to further utilising the cloud.

When interviewed as part of the research for this study, the head of Systems from Analysys Mason, a consultancy firm specialising in telecoms and technology, argued that often there is a 'false sense of security' associated with the use of internal servers as opposed to the cloud. He argued that in larger companies such as Microsoft and Google 'investment in security is higher' than in many smaller companies. For this reason, very often data can be more secure in the cloud than on internal servers.

David Pritt from Saunderson House had a different approach towards the use of the cloud for data storage. He argued that the use of public cloud 'leaves you at the mercy' of providers such as Amazon and Microsoft. Although he did accept that these large companies have made large investments in the security of your data he argued that in the contract they 'don't guarantee that 100% of your data will come out' their agreements allow for a possible loss of data, so users still have to ensure that systems are backed up and have full disaster recovery capability, ideally in remote data centres. The corruption of even a small amount of data can be problematic for many companies and it is for this reason that some firms are reluctant to expand their use of the cloud.

# Conclusions

Given the fact that 93% of respondents used some form of cloud-based technology, it is clear to see that the cloud is a prevalent feature within UK businesses. This research also clearly demonstrates that UK firms are very aware of the external challenges facing them and for some such challenges mean that they are unwilling to move further applications and services to the cloud in the future.

One of the key findings to come from the report is the fact that GDPR is seen as a greater challenge by many UK businesses than Brexit. This could be explained by the uncertainty surrounding Brexit and the true impact leaving the EU will have for UK firms, whilst the certainty of GDPR makes this a priority for firms in the UK.

The location of data is likely to become more of a priority for firms over the next few years in order to ensure that all data is held in a way that adheres to the legislation of the place in which it is located. Both the response to the survey and interviews highlighted the uncertainty surrounding data sovereignty within UK firms. This therefore suggests that there needs to be further clarification of the impact of Brexit on data to ensure that companies are clear on the impact this will have on the location of their data.

Overall the survey suggests that the cloud is being used in the UK by a large proportion of companies for a variety of business functions, with growth in cloud use expected in many companies in the future. Despite the external threats, companies understand the benefits that cloud technology can offer and it is for this reason that many are continuing to expand their use of such services.



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