WHITEPAPER

FIVE REASONS NOT TO USE CLOUD COMPUTING...

... AND WHY YOU, AS CIO, SHOULD STILL ADDRESS THIS ISSUE

Dietmar Meding
InEssence Reply

INTRODUCTION: CLOUD COMPUTING "GOOD OR BAD?" – HOTLY DEBATED IN GERMANY

"Cloud computing on the advance". German providers of Internet services and applications are predicted to increase their turnover to about 9.6 billion euros by 2016. With a volume of around €3.7 billion today, this corresponds to a total growth of more than 150 per cent, or 37 per cent a year. This research was published in August 2013 by eco, the association of the German Internet economy, and the management consultancy Arthur D. Little.[1]

"For 31 per cent cloud computing is currently not relevant. 13 per cent of companies have actually postponed planned cloud projects and 11 per cent even cancelled existing cloud solutions." This is the result of a representative survey[2] of 403 companies on behalf of KPMG. "The trend towards cloud computing is undiminished, but the NSA affair has put a damper on growth," said Bitkom President Dieter Kempf at the presentation of "Cloud Monitor 2014". [3]

These two perceptions from last year show that opinions still diverge on the subject of cloud computing. While proponents of the concept see the future of IT in obtaining services like "power from the socket" and paying for this based on use, sceptics list several reasons why they won't be outsourcing their own IT "into the cloud".

This white paper aims to show why you, as CIO of a company, should still even consider – maybe even with justified scepticism – the topic of cloud computing and how you can succeed in using the benefits of a corresponding cloud computing strategy without fear of the risks.

Dusseldorf, April 2014
Dietmar Meding

---

[1] http://www.eco.de/2013/pressemeldungen/wirtschaftsmotor-cloud-computing-37-prozent-wachstum-pro-jahr.html

[2] http://www.bitkom.org/files/documents/BITKOM_KPMG_PAC_Studie_Cloud_Monitor_2013.pdf

[3] http://www.channelobserver.de/artikel/nsa-affaere-schwaecht-wachstum-von-cloud-computing/

FIVE REASONS THAT SPEAK AGAINST CLOUD COMPUTING, FROM A CIO'S POINT OF VIEW

Proponents of cloud computing, especially the providers of the corresponding cloud computing solutions, have never tired of constantly propagating the benefits of using IT services provided by an external service provider across infrastructure, platform or applications. These stated benefits include:

– Greater flexibility and scalability in usage and costs
– No investments in IT-hardware/infrastructure and the corresponding IT knowledge
– Concentration on the core business
– Higher security with operation in professional data centers
– etc.

These benefits may be true for the use of cloud services in small and medium-sized enterprises (SMEs). For companies that, due to their size and market position, have had an established IT landscape for many years, these cloud computing "aces" apply only minimally or not at all. Instead, there are certain risks and dangers counteracting the alleged benefits in cost and flexibility.

And you, as the head of IT/CIO of your company, must of course face these risks and hazards. Because, at the end of the day, you are the one who is accountable to management for the smooth, efficient and most cost-effective possible operation of your IT architecture management – regardless of whether this architecture is operated internally or is entirely or partially operated using external cloud services.

The following risks and hazards associated with the use of cloud computing have been mentioned repeatedly in public discussions:

"IN FOR A PENNY, IN FOR A POUND!" – TECHNOLOGY AND VENDOR LOCK-IN.

True to this motto, when working with cloud service providers there is the risk of a "vendor lock-in" since the corresponding service is generally procured as a "complete package" therefore reducing the vertical range of IT. You also lose the corresponding IT expertise in the company because the cloud service providers and their staff are responsible for the provision of the cloud services. The "get back" (in-sourcing) of the services or relocating to a different service provider is therefore typically very difficult, in particular when there is a failure to agree in advance on appropriate standards for data formats with the provider.

"NO LONGER MASTER IN THE HOUSE" – LOSS OF CONTROL.

Closely linked to the risk of "vendor lock-in" is the fear of loss of control for you and your team in the IT department. This loss of control threatens not only the external relationship with the cloud service provider - typically, you will have little insight or even influence on the performance by the service provider. Internally, the use of cloud services can lead to a loss of control on the side of the IT department - the keyword here is "shadow IT".

In 2013, the market research firm IDC conducted a survey[4] on the topic of cloud computing at 260 IT and technical departments in Germany with at least 100 employees. It showed that 44 per cent of organisations take advantage of free or fee-based services from the cloud without involving the IT department. Three quarters of them use cloud services at least partially and a quarter use them very intensively. IDC also expects that the number is even higher in reality. Its reason for this is that IT departments are not involved day to day with employees and could therefore not know of the use. In the report, IDC states: "Furthermore, no one likes to talk about shadow IT".

This makes the core objectives of a company-wide alignment of IT even more difficult. Furthermore, service checks and provider management are uncoordinated and therefore, as a rule, insufficient. This results in inadequate compliance that requires huge governmental management.

"SERVICE OFFLINE, AND NOW WHAT?" – AVAILABILITY AND PERFORMANCE.

Again and again, news about failures from major cloud service providers such as Amazon, Google and salesforce.com are in the public eye. A failure of Amazon Web services in the summer of 2012 meant that the photo-sharing service Instagram and Twitter's video platform Vine were no longer available. While such disasters and the associated publicity ensure that the affected provider, in this case Amazon, do everything to correct the problem as soon as possible, the question naturally comes up as to how lesser-known and less-established cloud service providers deal with failures and how quickly they can fix these again. For you as CIO, this represents a risk because you are responsible for the smooth operation of your IT environment – independent of whether this is "on-premise" or operated from the cloud.

"WHERE IS OUR DATA?" - DATA PROTECTION, DATA SECURITY AND COMPLIANCE.

---

[4] http://idc.de/de/ueber-idc/press-center/54895-idc-studie-deutsche-unternehmen-wollen-mit-cloud-services-geschaftsprozesse-optimieren

In the field of data protection and data security, the subject of cloud computing can also give you, as CIO of a German company, considerable headaches. According to the Federal Data Protection Act, all companies based in Germany must comply with this and remain responsible for the proper processing of corporate data, internal and customer data, even if it has been outsourced. For example, in certain cases this can mean that the data may not leave German jurisdiction. For this reason, you must therefore also ensure that your cloud service provider adheres to this, which virtually rules out most international providers who generally move data among their globally distributed data centers for efficiency and load reasons. Thus it can also easily happen that you break data protection regulations as well as internal company compliance regulations.

I probably do not need to explain the data security problems resulting from the use of cloud computing. Usually there is nothing else you can do but trust that the cloud service provider is doing whatever it takes to ensure optimum data security.

"FIGHTING SILOS AND ISLANDS" – INTEGRATION IN EXISTING IT INFRASTRUCTURE.

As mentioned in the introduction, according to the eco survey last year, many CIOs see the integration into the existing IT landscape as one of the main hurdles for the introduction of cloud services. Most companies today have several information silos that are poorly integrated or not integrated at all. With the introduction of cloud computing solutions, there is a danger of creating additional 'IT Islands', which make a company-wide consolidation of data and information almost impossible.

Conclusion: Is it best that you keep your fingers off cloud computing for now and focus on your current challenges as CIO?

CURRENT CHALLENGES FOR THE CIO

After all, challenges for you as CIO and head of IT have continued to rise in the recent past. Your tasks have also become significantly more diverse and are no longer confined to ensuring the (reasonably) smooth operation of your company's IT landscape.

In the following sections, I will discuss a few of the challenges CIOs must face today. I assume that some of this will be familiar to you.

"FROM COST CENTRE TO PROFIT CENTRE" – THE NEW ROLE OF THE IT DEPARTMENT.

This development has been underway for a long time. After years of isolation as a "playground for technical innovations", reality has also hit IT departments. The pressure is on to generate income, not just spend it. For the IT department, this means that they must now prove their contribution to the benefit of the business and to the success of the company. On top of this: this contribution must be represented not only theoretically, but also with concrete earnings figures. In addition, the difficult economic times of recent years in many industries have also left an imprint on IT and the budget provided for this. "Providing more (IT services) with less (personnel, budget)" is the motto in many companies today.

But if IT departments today want to deliver more – and above all better – IT services with fewer staff and budget resources must prove that these services will make a positive contribution to the overall success of a company, and the path today inevitably leads to the cloud.

In 2013, the Experton group evaluated 270 IT projects, the costs of which were compared using the "Claranet Cloud TCO Calculator" in relation to on-premise operation vs. cloud operation. The results were as follows: significant differences in potential savings were identified for different projects, however for 93.8 per cent of all of the projects calculated by users in the "Claranet Cloud TCO Calculator" it could be demonstrated that cloud operation was "significantly less expensive than internal operation" according to the Experton group. [5]

Therefore, if you want to do justice to your new role as a "profit centre", you will have no choice in the future but to deal with the subject of cloud computing.

---

[5] http://www.experton-group.de/press/releases/pressrelease/article/die-wahrheit-ueber-cloud-kosten-empirische-ergebnisse-aus-tco-analysen-im-deutschen-mittelstand.html

"NEW POWER STRUCTURE!" – CHANGING RELATIONSHIPS WITH MANAGEMENT/IT DEPARTMENTS/INTERNAL DEPARTMENTS.

Not only has the role of the IT department changed, but the position of the head of IT/CIO in relation to management and the various departments has also changed drastically in recent years. In times of "IT consumerisation", the exclusive IT expertise and the corresponding exclusive position within the company is faltering. Today, "non-IT" staff are familiar with the use of IT technology much more than was the case a few years ago and they are therefore more confident when dealing with the CIO. In the meantime, management has learned that today technically (almost) anything is possible and demand results without long explanations. And ultimately, the odd failed IT project has lead to cracks in the image of the IT department. Many CIOs see themselves today in a defensive position of dealing with requests from management or departments for IT solutions that are only possible with the corresponding time and work and therefore cannot simply be made available "overnight". The objective of the CIO must therefore be to define proactively the roles and position for themselves as well as their departments.

Here as well, cloud computing will be a great benefit to the CIO and the IT department. On the one hand, the CIO can use cloud services in certain areas to meet the specifications of management, but also provide the departments with the desired speed and quality with a minimum of time and effort. Furthermore, the CIO, whose role will sooner or later evolve from chief information office to chief information broker, will finally again be the "master of the house" when the use of cloud computing solutions is discussed openly with management and the various departments, because then the idea of "shadow IT" will be eliminated. Availability and performance can be assessed beforehand with corresponding test runs in a fully functional "live environment" and appropriate contracts and service level agreements can be made. The same applies to the issue of "vendor lock-in", because any professional cloud service provider will maintain the data processed on their platform in a standardised manner so that it can be migrated to different systems if needed.

"PANTA RHEI - EVERYTHING FLOWS" – MARKET CHANGES AND TRANSFORMATION REQUIRE INCREASED FLEXIBILITY AND AGILITY.

Information technology is traditionally continuously subject to change, which is due to a variety of reasons. On the one hand this includes external factors such as changing market conditions (globalisation, competition, new production methods, new procurement and distribution channels) and on the other hand this includes internal factors that lead to a transformation of the IT landscape. Many companies are currently facing this challenge of converting their existing IT environments into new IT solutions of the next generation in order to be prepared for the challenges of the market. This requires a maximum of flexibility and agility in the IT department, which has still not been achieved in many cases because too many capacities are tied to routine IT tasks.

On the other hand, the CIO and IT departments face ever-increasing compliance requirements, which leads to a continuous increase in responsibility in an ever changing environment.

This development may be regretted by many here in Germany. After all, it was and is the German perfectionism that still stands for economic performance, economic miracles and prosperity. However, it is exactly this perfectionism, coupled with a high attention to detail, that often hinders the important quality of agility, and thus the ability to react quickly to changes. To be able to deliver a solution quickly that meets 90 per cent of requirements is more important today than "tinkering" (too) long on the optimal solution, which will be finished too late or perhaps not at all.

Therefore, for reasons of flexibility and agility, there is no other possibility for companies than to rely on cloud computing solutions in certain areas. It does not matter at all if this is cloud infrastructure for a new branch in the Far East, a cloud CRM solution for the sales team or the expansion of the internal franchise network. The fact is that with the appropriate cloud services, you are typically faster and have the added benefit of being able to unsubscribe from these services without being stuck with development, licensing or IT infrastructure costs. You can then use the time gained for internal developments for more practical purposes, such as the integration of these cloud services in the company IT landscape.

"A LIFE WITHOUT A SMARTPHONE AND INTERNET?" – DIGITAL NATIVES AND THE "WAR FOR TALENT".

Many companies are currently facing a generational change. Long-term, esteemed employees are retiring and making room for younger professionals and managers. In the meantime, a real fight has erupted in many industries for the recruitment of new, young specialists. The shortage of specialists is having an effect. In the past, the "right" company car and an appropriate amount of social benefits were sufficient to get an employee into the company and to keep their loyalty. For entry-level employees today, a smartphone, tablet computer and a working environment that enables working outside of office hours and offices are key decision criteria for the choice of employer.

According to the 2013 study[6] "Working in the Digital World" from Bitkom, the IT and telecommunications industry association, the majority of employees in Germany use both stationary computers as well as mobile phones and other mobile devices such as tablets or mobile industrial computers (PDAs) for work. About 62 per cent access data and applications on the corporate network from home, a third do this on a regular basis.

---

[6] https://www.bitkom.org/de/markt_statistik/64054_75865.aspx

According to a Citrix survey[7] from 2012, in the year 2020 almost 89 per cent of all companies will want to allow their employees a "mobile work style". They expect this will result in higher agility and flexibility of the workforce and lower costs. The companies surveyed also believe that these attractive forms of work will attract the loyalty of young talent who view a "9-to-5 job" in the office as antiquated.

Regardless of "digital native" or "digital immigrant", in the meantime Web 2.0, mobile computing and Web applications have become a part of most people's private lives. This user experience in the private sector results in expectations in the professional environment, and currently many companies and their IT departments are finding it difficult to meet these expectations. "If I can be 'always on' at home and access my apps and data from anywhere, why can I not also do this where I work?" is a frequent question that needs to be answered.

Another phenomenon of generation Y – this is what sociologists call that part of the population who became teenagers around the year 2000 – is the idea of "sharing". This is why the CeBIT chose the theme "Shareconomy", or "split or shared economy" as the main theme last year. In the meantime, sharing models have entered private lives (car sharing, apartment sharing) and working lives (time sharing, sharing information through social networks, etc.).

Therefore, companies today also have to offer their employees, especially the younger ones, a work environment based on the idea of sharing. From a technical point of view, a platform like this can only be implemented through the use of corresponding cloud services on the different levels of technology infrastructure, platform and software. Another advantage resulting from the use of such a platform is a much higher degree of standardisation and harmonisation of the IT landscape. While there is currently still a "chaos" of hardware, software and operating systems, versions and software versions in most companies, a cloud-based working cuts through this disorder. The cloud enables the employee to access data required for daily work based on their role or position in the company – and virtually anywhere at any time – regardless of hardware and platform used.

---

[7] http://www.citrix.com/news/announcements/sep-2012/der-arbeitsplatz-der-zukunft--ein-mitarbeiter--sechs-endgeraete-.html

CLOUD COMPUTING STRATEGY: YOUR ROADMAP FOR 2014

Once the supposed dangers and risks of cloud computing and the current challenges for a CIO are balanced, one quickly realises that these dangers and risks can be reduced significantly with the corresponding preparation. Furthermore, cloud computing will be part of an IT landscape in the future and will help you as the CIO to be able to master the demands placed on you.

As an introduction to a Cloud Computing Strategy with an analysis of the possibilities for the introduction of cloud services at your company, I recommend the following procedure:

STEP 1: AS-IS ANALYSIS

Of course, nobody will require that you "shut down" your existing IT landscape tomorrow and completely shift your business into the cloud. For companies of a certain size and with the current complex business processes, a complete "IT from the cloud" is hard to imagine. There will always be areas and IT solutions provided for them that will remain internal for various reasons. However, there will also be areas (CRM, collaboration, document management) that can be obtained (relatively) quickly as a cloud service.

Therefore, in a first step, create an as-is analysis of your existing IT environment and determine potential areas where cloud services can be a practical complement or alternative.

With this approach, you can "hit several birds with one stone". On the one hand, you redefine your relationship with the management and other departments because you are no longer doing everything yourself. You increase your own flexibility and agility, reduce the risk of "shadow IT" and offer new and innovative solutions "from the socket". In addition, you move the responsibility for the operation of the solution to an external service provider, who provides the necessary service quality as well as all data protection requirements with appropriate contracts and agreements. You are also in a position to meet all compliance requirements, without having to give up the reins completely. The idea of the CIO as a "Chief Information Broker" will then become reality. Hopefully some of the IT projects that can be procured as a cloud service, will be currently deemed as "tricky", so moving these projects will free up resources that you can make better use of for other innovations.

STEP 2: DEVELOP A HYBRID CLOUD MODEL

As mentioned in step 1, no one is expecting a "cloud-only" IT strategy from you in the next few years. In most cases, this also will be not feasible. However, there are already numerous examples of successful hybrid models in which cloud applications and on-premise solutions have been merged for a powerful, flexible and scalable overall architecture.

The demand for speed, agility and flexibility is generating a shift to the cloud. Ascertain which IT services are currently most in demand across the company and how quickly you and your IT team can provide them. Then you should research whether there is a cloud service provider who already offers these services as a cloud service. In doing so, you should focus in particular on the areas where there is already a comprehensive range of services from established vendors. This safeguards your investment and you can rely on a corresponding level of service quality, which will be even higher under certain circumstances than if you had to provide this service yourself.

The issue of data protection may also not be a hindrance for the use of cloud services in Germany today because there are now a whole range of service providers who can guarantee that the service or the application will be used exclusively in data centres on German soil and the data will therefore never leave German jurisdiction.

And, ultimately, you will decide which areas will remain (still) in your company in the future because they (currently) cannot be sent to a cloud service or are based on an application developed by you and your team.

STEP 3: COMMUNICATE THE CLOUD COMPUTING STRATEGY

This is probably the most important step in your cloud computing roadmap. Communicate openly and honestly about why you are outsourcing areas to the cloud and, more importantly, why you are NOT outsourcing certain areas to the cloud. This will help you achieve several goals at once. You position yourself for management/departments as the "chief information broker" who is also open to cloud computing concepts. Furthermore, you prevent the previously mentioned "shadow IT" by evaluating possible cloud services together with the departments. In doing this, you maintain control in assessing service quality and provider management and also increase your flexibility and agility by not only getting management and departments "on board" but also in finding external service providers who provide support, because not all IT services have to be provided by you and your department. You are therefore in a much better position to react quickly to changes in business and to demands placed on IT.

STEP 4: IMPLEMENT A CLOUD COMPUTING STRATEGY

The last step on your roadmap is then the implementation of your Cloud Computing Strategy. To do this, first perform a feasibility analysis. It is possible during the course of this analysis that you or the management and/or the department determine that a cloud service preferred at the beginning is not the best option after all. As with the cost comparison, analysis will repeatedly show that the cost benefits of cloud services can be very different from case to case.

The aforementioned evaluation of 270 TCO analysis performed over the Claranet Cloud showed that for more than 90 per cent of the projects planned by users, cloud operation was significantly less expensive than internal operations. However, in some cases, this cost advantage may be significantly lower than first assumed. Regardless of the results of the analysis, you will also demonstrate your abilities as a "profit centre" based on concrete figures and prove your contribution – with or without the use of cloud services – to the company's success.

After completing the feasibility study, you should then add best practice and use cases to the planned cloud services. Learn about the performance of the corresponding providers, speak with companies who have experienced the corresponding cloud computing solutions and then make a decision. This minimises the risk of dependency on a provider who does not have complete control over their own cloud services. Reservations regarding data protection, data security and compliance can also be dispelled at this time.

As a final point in your cloud computing roadmap, you should then create a corresponding timetable to establish and communicate the milestones for internal IT projects and for the introduction of external cloud services as well as their integration into the existing IT landscape.

In conclusion, my most important advice is to look for a "sparring partner" as early as possible to set up your own Cloud Computing Strategy that will support you in creating your roadmap. The partner should have the necessary market knowledge as well as the required design expertise and have practical experience in the evaluation, implementation and integration of cloud services into existing IT environments. You should also ensure that your partner has experience in more than one solution area so that they can assist you in the coordination of various cloud services.

CLOUD COMPUTING 2014 – CONCLUSION AND OUTLOOK

Even if you do not want to follow the euphoric market forecasts of some analysts and providers on the subject of cloud computing, as an innovative and modern CIO one should not completely rule out the subject of cloud computing. The trend towards cloud computing is clearly noticeable and will continue to grow in the future.

"I wager that the share of cloud use in companies will grow to 30 per cent by 2023, especially for software-as-a-service and this will therefore play a decisive role in the solution portfolio of the IT landscape," wrote Daimler-CIO Michael Gorritz in the 2013 CIO yearbook[8].

Or, to say it in the words of Michael Gorbachev: "Life punishes those who come too late!"

---

[8] http://www.cio.de/saas/it-anbieter/2938842/

ABOUT THE AUTHOR

Dietmar Meding has been the Managing Director and Partner of InEssence Reply, the company specialised in SAP Cloud Solutions within the Reply Group, since October 2013. In this role, he is responsible for the European-wide SAP Cloud business.

Dietmar Meding was with SAP from 2008, and in 2012, he began managing the SAP Cloud Solutions business as Vice President for EMEA & MEE (Europe, Middle East, Africa & Middle-Eastern Europe). Previously, Meding worked at Parametric Technology Corporation in Germany. He has over 15 years of sales and management experience.

InEssence Reply has in-depth expertise in the areas of consulting, process optimisation, integration as well as SAP Cloud technology and SAP cloud-based developments.

Through the strong Reply network, these services can be used as pure cloud solutions or in hybrid scenarios, and used in addition to already existing infrastructure or in connection with SAP on-premise solutions. Reply is specialised in the design and implementation of solutions based on new communication channels and digital media. Comprising a network of highly specialist companies, Reply supports Europe's leading industrial groups in the fields of telecommunications and media; industry and services; banks and insurances as well as public administration. Reply effectively supports business models based on new technologies such as Big Data, cloud computing, digital media, and Internet of Things. The services offered by Reply include consultancy, system integration and application management.

The company has more than 4,000 employees worldwide, approximately 600 of which are located in Germany, and had a total turnover of nearly half a billion euros in 2012.

InEssence Reply provides companies of upper middle size and big size services around SAP Cloud-solutions such as Consulting, Process optimization, Integration and Business Process Outsourcing as well as providing those organizations with the respective SAP Cloud Technology and/or additional developments based on the SAP-Cloud platforms. Due to the strong Reply Network, this can be offered in pure Cloud environments as well as in Hybrid-scenarios and especially in addition to existing infrastructures or connected to SAP on-premise-solutions.

InEssence Reply GmbH
www.reply.de