Cloud Computing

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Cloud Computing as an Enabler of New Business Models and Start-ups
Aligning On-demand SME Needs Through Cloud Computing

As a free and simple cloud-based contract management application for small and medium-sized enterprises (SMEs), Cloudtract supports businesses by aligning on-demand needs based on embracing cloud computing integration. Cloud computing's efficient systems and processes create the opportunity to drive innovation in businesses and support the optimization of operational flexibility and minimization of inexplicit costs that are critical enablers for attaining long-term business stability. But perhaps the biggest advantage of cloud services is the fact that their infrastructure is already in place, making cloud-based software instantly available and functional, remarkably shortening its setup life cycle in comparison to noncloud platforms. Cloud technology helps SMEs run and coordinate large external workforces, support operational management, and enable the building of new developments to ensure that they stay up to speed and futureproof within their markets. As industries are thriving using on-demand business models that require speed to market, agility and flexibility, SMEs are almost unequivocally directed to cloud technology implementations, which fit perfectly with the current behavioral profile of SME businesses. But how does this work in real-life situations?

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TRYING TO REVIVE A STRUGGLING COMPANY
This all sounds quite logical and practical, but the immediate questions are how cloud computing can be implemented and what benefits can be materialized. Answering these questions will require stepping back in history a few years and looking at a practical case. A traditional middle-sized insurance company is struggling to hold onto its market share and seeking ways to reduce costs and reinvent itself. The company hired a new head of marketing and a new head of IT. Both new managers started by reviewing existing contracts with suppliers and deciding which contracts to prolong or cancel. It took these managers about eight weeks to locate all contracts, only to find that the company was wasting money on contracts for services that did not get used. Contracts, some dating back many years, were found all over the place in various folders and cabinets and on different desks.

The inventory led to a decision to cancel several contracts, including a €40,000 IT contract. The employee who was responsible for the contract was also responsible for securing a new contract with a different supplier; regrettably, he focused only on negotiating the new contract and forgot to cancel the old one by the deadline date, thus wasting €40,000. A mistake like this is unacceptable for all companies, large and small. So, the quest for a simple and safe contract management solution was undertaken. An analyses of existing systems showed that the market was overflowing with traditional software vendors offering over-engineered traditional enterprise resource planning (ERP) systems or expensive pay-per-use models. So what does an organization do in this cloud-based era? It designs and develops a suitable solution itself: Cloudtract.

€40,000 MISTAKE + CLOUD COMPUTING
When there is no sense of urgency, change is mostly far away. In the case of Cloudtract, a €40,000 mistake created the sense of urgency. In

the "old" world, starting a new company would not be feasible due to the large hardware investments needed, especially if large volumes of data are the key business.

Cloudtract was founded based on the integration of cloud technology, considering its suitability to deliver computing resource advantages. As an online, cloud-based contract management solution for businesses, Cloudtract developed an application that fully enables scalability for a greater-proportioned user base. Features of the application allow businesses to set alerts for expiring contracts and store their contracts and other related documents in the cloud, allowing instant access and increased accessibility.

With scalability allowing an increase of computing power and data storage capacity, delivering a high-demand computing capacity and cost savings, businesses do not have to invest in physical space requirements and utility costs to set up traditional data center environments. Flexible and fast time-to-market benefits require the need for scalable computer resources and data storage server space.

The main benefits for starting up a new company that is fully cloud-based and has a virtual private cloud (VPC) at the heart of the company are:

- **Low and flexible cost operating model**—Cloud computing shifts from a fixed to a variable cost model and allows a pay-as-you-go model.
- **Scalability**—When data are at the heart of a company, growing quickly is essential. Cloud computing provides relatively low-cost, unlimited computing power to support this growth.
- **Availability**—Not only can the company focus on uptime with applications due to several cloud availability zones, it also enables the company to deploy new features more quickly, resulting in a shorter time to market.
- **Connectivity**—Cloud computing combined with web services enables the company to connect easily to third-party applications, which, in itself, increases market reach.
- **High security standards**— Because cloud computing is very focused on security, it upholds the highest security standards possible with accompanying accreditation and additional security and encryption layers.

CLOUD BENEFITS

The facilitation of data and data storage has become a commodity. As diversified demands result in the development of distinct specialized solutions that need to be quickly developed, tested and implemented, cloud technology delivers immediate provisioning of computing service needs and facilitates the on-demand economy requirements of businesses today. Given that cloud technology provides the perfect conditions for an extensive development, test, acceptance and production (DTAP) environment, finding qualified and experienced system operations (SysOps) staff to manage these environments seemed to be the only challenge.

Another important aspect in the development of the new company was the appeal for security of data. Using cloud-based infrastructures, the application is systemically required to comply with high security standards. Cloudtract operates in a VPC environment, which enables customizing network configurations and leveraging different levels of security.

As the scalability benefits and demands for data delivery opportunities for new business models regarding data and algorithms, the contract management tool is currently based on a freemium model, allowing the usability to continuously develop and offer additional features based on user input, market value, and interchangeable consumer needs and insight. Within an environment where businesses can access shared pools of configurable computing resources, drivers for potential new businesses can be identified through enhancing customer value propositions, increasing collaborations with

external partners, creating new delivery channels, creating competitive differentiation through specialization and vertical integration, and allowing flexible pricing models.

DATA SECURITY AND RISK COMPLIANCE CLOUD COMPUTING

With the expansion of cloud computing functionalities comes the need for effective security. Like controlling any other IT environments, the challenges of securing data, such as data loss, data leakage, service downtime, regulatory constraints, and risk of intellectual property theft, are amplified in the cloud model. For the service of monitoring and storing data to integrate with business administration of SMEs, cloud technology offers the best solution in which organizations/clients can store, retrieve and possibly modify data. To adopt the right cloud computing strategy as a business, drivers must be aligned with enterprise goals and objectives, and business and cultural factors must be favorable.

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In the case of Cloudtract, this means that data security is essential. On top of the VPC, encrypted disks are used by the cloud provider. All data are encrypted twice and procedural measures are taken to control the environments. When data security and availability of the data are important, choosing a cloud provider with several availability zones is crucial.

IMPORTANCE OF CLOUD PROVIDER

SMEs experience evolving priorities. The underlying infrastructure necessitates that security of an organization's cloud-based solution be based on a shared responsibility between it and the cloud provider that promises operability, risk transparency and audit governance. When structured on these basic foundations, the benefits of cloud technology will structurally comply with the purpose-driven integration for operational business procedures. Specific regulatory and business compliance requirements have to be made clear to users to specify the security of data. When starting a new company, criteria as a starting point for selecting a cloud provider include:
- Overall pricing
- Global presence and regional availability zones
- Security measures and standards
- Additional services and the development speed of these services

RESISTANCE IS FUTILE

The choice to enable cloud technology for conceptualizing a contract management solution makes sense due to how well cloud computing fits SME needs and the benefits it brings. The on-demand needs of the organization bolster arguments for cloud technology usage based on flexibility, availability, accessibility and data security.

The famous saying from *Star Trek*,[1] "Resistance is futile, you will be assimilated," might seem negative, but it is true here and cloud computing is an unstoppable, positive development. Cloud computing is here to stay and has become the new standard in doing business for large enterprises, SMEs and start-ups. It facilitates an entire new ecosystem of on-demand companies and redefines industry standards. The question is to what extent the owners of IT infrastructures are open to investigating the possibilities and tackling the challenges ahead.

ENDNOTES

[1] *Star Trek*, 1966-1969, is an American science fiction episodic television series created by Gene Roddenberry and owned by CBS and Paramount Pictures.