

CLOUD COMPUTING PRIMER

for Small and Medium-Sized Businesses

MANAGED CLOUD SOLUTIONS FOR YOUR BUSINESS

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iNSYNQ

CAPITALIZING ON AN IT REVOLUTION

EXECUTIVE SUMMARY

The impact cloud computing has on the traditional IT role can't be overstated. Cloud computing isn't an evolution of IT. It's a revolution within IT.

Cost savings is often the main selling point of cloud computing, but increasingly, companies rank business agility as the cloud's chief advantage. Cloud computing enables IT to apply resources as they're needed where they're needed, and pay only for what's required when it's required.

Cloud computing brings enterprise-scale infrastructure to small and medium-sized businesses (SMBs). It levels the playing field between SMBs and larger enterprise organizations, enabling smaller businesses to compete cost effectively with larger players.

Cloud computing substantially eases real-world SMB pressures::

- Unpredictable business environments
- Limited ability to optimize technology investments
- Constrained IT resources and skills

ABCS OF CLOUD COMPUTING

At its simplest, cloud computing is synonymous with the Internet. Software applications, data storage, and processing capacity are stored and accessed over the Internet instead of at a company's premises via a physical database, desktop computer, laptop, or mobile device.

At the core of cloud computing lies virtualization, which is the division of a single physical resource such as a server, storage device, or network into multiple "virtual" instances. Users, devices, and applications interact with a virtual instance as if it is a real logical resource. Virtualization not only produces efficiency gains in processing power, but also saves electricity, space, and cooling expenses because the number of physical machines is greatly reduced.

A cloud is a data center or group of data centers made of up compute and storage resources connected by a network. All these resources are virtualized into one big pool of shared resources that can be orchestrated intelligently and automatically. This shared pool of resources constitutes a cloud.

In addition to leveraging the efficiency and flexibility advantages of virtualization, clouds are highly adaptable and scalable. They adapt to meet the demands and capacity requirements of each shared resource. Once deployed, applications dynamically scale on demand. Resource issues such as congestion can be resolved automatically.

Often, computing power, hardware, and software are hosted in server farms built and maintained by a cloud service provider (CSP), who rents the cloud resources to companies on a pay-as-you-go basis.

AN IT REVOLUTION

The impact cloud computing has on the traditional IT role can't be overstated. Cloud computing isn't an evolution of IT. It's a revolution within IT.

Today, the majority of IT departments are under relentless pressure to do more with less money and fewer resources. Cloud computing offers a tangible way to free up IT resources meaningfully. It gives IT staff the opportunity to focus on strategic initiatives that move the business forward instead of expending lots of time and IT budget on managing and maintaining the status quo.

Cost savings is often the main selling point of cloud computing, but increasingly, companies rank business agility as the cloud's chief advantage. Cloud computing enables IT to apply resources as they're needed where they're needed, and pay only for what's required when it's required.

IT can greatly minimize or eliminate the swing caused by erratic workloads, where over-provisioning servers create unused capacity and under-provisioning servers lead to service degradation.

Applications and services spin up or go to market faster. IT can scale magnitudes greater than ever before.

THE DEMOCRATIZATION OF COMPUTING

Cloud computing brings enterprise-scale infrastructure to small and medium-sized businesses. It levels the playing field between SMBs and larger enterprise organizations, enabling smaller businesses to compete cost effectively with larger players.

The cost savings and revenue-growth opportunities cloud computing affords SMBs is significant. In a survey of small businesses in the U.S. conducted by Exact and Pb7 Research, small businesses that moved to the cloud doubled their profits and achieved 25 percent additional revenue growth compared to their contemporaries that had not moved to the cloud.

Increasingly, SMBs rank business agility as high or higher than cost savings as a key cloud computing advantage. Cloud-embracing SMBs have a much greater ability to enter new markets, develop new products faster, and drive higher levels of productivity—all while controlling cost and minimizing risk.

CLOUD COMPUTING SERVICE MODELS

Businesses choose how and where they use cloud services. Three cloud computing service models dominate:

- Software as a service (SaaS)
- Infrastructure as a service (IaaS)
- Platform as a service (PaaS)

Each of these service models provides a different level of user flexibility and control.

SaaS

In the SaaS model, SMBs use software applications on demand over the Internet. The web-based software is typically purchased from a CSP, and is accessible from any desktop, laptop, or mobile device with an Internet connection. The CSP manages software installation, upgrades, and backups, ensuring that cloud-based applications are always up to date and all SMB employees are using the same version.

One of the most attractive characteristics of SaaS is the pricing. For a low monthly fee, SMBs subscribe to cloud software and services on a pay-as-you-go usage basis. SMBs enjoy zero upfront IT infrastructure or technology investments, and predictable, recurring IT costs.

Unlike a traditional software license, the SaaS subscription fee includes comprehensive tech support. Many SMBs lack the budget or resources for dedicated, 24-hour tech support, often making it difficult to resolve technology issues efficiently.

SaaS is by far the most popular of the cloud service models. According to a recent survey conducted by SMB IT market research firm, Techaisle, penetration of SaaS applications among SMBs in the U.S. will reach 94 percent by the end of 2017, up from 73 percent in 2016.

Chief among the SaaS applications ripe for SMB adoption are customer relationship management (CRM), supply chain and inventory management, marketing automation, and customer service. Why? According to Techaisle, these applications not only address SMB top needs, but they can be accessed from outside the confines of the workplace, a key advantage of software served up from the cloud.

IaaS

In an IaaS model, SMBs outsource the responsibility and maintenance for infrastructure components, usually servers, storage, networks, load balancers, firewalls, IP addresses, and more, to an external cloud provider. SMBs don't incur the capital expenses of purchasing hardware or additional operating expenses associated with hardware maintenance and upgrades.

A common IaaS offering is a development environment for testing new applications or services. The development infrastructure can be created in minutes and removed when testing is complete.

The IaaS model has variable cost and utility pricing. Depending on the type of service involved, IaaS is offered in four different ways:

- Private cloud, wherein a specific number of physical servers are dedicated to one customer. This is the most expensive option.
- Dedicated hosting, wherein a company rents physical servers on demand. The cost and number of servers align with the company's requirements.
- Hybrid hosting, wherein a company has a combination of physical servers and virtual server instances on demand to reduce costs and increase flexibility.
- Cloud hosting, wherein a company rents virtual server instances on demand, often on an hourly basis.

PaaS

PaaS provides the platform to develop, run, and manage web applications without the costs and complexity of building and maintaining the underlying infrastructure. IT departments that prefer to customize their own solutions favor PaaS.

Users (most often developers) typically get access to all of the tools, programming languages, and APIs needed to create their application in the cloud. Allowing developers to focus on the features and functionality of the application itself substantially shortens the time to market.

CLOUD TYPES

Cloud computing services are deployed via private, public, or hybrid clouds. The type of cloud depends on a company's service delivery requirements.

PRIVATE

Private clouds have only one customer or tenant. A company can control and customize the private cloud to fit its needs. This control is why many enterprises are migrating their data centers to private clouds, so they can run more business applications that provide competitive advantages such as research and development, supply chain, analytics, and enterprise resource planning (ERP).

In a private cloud, services are delivered from a company's data center to internal users. This model offers the versatility and convenience of the cloud, while preserving the management, control, and security found in local physical data centers. Internal users may be billed for services through an IT chargeback model.

Because a private cloud is managed by the company's own internal IT team, it's ideal for businesses that want exclusive access and greater control over their cloud. To use a private cloud, organizations build their own data centers, making it the most expensive cloud type.

PUBLIC

In a public cloud, a CSP rents space to many customers or tenants. The provider offers everything from system resources to the security and maintenance of a company's portion of the cloud.

Public clouds enable companies to offload management when they don't mind giving up some control. Public clouds are a popular choice for hosting everyday applications such as email, CRM, human resource, collaboration, and other business support software.

Public cloud services are sold on demand, typically by the minute or hour, though long-term commitments are available for many services. Customers only pay for the CPU cycles, storage, or bandwidth they use.

HYBRID

A hybrid cloud combines advantages of both private and public clouds, with orchestration and automation between the two. For example, a company can run mission-critical workloads or sensitive applications in a private cloud and convert to the public cloud when demand spikes.

In a hybrid cloud, an organization's own IT team manages part of the cloud in-house and the rest off-site with a CSP's hardware. A hybrid cloud is ideal for a company that wants to manage business-related data such as customer files on-premises and store less-sensitive information with a CSP.

THE CLOUD ADDRESSES TOP SMB CHALLENGES

Cloud computing eases real-world SMB pressures:

- Unpredictable business environments (erratic revenue, dynamic competitive climate, business volatility) - The cloud empowers SMBs to exert control over an uncertain environment.
- Limited ability to optimize technology investments (economies of scale hard to attain, low pay-back on IT assets, restricted scalability) - The cloud allows SMBs to manage technology as a business asset.
- Constrained IT resources and skills (IT complexity requires new skills, IT adoption difficult to manage, difficulty hiring and retaining experts) - The cloud enables SMBs to leverage a CSP's experience and highly skilled staff.
- The cloud service provider is responsible for delivering high availability, business continuity, disaster recovery, and data backup services.

SUMMARY

Cloud-based services eliminate capital expenditures, and the resources and costs associated with maintaining and upgrading on-premises hardware and software. Because companies pay for what they use when they use it, their operational costs are dramatically reduced.

Services can be scaled up or down as needed based on demand and business requirements. Infrastructure and other IT resources can be up and running in minutes, and an entire solution configured in hours.

After costs savings, SMBs derive significant business value from cloud computing:

- Increased agility and scale
- Simplified IT management
- Productivity gains
- Greater access and mobility
- Reduced risk and improved resilience
- Easier collaboration

INSYNG: THE GOLD STANDARD FOR CLOUD SERVICES

Insynq partners with some of the industry's best—Intuit, Microsoft, Dell-EMC, and others—to provide small businesses with leading applications such as QuickBooks, Sage, Lacerte Tax, Drake Tax, SAP, Microsoft Office, and Microsoft Dynamics, Act!, and Goldmine CRM.

If you would like to find out more about Insynq's proven expertise and excellence in cloud services, call the provider at 866-206-1781 or visit www.insynq.com.

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