

The Benefits of Private Cloud Computing for IT Service Providers to Small and Midsized Businesses

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper
Prepared for Zenith Infotech

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What is Cloud Computing?

Cloud computing is defined by the US National Institute of Standards and Technology as follows:

“Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction¹.”

Essentially, cloud computing is the provision of IT services that are on-demand and network accessible, using flexible pooled resources that are simple to deploy and expand, with a low up-front, pay-as-you-go cost model. Cloud computing is typically delivered with a combination of commodity hardware, virtualization, management, & automation.

Cloud computing is the provision of IT services that are on-demand and network accessible, using flexible pooled resources

What Does ‘Cloud’ do for SMBs?

Positive outcomes from cloud computing for small and medium businesses (SMBs) include:

- Fast deployment – on-demand provisioning of virtual desktops, storage, and applications can be up to 240 times faster than with physical systems²
- Reduced costs – with easier desktop management, less maintenance, and cheaper thin clients, endpoint virtualization reduces costs by an average of 17%³
- Redundancy – virtualization of commodity hardware pools allows fast migration of workloads and rapid disaster recovery
- Scalability – dynamic use of pooled resources makes it easy to increase or decrease workloads, data storage, staff levels, and applications
- Ease of use – cloud computing hides IT complexity, allowing easier use of diverse, complex computing resources
- Flexible and mobile – network-accessible resources allow users to access business systems from any device, potentially even at home or on the road
- Green – centralization of resources reduces power consumption, and virtualization and deploying thin clients are among the most effective ways to reduce power costs⁴

However, smaller organizations typically have limited IT staff – and maybe no dedicated IT staff at all – and do not have time or resources to set up a ‘private cloud’ solution. SMBs need turnkey solutions that deliver real outcomes, not just technology buzzwords.

1 NIST, ‘Cloud Computing’, <http://csrc.nist.gov/groups/SNS/cloud-computing/index.html>

2 See EMA Research Report, *Best Practices in Virtual Systems Management (VSM): Virtualization Metrics and Recommendations for Enterprises*, <http://www.enterprisemanagement.com/research/asset.php?id=1104>

3 See EMA Research Report, *Real World Experiences of Endpoint Virtualization*, <http://www.enterprisemanagement.com/research/asset.php?id=1558>

4 See EMA Research Report, *The True Value of Green IT*, <http://www.enterprisemanagement.com/research/asset.php?id=945>

Public Cloud vs. Private Cloud

Public Cloud

Most discussion about cloud is about ‘public cloud’ – shared infrastructure made available to the general public or a large industry group, which is owned by an organization selling cloud services⁵ – such as Amazon Elastic Compute Cloud (Amazon EC2) or Google App Engine (see Figure 1 below).

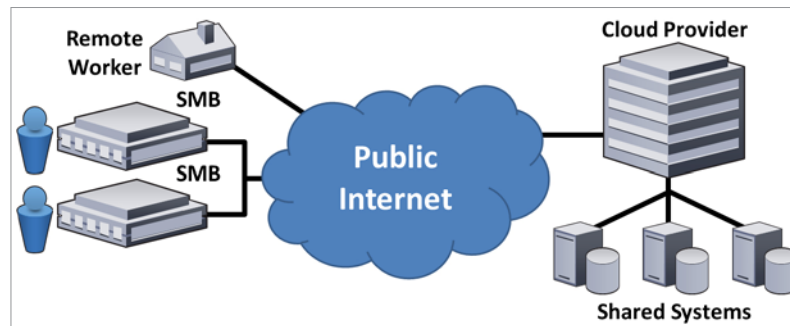


Figure 1: Public Cloud

Public cloud has some advantages – generally a low upfront cost, costs as low as 10¢ per hour, with practically infinite scalability. However, public cloud has significant downsides too, including:

- Service Levels – public cloud providers often have no SLAs at all, so uptime, performance, service quality etc., are all at the business’ own risk
- Network Dependence – public cloud performance depends substantially on the public Internet, which may drop or slow down with shared traffic, reducing or halting employee productivity
- Compliance – it is very difficult, and even impossible, to be compliant with HIPAA, privacy, PCI Data Security Standard, Federal Rules of Civil Procedure, and audit requirements
- Security – public clouds rarely have guarantees for timely patching, malware protection, security of confidential data, in-house administrator access restrictions, or audit trail recording
- Disaster Recovery – with no control over physical hardware, businesses do not have hardware redundancy or isolated backups, which can mean no DR capability at all
- Supplier Lock-in – public clouds tend to be proprietary, so switching providers is at best resource-intensive and costly, and may even be impossible
- Longevity – if the cloud provider goes out of business you may not have any access to your own applications or data, and possibly not even to your backups (if they ever existed)

Private Cloud

Private cloud is a different approach, where the cloud infrastructure is operated solely for a specific organization, either by the organization or by a third party, and either on-premise or off-premise⁶. Where a public cloud is external, shared, and outside of the business’ control, a private cloud is dedicated to one business, and can be controlled, managed, assured, secured, and recovered.

⁵ NIST, ‘Cloud Computing’, <http://csrc.nist.gov/groups/SNS/cloud-computing/index.html>

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With a private cloud approach, SMBs and service providers can most easily deploy what EMA calls the “responsible cloud”

With a private cloud approach, SMBs and service providers can most easily deploy what EMA calls the “responsible cloud” – a well-managed and secured cloud with many or all of the advantages of cloud computing, but few if any of the problems of public clouds – to achieve cloud-based outcomes (fast deployment time, reduced labor costs, lower costs, and ease of use), while providing management for service assurance, backup and recovery, audit trails, security, compliance, portability, and more.

Cloud Opportunities for Service Providers to SMBs

Private cloud provides an opportunity for service providers to deliver to their clients the benefits of cloud computing, while avoiding the risks and challenges of the public cloud. Various estimates have put the market opportunity from cloud computing somewhere around \$40-95bn in 2011, growing to as much as \$160bn by 2015. While estimates vary, it is clear that cloud computing is a multi-billion dollar – and growing – opportunity.

A core private cloud service for SMBs would include virtualization software for high availability and fast provisioning, desktop image management, single-click deployments for new users, onboard data backup and recovery, hardware redundancy for processing and storage devices, easily upgradable components to handle scalability, and system monitoring and management. It should connect to existing desktops, or use low-cost thin or ‘smart’ clients. This solution could be deployed on-premise (see Figure 2), or as a hosted service (see Figure 3).

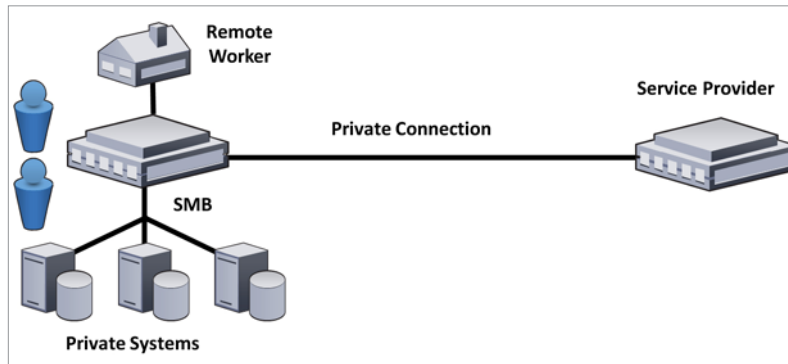


Figure 2: Internal or On-Site Private Cloud – onsite servers, storage, & desktops, with remote management

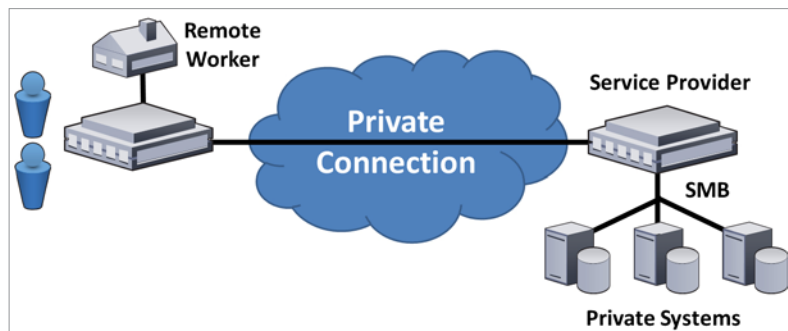


Figure 3: External or Off-site Private Cloud – hosted servers, storage, and management

For SMB clients, this would provide the major benefits of cloud computing, while avoiding the risks of the public cloud.

Zenith Infotech SmartStyle Computing is a solution for SMB that provides these cloud computing outcomes. It delivers a scalable, turnkey solution (hardware and software) with server-hosted virtual desktops, image management, redundant storage pools, and built-in management. It is available as a full hardware system that can be located on the SMB site or the service provider's own premises; or as a 'pay-as-you-go' service that is fully hosted by Zenith Infotech.

EMA Perspective

Cloud computing is a growing wave in IT. It is in danger of being over-hyped, but nevertheless can deliver real value to businesses of all shapes, locations, and sizes – perhaps even more for SMBs, which are not locked into proprietary, enterprise IT systems, and which cannot deliver complex IT solutions for themselves. This in turn means the cloud computing opportunity for service providers that support SMBs is real, it is here today, and it is substantial.

Of course, many challenges cannot be ignored. Security, compliance, reliability, service are all potential concerns, for SMB just as for large enterprises. However, these challenges also present an opportunity for service providers to leverage their existing trust relationship with their SMB clients, to deliver a private cloud computing solution which overcomes these problems. Similarly, investing time and

money upfront on a bespoke cloud solution is a significant risk for service providers. However, using a pay-as-you-go turnkey solution like Zenith Infotech SmartStyle Computing eliminates this risk, and provides a tested, supported, solution for the core needs of SMBs.

The cloud computing opportunity for service providers that support SMBs is real, it is here today, and it is substantial

EMA believes that there is real value in cloud computing solutions. Zenith Infotech is at the forefront of providing this value to SMBs, and to the service providers that support them.

About Zenith Infotech

Zenith Infotech is an international company serving IT Service Providers worldwide, with US-based headquarters Pittsburgh, Pennsylvania. Zenith provides three separate and distinct services – a Managed Service Infrastructure, a Virtual Help Desk and a Business Continuity Solution. Simply put, Zenith's mission is to help IT Service Providers grow their business without increasing their overhead. For more information, visit www.zenithinfotech.com.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that specializes in going “beyond the surface” to provide deep insight across the full spectrum of IT management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help its clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise IT professionals and IT vendors at www.enterprisemanagement.com or follow [EMA on Twitter](#).

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