TECH SUPPORT NOW LLC

SMALL AND MEDIUM BUSINESS TECHNOLOGY STRATEGIES

5 BENEFITS OF Moving to the Cloud

This white paper describes the benefits of Cloud Computing for small and medium-sized businesses.

This white paper is an introduction to available Cloud Computing Services from Tech Support Now, LLC and is geared towards business owners and executives for businesses that are seeking solutions to their company's IT difficulties.

Presented By: Tech Support Now, LLC

Statement of Confidentiality

What follows is simply the result of industry analysis and a review of solutions available. This document is simply intended for use as a referential resource to assist with an evaluation of a businesses preparedness to embrace a new service solution.

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About Tech Support Now, LLC

Tech Support Now, LLC has been providing professional IT Support for businesses in and around the Dallas/Fort Worth since 2002, We strive to give our clients Enterprise-level services and solutions at prices that work for small businesses. To be the trusted partner that transforms Technology into an asset by taking the time to understand the business before layering on our best in class support, proactive tools, and strategic oversight. For a selection of our core services, see the rest of this page, or visit our website at **www.tsntx.com.**



MANAGED IT SERVICES

To help reduce the amount of time and resources lost due to technology related issues and downtime, our managed IT services take a proactive approach to technology maintenance. By remotely monitoring your network and data constantly, potential issues can be detected and remedied before they result in an interruption of daily operations.



SECURITY SOLUTIONS

Regardless of size and industry, businesses can no longer overlook the importance of network security. We will assist your company to implement the right IT security solution. Content filtering, antivirus, antimalware, firewall, and threat prevention are just a few critical services we offer to keep your network and data safe.



BUSINESS CONTINUITY

Business continuity planning is about more than just backing up your company's data. It's about your company's ability to recover from a catastrophic event. Tech Support Now, LLC offers reliable data backup solutions and the expertise to assist you with your business continuity and disaster recovery preparations.



EMAIL HOSTING + PROTECTION

Whether you'd prefer to have us host your email, or you want to keep it in-house, we offer solutions to help keep your business safe and its email managed. With spam protection and email filtering on your side, you can be confident that your email is working for your business.



TECHNOLOGY SUPPORT

For businesses that rely on technology, a critical element of an IT strategy is finding the right tech support. From implementation and configuration to after hours end-user technology emergencies, we are there to assist you with your technology needs whenever you or your employees need them.



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Executive Summary

This whitepaper is designed to inform the reader about cloud computing and how the hosting, utility, and software solutions available in the cloud can benefit an organization or company. Most people that use the internet inevitably hear about "the cloud" and the virtualization of information. A surprising amount of people do not understand exactly what the cloud is, all the while mobile computing innovators from all corners of the earth are utilizing cloud computing to change the way we use computers.

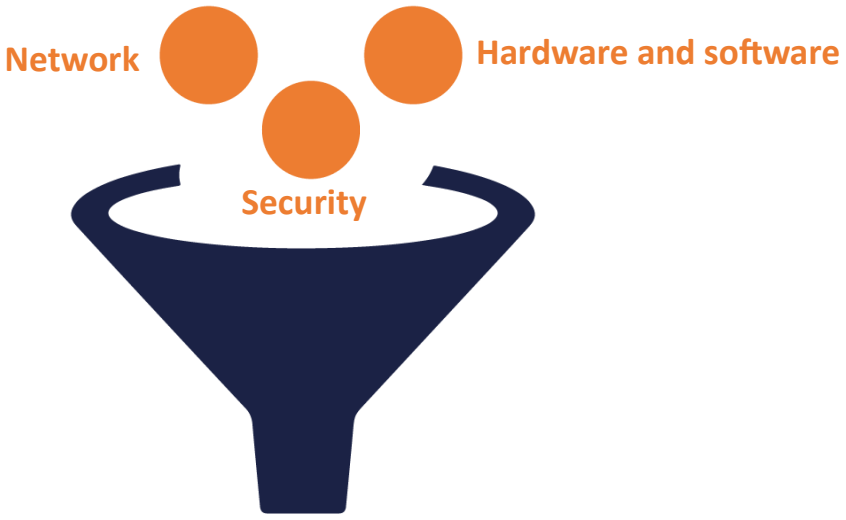
Computing is going mobile; there is no denying that. A survey conducted by Deloitte in 2018 indicated that smartphones had reached 85 percent market penetration, compared to the laptop computer's 77 percent and the 57 percent exhibited by both desktops and tablets. Many smartphones can even run the same applications that you run on your desktop PC at home or the office, which is only further proven by 70 percent of those surveyed confirming that they used their smartphone for work purposes outside of their regular hours. Cloud computing is largely responsible for their ability to do so.

Up until recently, business computing required a company to set up and house their own infrastructure (servers, firewalls, etc.), and staff an in-house IT department to keep the company's computing infrastructure running properly. This deployment model creates a scenario where a company's IT budget takes up a large chunk of potential capital, and there is still no guarantee of seamless access to the crucial data and information that workers need to maximize their own production, and ultimately make the enterprise profitable.

Cloud-based utilities allow users to discover a world of continuous, scalable, and secure remote computing; one where all the data they want to access is available from anywhere at any time. A virtualized computing platform on the cloud allows for unparalleled cooperation and collaboration. The cloud offers options for storage, data, software, applications, communications, and processing power for a monthly fee that can be budgeted around. The concept of shifting computing to a shared service provider is not new. The cost of cloud computing solutions are falling so dramatically that considering outsourcing your business' computing needs to the cloud is an affordable option, and the cloud is now accessible enough that any company can benefit from it.

Cloud computing solutions offer small and medium-sized businesses (SMB) customizable, flexible, and scalable options that are vastly changing the face of small business computing all over the world. SMBs have been at the forefront of this shift by showing an appetite for the implementation of cloud services. These cloud services benefit businesses in a variety of ways, the five of the most prominent being:

1. Gain the Benefits of Managed IT
2. Faster and feature-rich solutions with enhanced data environments
3. Computing efficiency
4. The ability to support a mobile workforce
5. A substantial reduction of IT-related costs



Defining Cloud Computing

Cloud computing is managed, shared applications, development platforms, or computing infrastructure accessible via the internet. It provides options such as bandwidth and on-demand computing power with flexible capabilities normally purchased as a metered service.

The National Institute of Standards and Technology (NIST) defines cloud computing as a "model for enabling ubiquitous, 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 interaction." NIST lists five essential characteristics of cloud computing:

- **On-Demand Self Service** - A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.
- **Broad Network Access** - Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations).
- **Resource Pooling** - The provider's computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location independence in that the customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state, or datacenter). Examples of resources include storage, processing, memory, and network bandwidth.
- **Measured Service** - Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts). Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service.
- **Rapid Elasticity** - Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time.

Three Cloud Service Models

Software as a Service (SaaS)

The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

Infrastructure as a Service (IaaS)

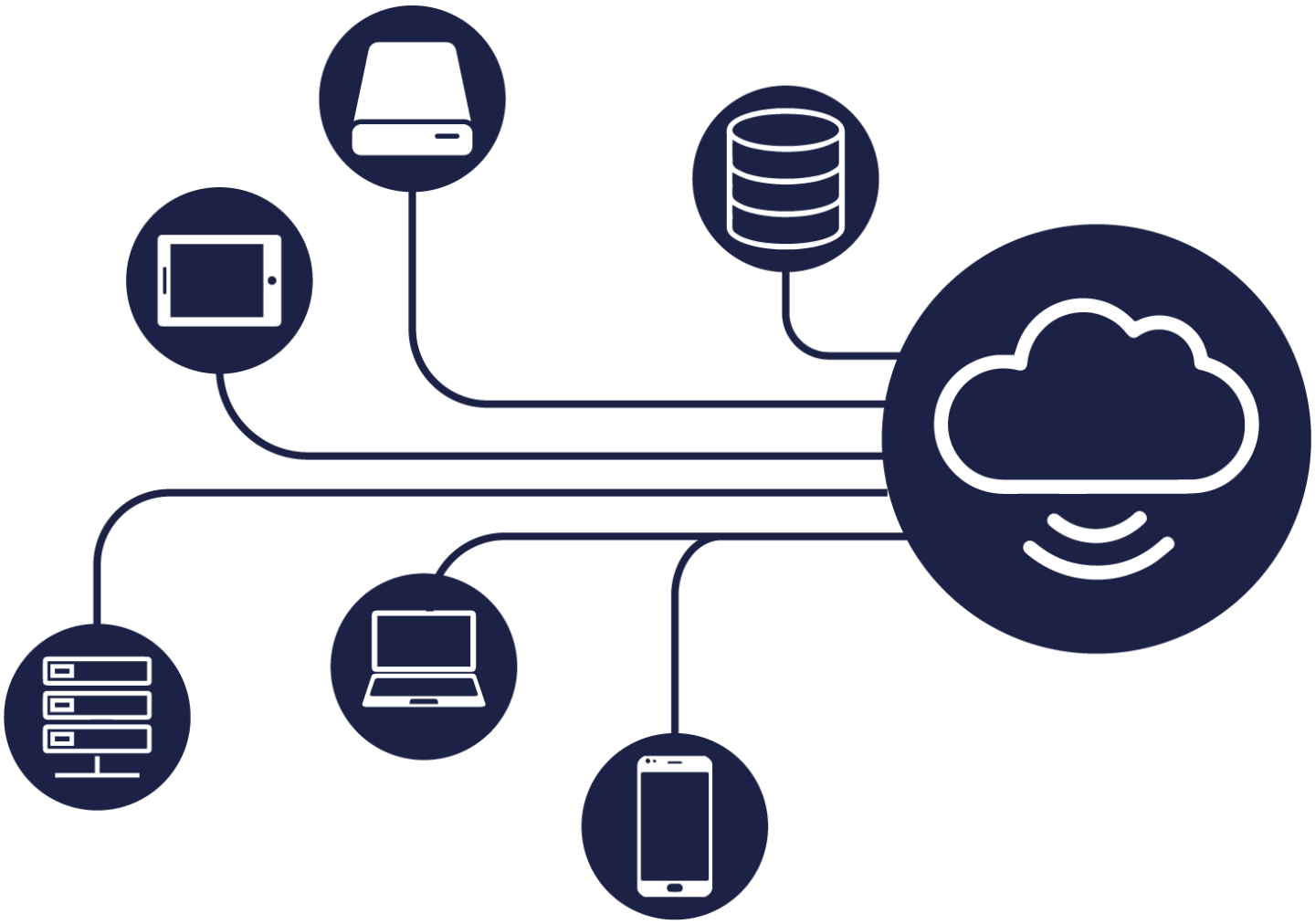
The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).

Platform as a Service (PaaS)

The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

Four Cloud Deployment Models

- **Public Cloud** - The cloud infrastructure is provisioned for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them. It exists on the premises of the cloud provider.
- **Private Cloud** - The cloud infrastructure is provisioned for exclusive use by a single organization comprising multiple consumers (e.g., business units). It may be owned, managed, and operated by the organization, a third party, or some combination of them, and it may exist on or off premises.
- **Community Cloud** - The cloud infrastructure is provisioned for exclusive use by a specific community of consumers from organizations that have shared concerns (e.g., mission, security requirements, policy, and compliance considerations). It may be owned, managed, and operated by one or more of the organizations in the community, a third party, or some combination of them, and it may exist on or off premises.
- **Hybrid Cloud** - The cloud infrastructure is provisioned for exclusive use by a single organization comprising multiple consumers (e.g., business units). It may be owned, managed, and operated by the organization, a third party, or some combination of them, and it may exist on or off premises.



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THE BENEFITS OF MANAGED IT

Many small and medium-sized businesses just can't meet the expense of keeping the internal IT staff that is necessary to keep up with the day-to-day maintenance and technical support. Companies that take advantage of managed IT consulting save money on day-to-day IT issues and prevent costly downtime. The virtualization of a company's workplace data and infrastructure can allow that business to get all of the benefits of having an in-house IT division without having to budget a staff of on-site employees to do so.

Since the infrastructure is all taken care of at the data center, management and maintenance costs are massively reduced, and redundancy, resource management, and 24/7 monitoring can eliminate downtime. For some businesses, wide-spread downtime can begin to rack up substantial costs in just minutes.

Scalable and Customizable Solutions

Organizations that have previously staffed an in-house IT professional to handle the maintenance of their computer system can save time and money by switching to the flexible, customizable solutions that they can find with managed IT services. Whether organizations are taking advantage of storage, processing, software, or development platforms via a private or public cloud, the selected solutions come equipped with proactive industry professionals that will monitor and control the security and integrity of that organization's data. Some of the universal benefits of outsourcing your IT support include:

- 24/7 Monitoring
- Proactive Support
- Eliminate Downtime
- Data Backup and File Security

Profitably Formula of Avoiding Downtime

Productivity Loss Formula

P = (Number of users affected) x (% of Productivity Loss) x (Average salary per hour) x (Duration of downtime)

Revenue Loss Formula

R = (Number of users affected) x (% of Revenue Loss) x (Average profit per employee per hour) x (Duration)

Overall Loss Due to Downtime

P + R = $$$

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ENHANCED DATA ENVIROMENTS

Strategic agility is integral to the success of many small and medium-sized companies in today's fast-paced business environment. The vast resources found in the cloud allow a company the consummate degree of access to business-specific software. The flexibility that cloud computing can present makes it a good solution for companies that rely on business-specific software to make their company go.

Mobile computing is the future. Cloud computing it at the forefront of this advancement in technology. From multimedia to communications to filing sharing, cloud computing services can be a solution that can offer a business a whole new platform in which to find simple and manageable options for all of your business' computing needs.

Scalable Data Environments Give Companies More Options

Large data environments allow a company to analyze and process supreme value from the data formats used by that particular company. New platforms are being created and launched all the time. The cloud is beginning to offer solutions for most IT business problems. Enhanced data environments in the cloud can offer companies a greater level of collaborative interaction with other employees than is normally possible for small and medium sized businesses. The larger data environments also allows for multimedia delivery to mobile devices. What seemed to be impossible only a few years ago is now completely possible in the cloud.

Service-Oriented Architecture

New software developers are popping up every day as they try to meet the demands that mobile computing has placed on developers. With this increase of software developers that are specifically creating software for service-oriented businesses, the cloud has become integral in the development of service-oriented architecture (SOA). SOA is the philosophy of organizing software code so that one set of data, and the code written to process it, can be reused by other applications.



This permits the software to be made available on multiple platforms and across networks maximizing the obtainability for reuse among various developers and users.

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INCREASED EFFICIENCY

Spiceworks conducted a survey of information technology professionals and 62 % of IT professionals said they were using some kind of cloud-based application, up from 28% in 2011. The top reason that was cited was efficiency. Most businesses have already implemented simple cloud-based services such as email and collaborative file sharing. Having managed computing on a centralized server allows for continuous use over many different platforms from any internet-ready computer.

As the cloud becomes populated with ever more software options, a solution to almost any business-related problem or situation will become available. As it is, there are many different software solutions already available in the cloud. The rapid growth rate of cloud computing assures that beneficial software options are or will be made available to SMBs to help them experience the improved efficiency that cloud computing presents.

Reduce Your Company's Carbon Footprint

Taking advantage of cloud computing services streamlines a company's computing immediately making it more Green. An Accenture-produced study commissioned by Microsoft estimated that companies could cut energy consumption and carbon emissions by 30 percent by switching over to the cloud. The study found that some of the core operational benefits that get thrown around about cloud computing also happen to carry some of its biggest environmental benefits. They include:

- Dynamic provisioning, matching server resources to the company's computing needs.
- Multi-tenancy, which makes for flatter peak loads (which can drive big energy costs).
- Server utilization, which means you get better use out of the hardware.
- More efficient data center designs with advanced cooling and power conditioning technologies.



Increase Equipment Utilization

With traditional IT methods, no matter the amount of users an organization has, server utilization is usually at the level that would be deemed energy efficient. With cloud hosting more users; specifically more users from more locations, allow for a much higher percentage of server utilization.

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THE SECURE MOBILE WORKFORCE

Allowing employees remote access to company data from offsite computers can present a significant security risk for an organization. Precautions need to be put in place such as installing safeguards to grant network access to only approved users. This is crucial to the security of your organization's data. Allowing more people access to a network can also increase the risk of harmful viruses and other malware wreaking havoc with your computer system.

Giving employees the ability to access company data from anywhere provides several key benefits for your business; such as increased employee morale and productivity, and substantial fiscal savings from the expenses of commuting and operating an office space. Most importantly, the security offered by the cloud gives you peace of mind when your company's network is being accessed from multiple people and multiple locations, because you know the IT team providing you with cloud services are using best practices and constantly monitoring the network for new security threats.

Only Approved Users are Granted Access

The cloud has security settings in place that only grant network access to approved users and platforms. This means that organizations can now confidently allow only users with proper credentials to remotely access the network, and permissions to the network can be customized to each individual user. The cloud allows for quick administrator and employee access from any terminal or device, and from anywhere with an internet connection, which makes it easy to get more done with less and not have to worry about the integrity of your network security.

Cloud Monitoring Service Protection

The cloud makes network security easy by allowing your virtual network to be monitored and maintained by your IT service provider. Cloud monitoring is proactive and will detect and remotely fix issues before they become a serious problem to your network.



Not only does this ensure that your mobile workforce has a connection that is secure from threats like viruses, spyware, spam, malware, etc., but it also guarantees your entire system will perform at the optimal level, so you know your information will be available when you need it.

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REDUCED IT COSTS

Businesses are continuously searching for ways to curtail redundant expenditures. Implementing the use of the cloud in some fashion can help reduce IT costs substantially. Cloud offerings are flexible and scalable, so a business only pays for the IT infrastructure they need.

By comparing the cloud computing models to the traditional method of housing, centralized infrastructure coupled with the monthly expense of paying an internal IT staff, permits a company to sidestep the process of dealing with the management and maintenance that keeps a business' IT running smoothly. These managed services come at a fraction of the cost of what a company would pay per month their on-site IT staff. This presents a great deal of value to any small and medium sized business that depends on smooth IT operations.

Flexible Solutions Save Time and Money

Small and medium-sized businesses can save time and money and increase efficiency by utilizing a cloud-based centralized virtual server to allow their employees to work remotely. Access to important documents over a secure connection from virtually any internet-connected device gives you and your staff the flexibility to work from anywhere.

No More Software Licensing Headaches

In the past, an organization would have to buy and license all of their own software. In the cloud, not only can an organization buy computing power and storage, but they can simply rent the software as a part of their monthly service contract.. With no capital spent and time lost renewing and managing software licenses it can add up to significant savings for the organization.



Free Up Resources

When an organization decides that outsourcing it's IT is the way to go they no longer need to allocate onsite resources to handle their IT. This frees up a substantial amount of man hours and thus organizational resources that can use their expertise to create better products or processes.

Focus on your Business

Not your Technology

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