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Solutions for the Real World

PDSA Special Report

Why Move to the Cloud

Overview

Cloud computing has gained incredible momentum over the last several years, and with good reason. As companies start looking at the cost of purchasing new hardware and new software licenses, they quickly realize that this investment is not very economical compared to paying a monthly subscription that covers all their needs. When you move your applications, databases and websites into the cloud, hardware is no longer a concern, and you are just a click away from being on the latest version of software or operating system at no additional cost.

Reasons for Moving to the Cloud

There are many benefits to moving your applications and infrastructure to the cloud, including:

1. Allows you to focus on your business needs and not infrastructure.
2. Allows you to rapidly adjust resources to meet unpredictable business demand.
3. Eliminates direct costs to establish infrastructure, such as hardware purchases and software licenses.
4. Reduces ongoing costs to maintain infrastructure, such as routine maintenance and software upgrades or patches.
5. Adds or removes additional capacity automatically based on utilization.
6. Provides rapid disaster recovery options in the event of an outage.

Of course, not everything can be moved to the cloud. For instance, you may have some specialized hardware or equipment that is on-premises. In that case, though you may still be able to use cloud services for database and application services, you still need some physical infrastructure to support your business. Other than these special cases, many people can move to a cloud-based environment right away.

Focus on Business Needs

Microsoft and Apple are constantly updating their operating systems with security and performance patches. If you are running your own servers, someone has to take the time to make sure these are applied. In addition to software updates, hardware has to be

updated as well. When you run in the cloud, the cloud vendor is responsible for these updates. You may get a hardware update automatically because they move your service to a new server. You get the benefit of the new hardware and software and you don't have to do a thing! This saves you a lot of time and money.

Rapidly Adjust Resources

Many companies have seasonal fluctuations in their business. This could mean your website gets inundated with tons of requests at certain times of the year, and is relatively calm during other times. If you have your own servers, this means you are investing in additional hardware and software to support the peak periods, which is excess capacity during the rest of the year. With cloud-based resources in place, you can automatically scale bandwidth and processing power as required: up or down. Monthly costs will go up during those times, but that cost will drop when the resources are not needed.

Eliminate Direct Costs

Typically, to establish new infrastructure or expand existing infrastructure, your organization must bear the cost of purchasing new hardware and new software licenses. When you subscribe for new software or services with a cloud provider, there are no up-front costs traditionally associated with on-premises infrastructure. Instead, you pay as go, typically on a monthly basis, based on the resources you actually use.

Reduce Ongoing Maintenance Costs

Depending on the selection of cloud services needed for your organization, there may be little or no ongoing maintenance costs. For instance, you no longer support or maintain the physical hardware – your cloud vendor is responsible for the care and maintenance of the overall hardware platform. If you choose to use an application service, such as an Azure Web Application, then there are no operating system maintenance costs, either. In some cases, such as a cloud virtual machine, there may be ongoing maintenance to the operating system or other third-party software, but it is usually simpler to automate maintenance and service packs in a virtual or cloud environment.

Automatically Add or Remove Capacity

With cloud services, you can monitor utilization and automatically adjust your environment to compensate. With on-premises or co-located hardware resources, this is practically impossible without pre-purchased and pre-configured hardware and software ready and waiting for your business to change.

Rapid Disaster Recovery

What would happen if your office building caught on fire? Do you have all of your current data backed up onto tape or external hard drive and stored offsite? Many businesses lack the time and resources to ensure backups are made on a regular basis and that those backups are taken offsite. If you are hosting your own email servers and websites on hardware at your office, not only have you lost your data, but you have lost your ability to interact with your customers as well. However, if you move your backups, email, and websites to the cloud, then you can still run your business from another location, with little to no disruption in your normal business process in the event that your office facilities are damaged. In the event that there is a system outage that affects your cloud services, you can quickly and easily implement a business continuity plan to reactivate your applications at a functioning cloud datacenter.

Cloud Characteristics

The National Institute of Standards and Technology (NIST) identifies five essential characteristics of the cloud model: On-Demand Self-Service, Network Access, Resource Pooling, Rapid Elasticity, and Measured Service.

On-Demand Self-Service

This is the ability of a cloud platform to automatically provide resources as needed, without requiring human interaction.

Network Access

All cloud platform features and services are available over a network, accessed through a client such as a mobile phone, tablet, laptop or workstation.

Resource Pooling

Physical and virtual computing resources in the cloud platform are assigned dynamically according to level of demand, including storage, processing, memory, and network bandwidth.

Rapid Elasticity

Cloud platform capabilities can be provisioned and released, in some cases automatically, to scale on-demand.

Measured Service

Cloud platform resource usage can be measured and reported, providing transparency for both the provider and consumer of the service.

Service Models

There are three service models commonly used for cloud applications: Software as a Service, Platform as a Service, and Infrastructure as a Service.

Software as a Service

The most common cloud service model is Software as a Service, or SaaS. In this model, applications are accessible from various client devices, often through a web browser.

Platform as a Service

Platform as a service allows you to deploy applications designed to run on your provider's environment into the cloud.

Infrastructure as a Service

Infrastructure as a service allows you to use processing, storage, networks, and other computing resources to run whatever applications or operating systems you choose.

Deployment Models

There are four deployment models: private, community, public, and hybrid. A private cloud is created for exclusive use by one company. Community clouds are created for a group of consumers or organizations with similar needs. A public cloud is designed for

use by the general public. Hybrid is just that: some combination of the other three deployment models.

Summary

Moving to the cloud can have tremendous benefits for your company. You do not need to immediately move all of your systems to the cloud. You can do just a little at a time. We have helped many of our clients, and even our own company, to move to the cloud.

PDSA Is Here to Help

PDSA is ready to help you as well. Call us today to discuss your requirements and we will come up with a plan to move your organization's applications and resources to the cloud.

Contact Information

If you would like to know more about the information in this special report, please contact either Paul D. Sheriff or Michael Krasowski at PDSA.

Paul Sheriff

(615) 675-4632

PSheriff@pdsa.com

Michael Krasowski

(714) 734-9792 x223

Michaelk@pdsa.com

Company Information

PDSA, Inc.
17852 17th Street
Suite 205
Tustin, CA 92780

Tel (714) 734-9792
Fax (714) 734-9793
www.pdsa.com

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