



BENEFITS OF MIGRATING ASP.NET APPS TO THE CLOUD

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GoDgtl understands how cloud computing - and the benefits of flexibility, scalability, security, and agility enabled by **cloud computing** - can transform organizations.



Introduction

The working environment has changed, and business conditions are evolving faster than ever before. To survive and thrive in this new environment, companies not only need to innovate quickly and develop resilience but also find new avenues to save costs. Moreover, there is increased pressure on businesses to shift their strategies from being physical-first to digital-first. Similarly, they must also accelerate their digital transformation to increase productivity and quickly recognize and address new opportunities.

In this digital-first world, web applications play a significant role in how customers interact with a business. If we put things in perspective, there are more than 38 million ASP.NET websites across the globe, and many of those ASP.NET applications run on-premises. While these apps deliver value to businesses, they require considerable resource effort and longer lead times to roll out new customer experiences. For optimal performance, scalability, and cost savings, and to retain existing customers and capture new opportunities, companies must modernize and migrate their web applications and data to the cloud. Moreover, developers must also be empowered to innovate and have the flexibility to ship new app features faster.

This whitepaper highlights some of the significant benefits of migrating your on-premises ASP.NET apps and databases to the cloud and provides an overview of key features of Azure, Microsoft's public cloud computing platform that you can use to migrate your existing on-premise apps.



Scalability to Meet Digital Demand is Crucial

In an on-premises environment, organizations need to predict the highest usage in advance and consider this constraint when planning infrastructure capacity. Cloud computing eliminates this constraint and enables you to scale your service to meet customer demand flexibly. Moreover, with on-premise infrastructure, all your extra resources can lie idle and underutilized most of the time, representing a significant financial outlay that could otherwise benefit your business in more ways. In situations like these, the public cloud helps organizations meet the challenges of digital demand.

Scalability is one of the major benefits of cloud computing, enabling you to handle an increase in digital demand or sudden traffic spikes for your web applications. For instance, the PaaS service can effectively address your scalability needs by automatically allocating and releasing the necessary resources depending on your demand. Moreover, businesses can meet the maximum capacity needs at all times as per their requirement.



Optimization on Costs

One of the core benefits of moving your applications to the cloud is cost-efficiency. **Let us take a look at three ways in which the cloud can optimize costs:**

- **Saving Costs on Resources**
- **Maximizing Your On-Premises Investment**
- **Reducing the Costs for Development and Testing**

In an on-premises environment, you must conduct capacity planning in advance and be careful with the number of resources you acquire. Remember that with overprovisioning, you will be paying for resources that are not used. Besides cost, any infrastructure investment can take months to realize. While some of these expenses are more natural to gauge, such as the cost of new equipment, other values are less visible. The time and effort required to select and evaluate equipment, get approval from business leaders for new purchases, and buy, install, configure, and integrate the necessary equipment are some of the examples where cost determination is challenging.

When hosting your applications and data on the public cloud, the migration costs of infrastructure and team time are no longer a problem. With the cloud, resources are always available, and you can change the amounts that are used at any time. In the case of overestimated workloads, resources can be downsized at any time, and you can avoid paying for unused resources. Also, if workloads are underestimated, you can add additional resources in a matter of seconds.

This means that just like a utility, you only pay for what you use, and you can use what you need when you need it. This way, you don't have to pay in advance for resources that you will rarely use. By planning and using scalability options integrated into PaaS services, you can make significant savings and use additional funds for further development and new services.



Besides giving you more flexibility and cost-saving options, the flexibility of the cloud also enables businesses to experiment with new business ideas with minimal risk or cost. Moreover, since there is no need to purchase hardware or locate it in a data center, businesses can start developing new projects in an agile fashion with cloud technology. This is because it is easy for companies to build up and tear down the technology to meet the needs of the current project, learning by trial and error to investigate market needs in light-touch projects.

The cloud can help you maximize your on-premises investments by allowing businesses to assign their existing licenses to cloud resources while making significant license cost savings. Azure Hybrid Benefit is a pricing benefit for customers who have existing licenses with Software Assurance. When migrating to Azure, it helps maximize the value of existing on-premises Windows Server and SQL Server license investments. At a time when many organizations are reviewing costs, it is noteworthy that there are options to save money by migrating apps to the cloud. For example, eligible customers can save up to 55% on Azure SQL Database. This saving can help promote innovation as well as reduce costs in the long run.

Increasing Operational Efficiencies

Businesses are always looking for ways to increase their operational efficiencies and remove overheads so that their team can focus on providing a better customer experience and services. There are two main ways the cloud can help you operate more confidently to meet your business and customer needs.

1

MAXIMIZE YOUR APPLICATION UPTIME

Migrating your applications to the cloud ensures high availability, meaning that business users will be able to access your services when they need them. For example, your customers can have a good experience on your website without significant investment, supported by the cloud's promise of high availability, scalability, and maximum uptime. Developers can respond to requests to change the company website in short timeframes, delivering business value in a quick turnaround time.

It is noteworthy that building highly available applications in an on-premises environment can be challenging and require significant investment. There is also the challenge of maintaining data in sync while delivering a responsive website. The cloud can help significantly in this regard by providing global availability and scalability for your applications, regardless of where your customers are in the world.

**2**

DETECT AND RESOLVE ISSUES

The cloud comes with built-in monitoring and diagnostic tools that simplify your operations and help you achieve operational excellence. Granular monitoring and logging diagnostics can keep applications running optimally across the world in addition to logging metrics in real-time. Tools help detect application issues as they happen and provide the opportunity to resolve them before they start impacting users.

The built-in tools can also identify bottlenecks and help you understand how your applications are performing to improve customer experience proactively. For example, Azure App Service diagnostics is an intelligent and interactive experience that enables you to troubleshoot your app with no configuration required. If/when you do run into issues with your app, App Service diagnostics guides you to the right information to troubleshoot and resolve the issue more easily and quickly. It also offers an auto-healing functionality that allows you to restart, log, or trigger a custom mitigation action if your app is experiencing unexpected behavior.

Increasing Operational Efficiencies

Security breaches incur many different types of risks for businesses: reputational, financial, and legal. For instance, a security breach on customer data can lead to public embarrassment and a loss of trust by customers through lawsuits, or worse. Therefore, organizations need to take this topic very seriously and do their best to prevent any security breach.

When taking care of security, businesses must consider a variety of potential scenarios, ranging from malicious attacks from external hackers to thoughtlessness by internal employees who do not appreciate the risks.

Many organizations often forget physical security, but local infrastructure needs to protect against break-ins and disasters such as floods and fires. Keeping applications and data secure on-premises requires different tools, including firewalls, encryption tools, monitoring tools, antivirus software, penetration testing tools, and much more. It is time-consuming to detect and confirm an issue. Moreover, security tools are expensive and require staff with specialized skill sets, which can result in recruitment, retention, and training costs. For many organizations, security is an additional complex constraint that adds pressure to meet business expectations.

Security is a crucial part of meeting the digital demand, and using the cloud means that the responsibility of security is shared with the cloud provider.

In a shared responsibility model, the cloud provider handles the physical and infrastructure security, and the customer is responsible for endpoints, identity, access, and applications.

To share the responsibility with customers, Microsoft spends over USD 1 billion annually on security, with more than 3,500 security professionals and a host of cloud-based security technologies and products.

In addition, Microsoft Azure offers enterprise-grade services and built-in security features to help secure your application and data. With modern applications, it is not enough to only secure the application; it is crucial to consider the data that underlies it. Azure SQL Database comes with specific built-in security options. **With native support for Azure Active Directory, it has several additional security features such as securing the data at rest and also while it is being transported between the application and the database.**

Roll Out and Push New Features Quickly

To survive in the digital-first era, it is crucial to be able to react to changing market conditions and reach customers. Every company wants to push forward and deploy changes as soon as possible in order to stay competitive. They also want to innovate and provide the best possible experience to their customers while maintaining cost efficiency. On-premises solutions can be resource and cost-hungry to maintain and slow and inflexible when shipping new features.

Organizations are now moving toward adopting DevOps for faster and more agile development.

Research shows that the DevOps market will grow 20% over the next seven years as businesses adopt new frameworks for development. **That said, DevOps can be challenging to adopt, but the cloud can help streamline the process with a range of options in the .NET ecosystem.**

Today, there is an even higher demand for developers and IT talent. Developers and tech managers are constantly being challenged to find the right talent to join their teams. Their teams are often stretched with many different hardware and software management tasks in on-premises environments. In such a scenario, organizations must attract, recruit, and retain the right talent by moving with the market trends.



Why Should You Use Azure?

In the present times, businesses need to maintain low operating costs more than ever while responding to evolving user needs. Azure App Service and Azure SQL Database together take care of the availability, scalability, security, and infrastructure management of your apps, allowing you to spend more time growing your business and empowering your employees.

For ASP.NET applications, Azure provides the only end-to-end fully managed platform that natively supports Windows, offering unparalleled developer productivity with deep Visual Studio and GitHub integration. Furthermore, it builds on 25 years of SQL innovation together with Azure SQL Database. In fact, you can enrich your apps in numerous ways with other services that Azure offers after migration.

How Does GoDgtl Collaborate With Azure?

GoDgtl brings a team of experienced cloud experts who work directly with AWS to bring value and real solutions for your cloud projects. With direct access to AWS resources and in-house cloud consulting talent, GoDgtl is ready to guide you through your cloud journey, regardless of where you are on the path. Whether it is more knowledge-based information on cloud topics such as security, governance, and compliance, or basic cloud migration aspects, or even if an assessment is needed, GoDgtl can provide a roadmap for your path to project completion and success.

Sources

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