GoDgtl
by **PruTech**

AZURE HYBRID CLOUD &
DIGITAL TRANSFORMATION

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The move to a **hybrid cloud** is not just a technology play. When viewed as a part of an organization's **digital transformation strategy**, it becomes obvious that a hybrid cloud model plays a **key role** in modernizing IT operations and achieving cost efficiency.

What is Digital Transformation?

When discussing digital transformation, one immediately recognizes how it covers a broad scope. However, digital transformation is mainly about reimagining ways of bringing people, processes, and data together to create better customer value and maintain a competitive advantage in a digital-first world.

Unlocking business value, driving change through the cloud, and doing these things withsecurity, scalability, and speed is a challenge for most companies. Enterprises and large organizations increasingly turn to the cloud to achieve essential flexibility and efficiency. However, it is important to leverage the existing infrastructural investments as much as possible. A hybrid cloud approach offers the best path to the cloud and is a way to optimize your current assets.

For many industries, including banking, financial services, and healthcare, on-premises operations aren't going away anytime soon (if at all). So, optimizing the existing technology assets and investments makes sense both economically and from an innovation perspective.

> Every business is different, and a hybrid cloud gives you the flexibility to choose the best location for each application, moving workloads to the cloud on-demand.

Using a cloud model means that businesses are free to choose the balance between on-premises, public, and private cloud that best meets their unique security, compliance, and operational requirements. In the hybrid cloud, you're able to keep critical data, applications, workloads, and services on-premise s, if you choose, and scale to use resources in the cloud on an as-needed basis. A stable hybrid cloud environment also helps IT administrators manage, assess, and mitigate security threats. Moreover, granular controls and single sign-on reduce the risks associated with multiple users, devices, apps, and platforms.

> The move to a hybrid cloud is not just a technology play. When viewed as a part of an organization's digital transformation strategy, it becomes obvious that a hybrid cloud model plays a key role in modernizing IT operations and achieving cost efficiency.

Cost is an important consideration for IT decision-makers, and driving ROI is always one of the top concerns. Moving on-premises workloads to the cloud, where you only pay for what you use, delivers significant savings. Using on-demand resources in the cloud, you can leverage the power of the cloud and provide services that complement your existing on-premises data center. With an investment in a hybrid cloud model, infrastructure spending shifts from capital to operating expense, freeing up resources for other projects supporting a business.

In addition, most organizations recognize that moving to the cloud is fundamental to achieving digital transformation. This white paper highlights the benefits of a hybrid cloud model and helps you understand how to evaluate the key elements of a consistent hybrid environment.

5 Elements of Digital Transformation

Enterprise computing has moved beyond data storage and reporting to a strategic function that introduces new ways of working internally and externally with partners and customers.

- IT creates momentum for innovation and collaboration.

- Modern IT leverages the existing assets and investments, integrating the power of flexible cloud technologies.

- Hybrid cloud enables faster data processing, application development, and implementation.

- Enterprises can quickly scale and respond to evolving business needs.

- Managing all data resources from a unified platform allows businesses to unlock new opportunities and position emerging/next-gen technologies, such as AI, machine learning, and the Internet of Things (IoT).

The Importance of Hybrid Cloud Consistency

A consistent hybrid cloud ensures that IT managers, developers, and users can work seamlessly across platforms in a fully integrated environment. The size and complexity of your applications, hardware platforms, and operating systems you use are all factors that impact your migration strategy. Your migration to the hybrid cloud is also a cultural shift. It's about more than just technology, and you need to consider your users and plan for inevitable adjustments to roles, processes, and governance.

However, as enterprises have learned, the benefits of the hybrid cloud far outweigh the challenges. Once you've adopted an integrated hybrid cloud model, you'll be able to manage and optimize workloads more logistically. The visibility and consistency you achieve through a hybrid platform are key to hybrid cloud success. Without a comprehensive solution, there are more moving parts to manage. In fact, a fragmented approach to a hybrid cloud elevates the risk for several reasons.

For instance, in today's cost-conscious IT environment, inefficiencies are expensive and difficult to justify over time. Furthermore, organizations that rely on multiple hybrid cloud vendors risk significant complications due to:

- Different identity management systems

- Different management and security systems

- Different data models and support for distinct developer experiences

Leverage Your Data Assets in Powerful New Ways

When you can distribute data seamlessly between the cloud and on-premises, you're able to realize the benefits of granular analytics, visualizations, and deep learning. Data coming in from external sources must be able to live with on-premises corporate data. A hybrid cloud environment makes this possible. What this looks like at the operational level varies according to the organization, because every organization manages its data differently, and there isn't a one-size-fits-all approach to data management. That said, regardless of where your data resides, your team should be able to use the same tools, whether on-premises or in the cloud. A consistent hybrid cloud model allows users to work with operational and analytical data and provides the same services on-premises and in the cloud for data warehousing, analysis, and visualization. Beyond operational data, Microsoft's hybrid cloud data platform includes consistent services for analyzing and visualizing on-premises and cloud data.

- Load data from both on-premises SQL Server database and Azure SQL database.

- Work with both relational and unstructured data.

- Analyze data with your existing skills and familiar tools.

- Visualize data with cloud-based Power BI - a suite of business analytics tools that works with data from many different sources.

The best cloud vendors provide deep and consistent functionality, both in the cloud and on-premises. With a platform that allows you to work with data in many different ways, seamlessly distributing it between both environments, your organization can leverage powerful analytical and operational tools, create and scale resources as needed, handle high availability, and at the same time, optimize costs.

Ensuring Visibility and Control in the Hybrid Cloud

End-to-end visibility and control are vital to a consistent hybrid cloud environment. Microsoft offers built-in management and security capabilities that include an integrated set of tools for monitoring, configuring, and protecting your hybrid cloud. This end-to-end approach to management specifically addresses four real-world challenges faced by organizations considering a hybrid cloud solution:

Insights & Analytics: Monitoring activity is a critical part of hybrid cloud management, and to do it, you need full visibility of both your on-premises and cloud data centers. With a consistent, fully integrated solution, you can use the same tools to find and fix errors faster, regardless of whether the problem database operates on-premises, on a hosting provider, or in the cloud.

Protection & Recovery: The cloud offers an efficient and cost-effective choice for data backup and recovery. Most cloud platforms allow you to run third-party software for backup and disaster recovery, but these services are fully integrated and easy to turn on with Microsoft. This means that you don't have to install and manage a separate product in the cloud. If you manage multiple workloads in the cloud, automation can give you the control you need across hybrid environments. Streamlining workflows and creating operational efficiencies make sense from both a business and a technological perspective.

Automation & Control: Using automation, admins can create PowerShell scripts (runbooks) and operationalize common processes. From resetting passwords to establishing their virtual machines, they can do it all. You gain actionable insights that can save valuable time and money by proactively creating runbooks and configuring them to execute when alerted.

Security & Compliance: In a hybrid cloud environment, IT needs a coherent, unified view of the security state of its resources. This central source of data allows administrators to understand their vulnerabilities and respond quickly. To deliver this ability, Microsoft provides an integrated suite of intuitive tools for administrators to use without requiring specialized security credentials. With one click, administrators can correct configurations on virtual networks or enable encryption on SQL databases. Troubleshooting is also easier because admins can receive specific recommendations and guidance on fixing security vulnerabilities, tapping into the power of machine learning, advanced analytics, and threat intelligence.

Building a Common Environment for App Development

What works in one environment is not guaranteed to work in the other. For instance, applications developed in the public cloud aren't always built with the same languages available on-premises. The business benefits of being able to deploy anywhere are significant. Moreover, the ability to use existing skill sets means that you don't need to hire an extra team of developers or incur additional costs that are typically associated with developing and translating to different languages.

It is also a challenge to provide up-to-date platform technologies for applications that connect to the cloud or that need to run closer to their users. Edge computing, i.e., computing that happens closer to the source of data, such as IoT devices, is easier in a hybrid environment where development is the same, whether on-premises or in the cloud.

Rather than stretching or modifying the existing on-premises technologies to function in the cloud, a hybrid model enables developers to build and deploy modern applications in both environments in a familiar way. Furthermore, moving applications between on-premises and the cloud is also straightforward. You can choose where to deploy an app based on your needs, and you aren't locked into either cloud or on-premises. Also, your on-premises development projects aren't limited to older technologies because the cloud supports up-to-date technologies.

Hence, organizations can mitigate staffing issues while enhancing productivity from a resourcing perspective because development skill sets are the same for both environments. In a hybrid world, consistency matters. For DevOps teams, it is fundamental. Consistency across the cloud and on-premises means that your DevOps team can build applications that run in either environment and easily deploy to the right location. Moreover, templates can be reused acrossthe hybrid cloud, which can further simplify DevOps processes.

Reasons Why MSFT Azure works for Digital Transformation

Protects Business Assets: For Microsoft, security is not an afterthought. Azure keeps data and assets safe and sound within the cloud by ensuring transparency, privacy, and compliance.

Deploys Easily: Azure was designed to be built freely and deployed anywhere by customers with the resources they already possess. Therefore, open-source technologies and partnerships are supported by Azure. Because many CIOs use open source technology as their chief strategy, Microsoft built Azure Container Service and HDInsight on open-source technology.

Is Highly Intelligent: Digital transformations cannot happen without data. Azure data and intelligence provide ideal data to derive new insights necessary for meeting the needs of a company's mobile customers. Data and intelligence technology reveal a company's data and needs and the outcomes that data may drive. Once customers grasp this information, intelligence can be combined with machine learning. Moreover, support for artificial intelligence (such as Cortana and Siri) is also an important aspect of Azure.

Quickly Develops Apps: Rapid development of apps is vital within the cloud. Microsoft Azure shines in this area. Azure's Infrastructure-as-a-Service (storage, computing, and networking) is designed to keep costs down and ROI up. As reported by Microsoft, "When you add our integrated platform services, which run IaaS in the back-end, customers accelerate agility. A recent study showed that customers using our PaaS for an app (development) estimate 466% more ROI than on just IaaS alone. This includes services across apps both small and Internet scale, data, integration, and so on." Azure's Xamarin also aids in app development, helping individuals build mobile apps with C# compiling code across iOS, Android, and Microsoft.

How GoDgtl Collaborates with Microsoft Azure

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How GoDgtl Collaborates with Microsoft Azure (cont.)

GoDgtl brings a team of experienced cloud experts who work directly with Microsoft Azure to bring value and real solutions for your cloud projects. With direct access to Microsoft Azure resources and in-house cloud consulting talent, GoDgtl is ready to guide you through your cloud journey regardless of where you are on that path. Whether it's more knowledge-based information on cloud topics such as security, or 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.

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