Session Abstracts

# Business Benefit of Cloud

Azure is Microsoft’s cloud computing platform, a growing collection of integrated services—analytics, computing, database, mobile, networking, storage, and web—for moving faster, achieving more, and saving money. Azure runs on a worldwide network of Microsoft-managed datacenters across 19 regions—more countries and regions than Amazon Web Services and Google Cloud combined. Azure’s integrated tools, pre-built templates, and managed services make it easier to build and manage solutions faster, using skills developers and IT professionals already have and technologies they already know. Microsoft is the only vendor positioned as a Leader in Gartner’s Magic Quadrants for Cloud Infrastructure as a Service, Application Platform as a Service, and Cloud Storage Services for the second consecutive year. Azure’s hybrid cloud solutions give you the best of both worlds: more IT options, less complexity and cost.

# Architecting Managed Services for Customer Solutions

System Integrators are increasingly offering managed services to operate strategic solutions on behalf of their customers. We will introduce key concepts such as multiple subscription management and billing. We will then demonstrate Azure Resource Manager as a component for creating reusable solution templates, adding tagging to bills, and enabling role-based access control features. Finally, we will demonstrate the rate and usage APIs as opportunities to create additional value-added services.

# Compute

This session equips the Solution Architect with essential knowledge to leverage compute options the Azure platform provides in various application scenarios. Learn how to deploy virtual machines, customize images, and attach disks to support your most demanding workloads. Next, understand how to use platform-as-a-service options for web apps, web jobs, mobile apps, Docker containers, and service fabric. And finally, see how to capture the promise of elasticity that cloud computing makes by auto-scaling your solutions.

# Storage

The Azure Storage system is a foundational building block for many services in the Azure Platform. It has a touch point of about 85% of the services in the platform, meaning it's durability and scalability is proven. How is massive scalability achieved in this systm? Why do you care as a Solution Architect? What are some best practices for architecting your solutions so that durability and scalability are achieved? These questions are addressed in this session. You will learn internals of how the Azure Storage system works across all storage abstractions. As you progress through the session you will be introduced to capacity and constraints of the system. Lastly, you will learn some best practices on how to apply this knowledge in your architectures to deliver scalable and durable storage solutions.

# Networking

Virtual Networks provide a layer of isolation for your compute and data resources in the cloud and are can be carved up into subnets like an on-premises network. However, Azure Virtual Networks don't have to be isolated to cloud-only deployments. In fact, it is common for today's Solution Architect to have to bridge the gap between on-premises and cloud environments. See how you can extend an on-premises network to Azure Virtual Networks using point-to-site, site-to-site, and private connections using ExpressRoute. Understand scenarios appropriate for each solution. Then, see how to conquer multi-site networking topologies and how network security groups and access control lists can be used to further protect resources. Finally, understand how to leverage the load-balancing features of Azure (internal and external) to achieve highly available architectures.

# Architecting Virtual Machine Solutions

Virtual machines in Azure are very easy to get started with. Simply provide an image for a new virtual machine instance or choose one from the gallery and you’ll be up and running in no time. Just like with on-premises solutions, there are best practices to follow when designing solutions comprised of virtual machines. We will discuss best practices for specific workloads such as identity and database workloads and will highlight the areas that Architects need to remember when designing complex solutions in the cloud.

# SAP on Azure

SAP on Azure represents a significant sales opportunity for any Systems Integrator. Customers with an investment in SAP face a significant cost to provide environments for developers and testers that can be easily offset by hosting this workload in Azure. This session will demonstrate the potential cost savings to the customer while providing Architects the guidance needed to properly design an SAP environment using Azure.

# Architecting Hybrid Solutions

One of the primary benefits of Azure as a cloud platform is its ability to enable hybrid solutions between on-premises and cloud. We will start with a look at networking requirements for various workloads and will highlight opportunities such identity solutions and SQL Server Availability Groups to provide disaster recovery for specific workloads. We will then look at Azure Site Recovery and Backup as options for protecting virtual machine solutions. Finally, we will discuss Remote App and StorSimple as two additional enablers for hybrid solutions.

# Architecting Modern Cloud Apps

Modern cloud applications offer end-user experiences and features that transcend traditional on-premises applications. For example, there are often multiple database technologies supporting today's modern app. Embrace the notion of polyglot persistence and see how RDBMS's, NoSQL databases, and caches can be combined to deliver robust end-user experiences. Modern cloud apps today are also expected to be reachable regardless of the platform or device. See how Azure's App Service can be used to expand the reach of your solutions. Modern cloud apps are also not always just platform-as-a-service solutions. Learn about modern architecture patterns enabled by Azure that span infrastructure-as-a-service and platform-as-a-service deployments.

# Architecting Global Scale Web and Mobile Solutions

One of the main benefits of the Microsoft Azure platform is its massive scale. Microsoft Azure runs on a massive network of over 19 regions worldwide. This global reach makes it possible to create solutions on a global scale that meet your demanding performance requirements. We will discuss architectural patterns that lend themselves to global geo-located solutions and the specific features of Microsoft Azure that enable geo-replicated data.

# Architecting IOT Solutions

Internet-of-things (IOT) is driving some compelling application scenarios in our industry that in turn result in new business opportunities. It's also creating some challenges. Smart devices and sensors are generating massive amounts of data in real-time. How is this data ingested? Where is it stored? What are the services available to perform analytics on this data? These challenges and patterns for addressing them are covered in this session.

# Architecting Big Data and Analytics Solutions

The proliferation of customer data and the desire for insights not previously attainable has created a new industry focused on analyzing massive amounts of data. The cost of processing huge amounts of data does not need to be prohibitive when you can take advantage of a scalable cloud platform. We will discuss the Lambda architecture to take advantage of both batch and stream processing of data and will show various Azure services such as Azure Data Lake, Azure Data Factory, Azure Stream Analytics, Azure Machine Learning, and Power BI to provide a solution to unlock insights into data.

# Architecting Predictive Analytics Solutions

Machine learning uses computers to run predictive models that learn from existing data in order to forecast future behaviors, outcomes, and trends. These forecasts or predictions from machine learning can make apps and devices smarter. When you shop online, machine learning helps recommend other products you might like based on what you've purchased. When your credit card is swiped, machine learning compares the transaction to a database of transactions and helps the bank do fraud detection. Azure Machine Learning is a powerful cloud-based predictive analytics service that makes it possible to quickly create and deploy predictive models as analytics solutions. This session will introduce you Azure Machine Learning so that you can quickly get started building predictive analytics solutions.

# Identity and Access Management

Identity and Access Management is a cornerstone to any solution architecture today and application security is no longer an afterthought, but instead, an integral part of how applications are developed. In this session you will learn how Azure Active Directory delivers unprecedented levels of security to cloud applications. You will learn how to extend your environment to leverage thousands of popular software-as-a-service applications available in the Azure Marketplace and manage access to those applications. You will learn how Azure Active Directory manages identities and solutions to extend existing on-premises directories to the cloud to achieve single-sign-on across all your applications running on-premises and in the cloud. Finally, you will learn how to develop real-world line-of-business cloud applications that are protected by Azure Active Directory using industry standard protocols such as OAuth, WS-Federation, and SAML. You will learn how to achieve claims-based security in your solutions and patterns to help reduce application security risks.

# OSS

Microsoft Azure is an open and flexible platform that enables you to run the platform and code that your solution requires. One in 5 virtual machines on the Microsoft Azure platform use Linux, and Microsoft has openly embraced the open source community by contributing key assets such as the .NET framework and its libraries to the open source community. Microsoft is a key contributor to open source initiatives and enables the platform that your solution needs regardless if it uses Windows or not.

# Monitoring and Diagnostics

Application monitoring and diagnosing problems is a core function of all IT groups, regardless of whether the application is running on-premises or in the cloud. In this session see how IT can leverage features such as Operational Insights to collect, store, and analyze diagnostics data. Next, learn how developers can use Application Insights to provide deep analytical metrics from their applications to improve performance, response times, analyze application failures, and discover usability trends. Lastly, learn practices for storing log data, tools for analysis, and how to configure rules and alerts to help thwart off potential problems for your end-users.

# Microsoft Azure Media Services

Have you had to fix something lately? Did you read instructions, or did you watch a video? Customers expect the richness of audio and video as part of their solutions, and are increasingly looking to video solutions to deliver new business models and capabilities. Delivering media solutions within existing infrastructure constraints can be very costly. This session will demonstrate how to leverage Azure Media Services for solutions ranging from health and human resources to manufacturing to retail.

# Building Secure Solutions in the Cloud

Raise your hand if you're a security expert! Most would not raise their hands, even if they were a "security expert". Today's online world is extremely hostile. So, naturally, questions about security and compliance are front-and-center for all customers. In this session you will learn about steps Microsoft takes to insure a secure and compliant platform for you to architect and build your solutions on. You will learn about the resources available to you to address complex security and compliance questions. Most of all, you will learn that you (and your customer) share in this responsibility of securing your solution. Where does Microsoft's responsibility for security end and where does your responsibility begin? What are some specific actions you can take to promote a secure solution and instill confidence with your customers that their solution is secure? Find out the answers to these questions in this session.

# Cloud Patterns and Anti-Patterns

Building solutions designed to take advantage of the cloud’s scale capabilities requires a change in thinking from how you might have designed the same solutions on-premises. This session will highlight common patterns, such as queue-based communication between dependencies, and will also highlight anti-patterns that limit performance and scale.

# DevOps in the Cloud

Enterprise IT organizations are increasingly driven by business demands for faster, better solutions delivered more quickly than ever before. DevOps has emerged as a trend to help organizations evolve to better collaborate between development and operations teams for addressing these solution delivery challenges. While a DevOps transformation can take time to fully realize within an organization’s people and processes, there’s opportunities to accelerate the path towards DevOps by smartly leveraging cloud capabilities that can reduce infrastructure complexity, simplify release management, and support end-to-end application visibility through all stages of a solution’s lifecycle. This session will discuss the features in Microsoft Azure that help to realize this transformation and how the platform enables integration with existing assets.

# Oracle and IBM on Azure

Microsoft Azure is an open and flexible platform. Microsoft has formed strategic partnerships with solution provides such as Oracle and IBM to enable those solutions to easily run on the Microsoft Azure platform while providing the support that your organization requires for those solutions. This session will provide you with insights and key considerations when deploying Oracle Database, DB2, and WebLogic Server on Microsoft Azure and will highlight licensing and support options for each component.

# Cost Modeling

This session will discuss the financial opportunities for cloud-oriented partners and how the cloud can improve partner business models. Understanding the Microsoft Azure platform and how to estimate costs of solutions will pay off as more customers are driving to reduce their datacenter footprint and move strategic workloads to a cloud platform. This session will discuss how to have a TCO discussion with customers, will highlight how Azure pricing works, and will demonstrate the guarantees in place that make Microsoft Azure the cloud platform of choice.