

## Microsoft Azure Architecting Session Outline

### Workshop Details:

<b>Duration:</b>	3 Days
<b>Synopsis:</b>	These sessions are targeted at Aspiring Software Architects to build competencies in them for Architecting solutions on the Microsoft Azure platform. The Microsoft Azure platform provides Infrastructure as a Service as well as Platform as a Service capabilities and this session will discuss the various solutions that can be based on them. The technology choices and options will be debated using various business scenarios. In all sessions we will also look at the different patterns and best practices that can be used to build cost effective, highly scalable and available solutions on the Microsoft Azure platform.
<b>Delivery Methodology:</b>	All the sessions will be delivered using slide-decks and demos. The technology choices and options will be debated using various business scenarios. In all sessions we will also look at the different patterns and best practices that can be used to build cost effective, highly scalable and available solutions on the Microsoft Azure platform. We will also have exercises in the form of case studies that will be done by the group during the session for some of the modules.

### Course Content

<b>Session 1</b>	<ul style="list-style-type: none"> <li>➤ <b>Microsoft Azure Platform Overview</b> This session reviews the current roadmap for the Microsoft Azure Platform. It will discuss the different components of Microsoft Azure and bring the entire class up to date with the changes in the platform.</li> </ul>
<b>Session 2</b>	<ul style="list-style-type: none"> <li>➤ <b>Technically Qualifying Microsoft Azure Deals</b> This session reviews the criteria used in cloud assessments and discusses how to consider aspects such as security, compliance, code complexity, latency, feature gap identification, risk etc. and give the participants a framework for assessing the technical feasibility of a potential deal</li> </ul>
<b>Session 3</b>	<ul style="list-style-type: none"> <li>➤ <b>Hosting applications in the Microsoft Azure cloud – Choosing the correct Execution model</b> Microsoft offers multiple options for hosting applications on the Azure cloud, both in Infrastructure as a Service (IaaS) as well as Platform as a Service (PaaS). We have a choice of hosting our application on a VM (IaaS) or as a Cloud Service (PaaS) or as a simple WebSite (PaaS). When we are moving existing applications to the Azure cloud or building new ones to be hosted on the Azure cloud, being able to make the right choice for the execution model becomes critical. You need to evaluate the use cases, benefits, costing, and limitations for each of these models. This session,we will take up scenarios and understand which execution model is right in each case and also do a comparative analysis for the same.</li> </ul>

<b>Session 4</b>	<ul style="list-style-type: none"> <li>➤ <b>Architecting for Cost</b> The design and architecture choices of cloud applications will be influenced by the cost of the solution to a great extent. This session will cover how to factor cost into architectural solutions.</li> </ul>
<b>Session 5</b>	<ul style="list-style-type: none"> <li>➤ <b>Building data centric solutions on the Microsoft Azure Cloud</b> The cloud offers us limitless scale and elasticity for our applications and data they generate. Having the data close to the application is the ideal design choice, but with the cloud there are a lot of options for storing the data. Each data solution comes with its own strengths/advantages, scale, limitations and usage and connectivity patterns. Choosing the right storage option is critical to the solution you build on Azure cloud as it could affect the cost, performance and scaling for your solution. Also it is critical to build DR and HA solutions for the data. This session looks at the various cloud storage available in the Microsoft Azure cloud like SQL Database, Microsoft Azure Storage, making the right choice and choosing the ideal pattern for partitioning, DR and HA for the data.</li> </ul>
<b>Session 6</b>	<ul style="list-style-type: none"> <li>➤ <b>Designing Applications for the Azure Cloud – Patterns</b> Designing applications for the cloud is very different from designing traditional web applications that will be hosted on premise. Being a multi-tenanted environment there are specific patterns that are used for Cloud. This session will discuss the different patterns that should be used to build applications for the Azure Cloud.</li> </ul>
<b>Session 7</b>	<ul style="list-style-type: none"> <li>➤ <b>Assessing migration of applications to the Azure cloud</b> This session will cover the various techniques involved in evaluating the effort and cost of migration. This session will introduce tools that can be leveraged to make an assessment.</li> </ul>
<b>Session 8</b>	<ul style="list-style-type: none"> <li>➤ <b>Integration patterns on the Microsoft Azure cloud for Hybrid Solutions</b> There are a lot of motivations for moving applications to the cloud, but at the same time there are limitations like compliance, cost, legacy software which may compel you to build a hybrid solution where part of the solution is on premise and only part of the solution moves to the cloud. Also Enterprise applications require integration between various applications, services, components and data. This session we will look at how to build such hybrid solutions requiring integration between different components of the solution and what are the services available on the Azure cloud for enabling this. We will look at patterns for solving data synchronization, identity, integration of components across clouds or across on-premise and in the cloud.</li> </ul>
<b>Session 9</b>	<ul style="list-style-type: none"> <li>➤ <b>Security for Azure applications</b> This session will look at the different mechanisms available on the Microsoft Azure cloud to implement security within your application. We will discuss the concepts of Claims based security and its usage, federated authentication and much more.</li> </ul>
<b>Session 10</b>	<ul style="list-style-type: none"> <li>➤ <b>High Availability and Disaster Recovery for Microsoft Azure Solutions</b> This session, we will look at the platform services you can leverage to make your application resilient to major failures. Planning for failure in cloud applications is always necessary and we will discuss ways you can architect</li> </ul>

	your application for high availability. We also show how you can use Microsoft Azure for backup and disaster recovery for your on-premises applications.
<b>Session 11</b>	<p>➤ <b>Architecting solutions using Mobile Services, Media Services and HDInsight Services using Microsoft Azure platform</b></p> <p>This session, we look at the HDInsight, Hadoop based Services for Microsoft Azure, a service that deploys and provisions clusters in the cloud, providing a software framework designed to manage, analyze and report on big data. HDInsight forms the ideal solution in scenarios like ad hoc analysis, in batch fashion, on an entire unstructured dataset stored on Microsoft Azure nodes, which do not require frequent updates. We will also look at the new Media Services in Azure, a cloud based service for ingest, encoding, format conversion, content protection and both on-demand and live streaming capabilities. Lastly we will cover Mobile Services, a turnkey backend solution to power your mobile apps.</p>