On-Premise Web Application
Architectural Overview
Cloud-based Web Application Architectural Overview
DEMO

On-Premise Bicycle Store Web Application
SQL Database

• Why?
  – Avoid accessing local SQL Server from the cloud
  – Cannot install SQL Server on worker roles
  – SQL Databases provide reliability and performance

• How?
  – Migrate existing membership and application databases to a SQL Database
  – Change connections strings in the application

• Caveats
  – Aspnet_regsql doesn’t work with SQL Database
DEMO

Building Secured, Scalable, Low-latency Web Applications with the Windows Azure Platform
Storage

• Why?
  – Reduce load on web server by moving resources to external storage servers
  – Blob storage resources are accessible via HTTP

• How?
  – Move resources from web application to blob storage
  – Change links in application to point to the blob

• Caveats
  – Workaround required when working locally
  – Need to manually set caching rules on resources
Content Delivery Network (CDN)

• Why?
  – Improve user-experience by bringing the content closer to the customer
  – Can be applied to storage and hosted service

• How?
  – Configure CDN for storage and hosted service
  – Change links to point to CDN instead of storage
  – Move application resources to a “\cdn” folder

• Caveats
  – ASP.NET’s bundling feature doesn’t work with CDN
  – Requires some work to support both local & cloud
DEMO

Building Secured, Scalable, Low-latency Web Applications with the Windows Azure Platform
Full IIS Support

• Why?
  – Use more IIS features, such as ARR and WAS support for WCF
  – Allows deploying multiple web sites in one Web Role

• How?
  – Full IIS is the default setting for Web Roles
  – Configure IIS in the Web.Config’s <system.webServer>
  – Add startup tasks to change global IIS settings

• Caveats
  – Default server version is W2K8 Server SP2, not R2
  – Some IIS settings require elevated startup tasks and restarting IIS
Windows Azure Diagnostics

• Why?
  – Azure diagnostics allows collecting and centralizing diagnostic data from servers
  – WAD can collect various sources, such as event viewer logs, IIS logs, and any custom log file you create

• How?
  – Configure collected sources and scheduling either in code or configuration
  – Pick a tool for viewing collected diagnostics data

• Caveats
  – Lack of Microsoft tools for viewing event logs and performance counters
  – Sorting out the collected data takes some time
DEMO

Building Secured, Scalable, Low-latency Web Applications with the Windows Azure Platform
Windows Azure Caching

• Why?
  – In-memory storage, such as cache ans session state isn’t suitable for web farms
  – Azure caching provides better performance and feature than Windows Azure AppFabric Cache

• How?
  – Create a new cache worker role
  – Configure session state and output cache to use the distributed cache provider

• Caveats
  – Not that I’ve seen (currently...)
DEMO

Building Secured, Scalable, Low-latency Web Applications with the Windows Azure Platform
Identity, ACS, and WIF

• Why?
  – Integrate web application with popular identity providers
  – No need to self-manage users and password

• How?
  – Create access control settings in the ACS portal
  – Use WIF to set the trust between the web application and ACS

• Caveats
  – Multiple ACS configurations to use both local and cloud
  – Some coding is required when using more than one server instance
DEMO

Building Secured, Scalable, Low-latency Web Applications with the Windows Azure Platform
Cloud-based Web Application Architectural Overview
If We Had the Entire Week...

1. **Working with Data**
   - SQL Server, SQL Federation, NoSQL

2. **Hosting and Deploying**
   - Traffic Manager, Virtual Machines, Web Sites

3. **Networking and Messaging**
   - Service Bus, Queues, Virtual Network

4. **Developing**
   - Non-.NET support - Java, PHP, Node.js …
Resources

• This session

• Windows Azure landing page
  – http://www.windowsazure.com

• Training course
  – http://msdn.microsoft.com/WAZPlatformTrainingCourse (Online)

• Forums and Blogs
  – http://www.windowsazure.com/support/forums
  – http://blogs.msdn.com/b/windowsazure

• My info
  – Blog: http://blogs.microsoft.co.il/blogs/idof
  – Email: idof@sela.co.il
  – Twitter: @idoFlatow

Don’t forget to tell us how it was