

# Windows Azure Question-Answer Part II- Azure Web Apps



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# WINDOWS AZURE QUESTION-ANSWER

## Windows Azure Web Apps

### WHAT IS AZURE WEB APPS?

- It is Windows Azure Platform-as-a-Service offering to host your web applications in Azure cloud.
- It supports variety of configuration and customization options like custom domains, auto-scaling, SSL certificate, Load Balancer and etc.
- It supports variety of integrated development environments (IDEs) and frameworks like .NET, Java, PHP, Node.js, Python etc.
- You can deploy your web applications directly using Visual Studio or you can use FTP tools or web deploy protocol.
- Here, the goal is, as a developer you focus on developing your web application and solving business problems instead and Microsoft will manage hosting platforms and scaling specifics.
- You can easily scale up a stateless web application by configuring autoscale in the portal.

### WHAT IS AUTOSCALE/SCALING YOUR WEB APPLICATION IN CLOUD?

- Autoscale creates multiple instances of your Web App and automatically load balanced them so that your application can meet potential spikes in demand.

### EXPLAIN DIFFERENT TIERS FOR YOUR WEB APP?

There are 4 tiers available to scale or to host your Web Applications with.

You can use App Service Plans to assign a tier to a group of Web App instances.

At any time you can switch the tier for a App Service plan.



- Talent Development
- Competency Assessment
- Training Infrastructure

In Free and Shared tier, you are billed per hour for each instance of your Web App. In the Basic and Standard tiers, you are billed per hour for your dedicated VM and not per Web App.

- Free
- Shared
- Basic
- Standard

**Free:**

- Shared Compute Resources,
- Limited bandwidth and CPU Time,
- Limited Customization options
- Offers 10 Web App instances.
- All instances share pool of 60 minutes of CPU time per day

**Shared:**

- Shared Compute Resources,
- Lot in common with the free tier,
- No upper limit to bandwidth and CPU time
- In this tier, you can also use a custom domain with your web app and manually scale out.

**Basic:**

- Your Web App instances are not in a shared environment.
- Here, you have a dedicated compute instance where you can host as many Web App instances as you want.
- This tier supports additional configuration and customization options like AlwaysOn, Secure Socket Layer (SSL) for custom domains and a limited quantity of WebSocket connections.
- You can manually scale out this tier to a maximum of three dedicated compute instances.



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### Standard:

- The Standard tier offers the same functionality as the Basic, Free and Shared tiers but includes additional features such as Publishing Slots and Backups.
- It supports autoscale functionality also with which you can automatically scale your Web App based on a metric or a schedule.

## WHAT IS APP SERVICE PLAN?

- App Service plan logically group web apps within a subscription.
- Multiple Web Apps can exist in a single App Service plan.

## EXPLAIN ALWAYS ON FEATURE IN WEB APPS.

- When your ASP.NET Web Application is hosted on the IIS, you can isolate them in the Application pools.
- To improve the performance of the Web Server IIS automatically recycle the application pool on a schedule basis and by running the initial application start-up tasks for your web application only when the first request is processed. This prevents your application from using unnecessary resources when it is not requested by clients.
- You can inject your own logic into ASP.NET's startup by implementing a Global.asax file with the `HttpApplication` class.
- If your application is precompiled, the startup tasks run immediately.
- These startup tasks are long and resource intensive. This will cause the first request or any request that is issued immediately after an application pool recycle to take longer than normal process.
- You can resolve this in IIS by setting your application pool's application start mode to Always running. In Web Apps, you can achieve this by using the AlwaysOn feature.
- AlwaysOn prevents your application from recycling due to going idle.

- This is accomplished by the Azure platform that regularly pings your Web App so that it is always active and is in running state.
- AlwaysOn ensures your application is already running before your first client requests are issued.
- AlwaysOn is available for only Basic and Standard tier Web Apps.

## EXPLAIN SCALING IN WEB APPS.

- In many cases to meet the desire performance of our web app , we need to scale it out (horizontally - ) by increasing the number of instances of the application.
- Azure pre-built load balancer will spread the load of your web application across multiple instances.
- This will ensure that your application meets the increasing demand from client devices or browsers.
- Many times, application workload is unpredictable.
- In this case we end up overestimating or underestimating the number of Web Apps that are needed to provide the best user experience.
- Ideally , we want our web platform to use the extra instances only when it is necessary and to shut down same instances when they are no longer needed.
- So Azure comes with Auto-scale to control horizontal scaling by using metrics and schedules.
- Using autoscaling you can control your application's resource allocation closely with the actual utilization.
- By utilizing autoscaling , we can minimize unnecessary resource cost by removing Web App instances when they are no longer needed.
- By utilization autoscaling , we can maximize performance and client response by creating Web App instances when a measured threshold is met.
- Along with Auto-scale configuration you should define schedules. These schedules are useful to specify different autoscale rules for different date and time periods.
- Once you define schedule you should define metric to measure configuration value...such as CPU Utilization Percentage (range) and Storage Queue Length (threshold) , Average memory , Http Queue Depth and Disk Queue Depth.

## WHAT IS WEB DEPLOY PROTOCOL?



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- WebDeploy simplifies deployment of Web Applications and Web Sites to IIS Servers by providing standard package format.
- This package can be installed manually using IIS Manager, command line tools or PowerShell.
- A Web Deploy is simple representation of an IIS Web App.

## WHAT DOES GO INSIDE WEB DEPLOY PACKAGE?

Web Deoloy package contains following data:

Binaries

Content

XML Configuration

Registry Modification

Databases

GAC and Assemblies reference

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## About The Author

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- Krunal Trivedi is a Microsoft Certified Trainer as well as MCT INDIA Regional Lead
- *Krunal delivers training on various Microsoft technologies like .NET Framework , ASP.NET MVC Framework , SharePoint Server , Windows Azure – PaaS and IaaS, Office 365.*
- *He is having extensive experience of delivering IT technical training to thousands of participants In various software MNCs.*
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- *Spanlabs is one of the premier Information Technology and Soft-Skills training organization.*
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