

# Azure Web Apps

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# Azure App Service Family



**Web Apps**  
Web apps that scale with  
your business



**Mobile Apps**  
Build mobile apps for any  
device



**Logic Apps**  
Automate business  
processes across SaaS and  
on-premises



**API Apps**  
Build and consume APIs in  
the cloud

# Azure Web Apps

- Support a variety of languages and platforms
  - .NET, Java, Node.js, PHP, Python, and more
- Support scaling (manual or auto) and load balancing
- Support slots for staged deployments and A/B testing
- Support continuous integration

## Familiar and Fast

Leverage existing skills, plus languages, frameworks, and tools you're familiar with

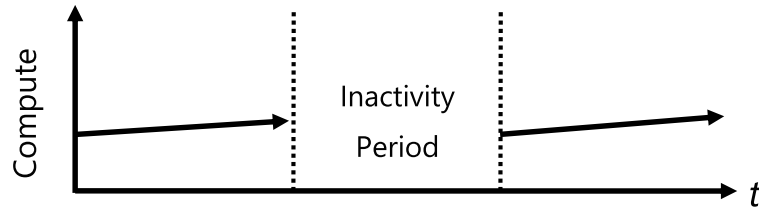
## Enterprise Grade

ISO-, SOC2-, and PCO-compliant with enterprise-level SLAs

## Global Scale

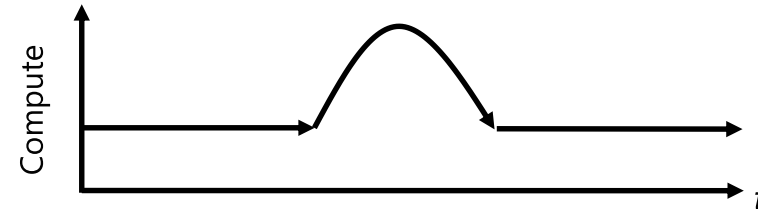
Scale up and down as needed, manually or automatically

# Scaling - Cloud Computing Patterns



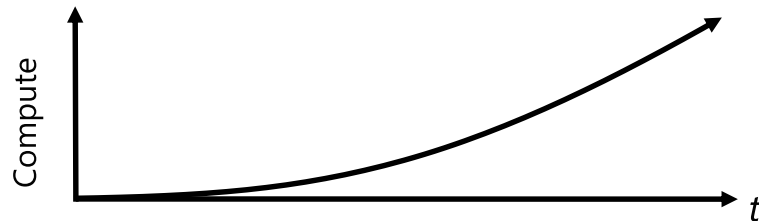
## On and Off

On & off workloads (e.g. batch job)  
Over provisioned capacity is wasted  
Time to market can be cumbersome



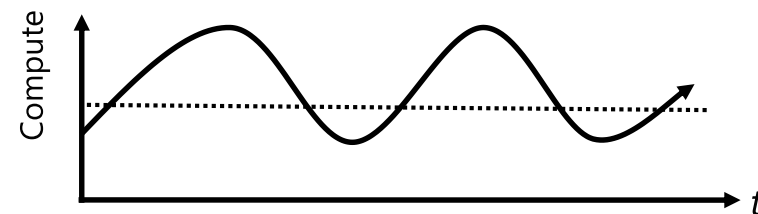
## Unpredictable Bursts

Unexpected/unplanned peak in demand  
Sudden spike impacts performance  
Can't over provision for extreme cases



## Growing Fast

Successful services needs to grow/scale  
Keeping up w/ growth is big IT challenge  
Cannot provision hardware fast enough



## Predictable Bursts

Services with micro seasonality trends  
Peaks due to periodic increased demand  
IT complexity and wasted capacity

# Scaling Up vs. Scaling Out

## Scale Up



### Vary the VM size

*1 Core w/ 1.75 GB RAM  
2 Cores w/ 3.5 GB RAM  
4 Cores w/ 7 GB RAM*

## Scale Out



### Vary the VM count


*Max 3\* instances  
Max 10 instances  
Max 20/50\*\* instances*

# Manual Scaling vs. Auto-Scaling

Manual – Scale via  
portal or scripts

\* Scale by


Description Manual setup means that the number of instances you choose won't change, even if there are changes in load.


Instances 

Auto – CPU Percentage

\* Scale by

Description Automatically scale up or down based on CPU Percentage. Choose an average value you want to target.

Instances   


Target range   


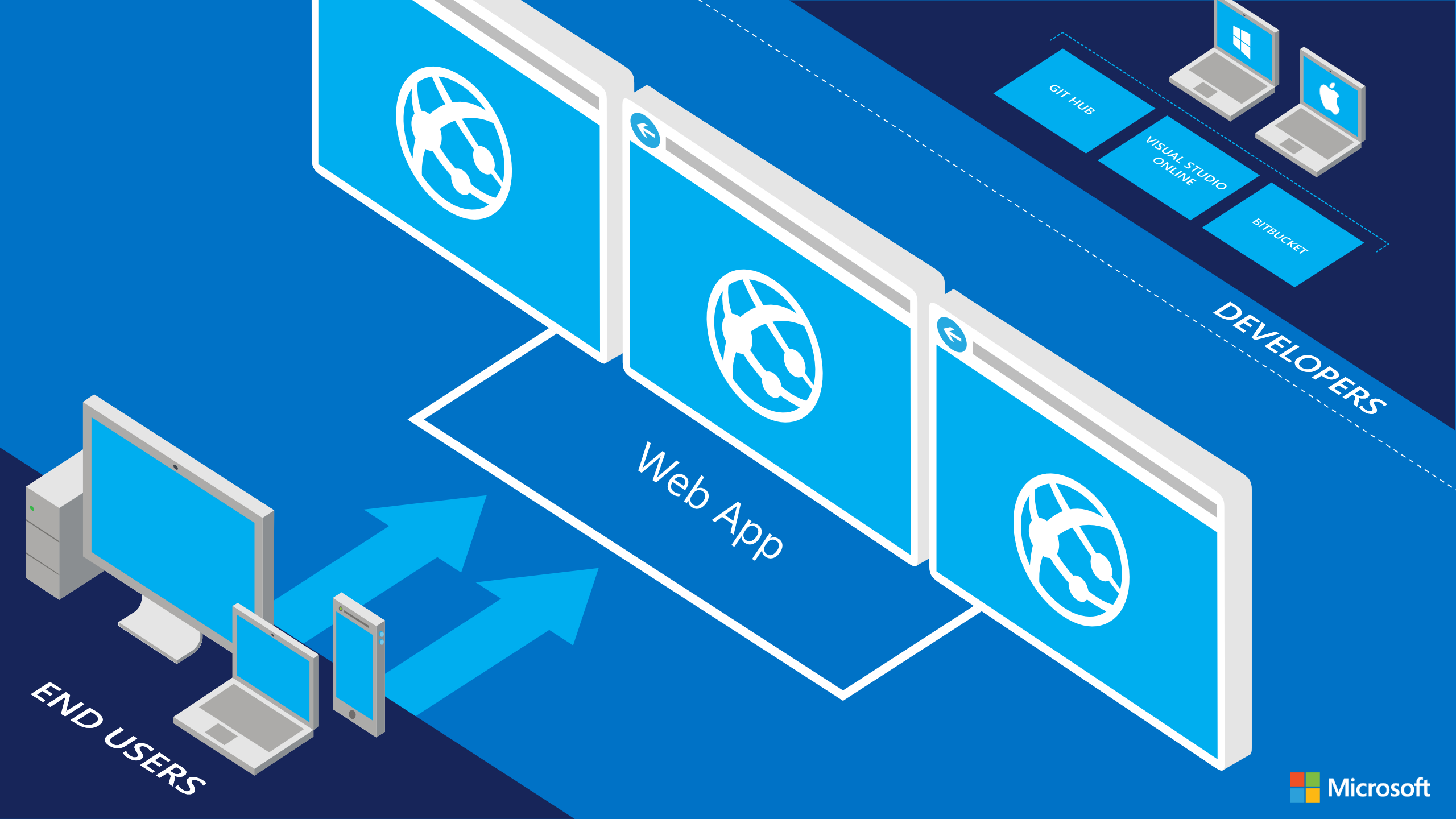
Auto – Schedule &  
Performance Rules

\* Scale by

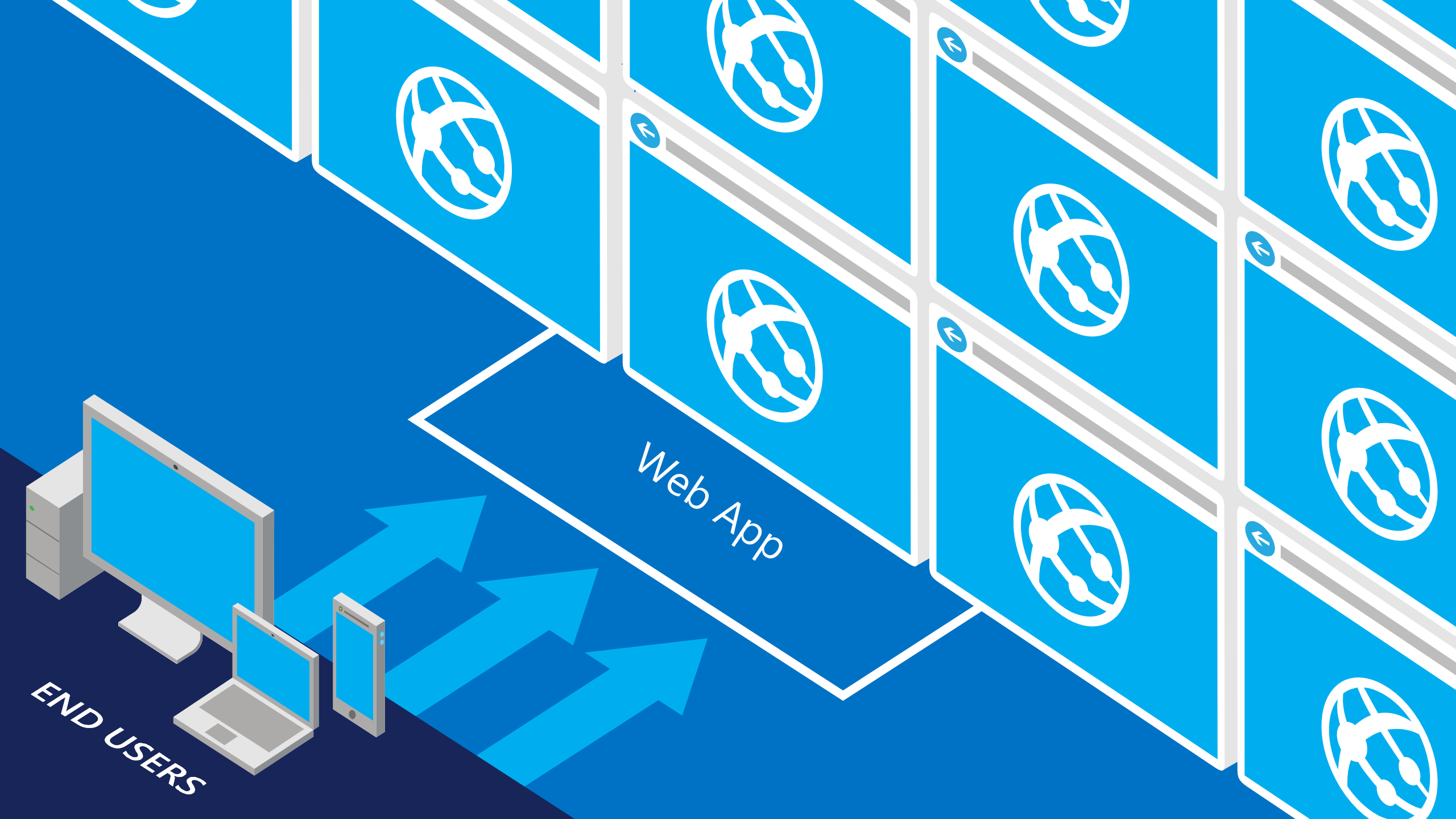
Description Create your own set of rules. Create a schedule that adjusts your instance counts based on time and performance metrics.  
Monday-Friday Profile, scale 3 - 9

Settings CPU Percentage > 80 (increase count by 1)









# Deployment Slots

- Use a Deploy-Confirm-Promote workflow
  - Promote via "swap" through Azure portal
- <http://sitename-slotname.azurewebsites.net>

The screenshot displays the Azure Portal's 'Deployment slots' management interface for a web application named 'testa4cs'. The interface is divided into two main sections. The left section, titled 'Deployment slots', features a table listing the current deployment slots. A single slot, 'testa4cs-staging', is shown with a 'Running' status and is linked to the 'testa4cs' app service plan. Above this table are two buttons: 'Add Slot' and 'Swap'. The right section, titled 'Swap', provides configuration options for the swap operation. It includes a 'Swap type' dropdown set to 'Swap', a 'Source' dropdown set to 'Staging', and a 'Destination' dropdown set to 'production'.

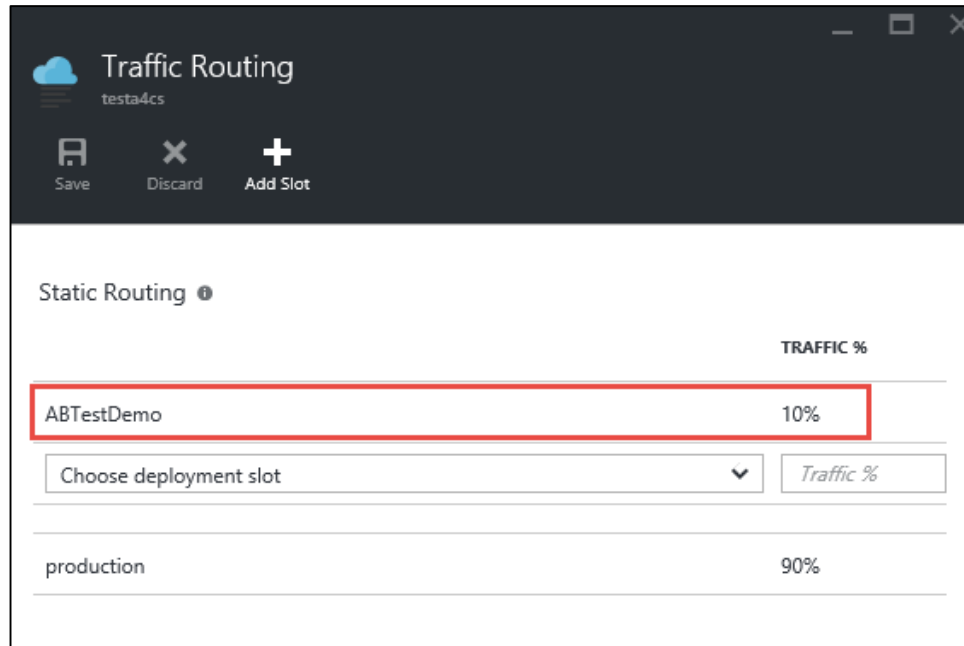
NAME	STATUS	APP SERVICE PLAN
testa4cs-staging	Running	testa4cs

Swap configuration:

- Swap type: Swap
- Source: Staging
- Destination: production

# A/B Testing

- Test changes by routing requests to different deployment slots
- Use Traffic Routing to direct % of traffic to alternate slots



The screenshot shows a 'Traffic Routing' window with a dark header. Below the header are three buttons: 'Save', 'Discard', and 'Add Slot'. The main content area is titled 'Static Routing' and contains a table. The table has two columns: 'TRAFFIC %' and an unnamed column for the deployment slot. The first row is highlighted with a red border and shows 'ABTestDemo' with a traffic percentage of '10%'. Below this row is a dropdown menu labeled 'Choose deployment slot' and a text input field labeled 'Traffic %'. The second row of the table shows 'production' with a traffic percentage of '90%'.

	TRAFFIC %
ABTestDemo	10%
Choose deployment slot	Traffic %
production	90%

# Continuous Integration

- Web apps can be deployed manually via FTP or WebDeploy
- Automate deployment using 3<sup>rd</sup> party source-control providers
- Can also use a local Git repository from Azure Portal



Git



Visual Studio  
Team Services



CodePlex



GitHub

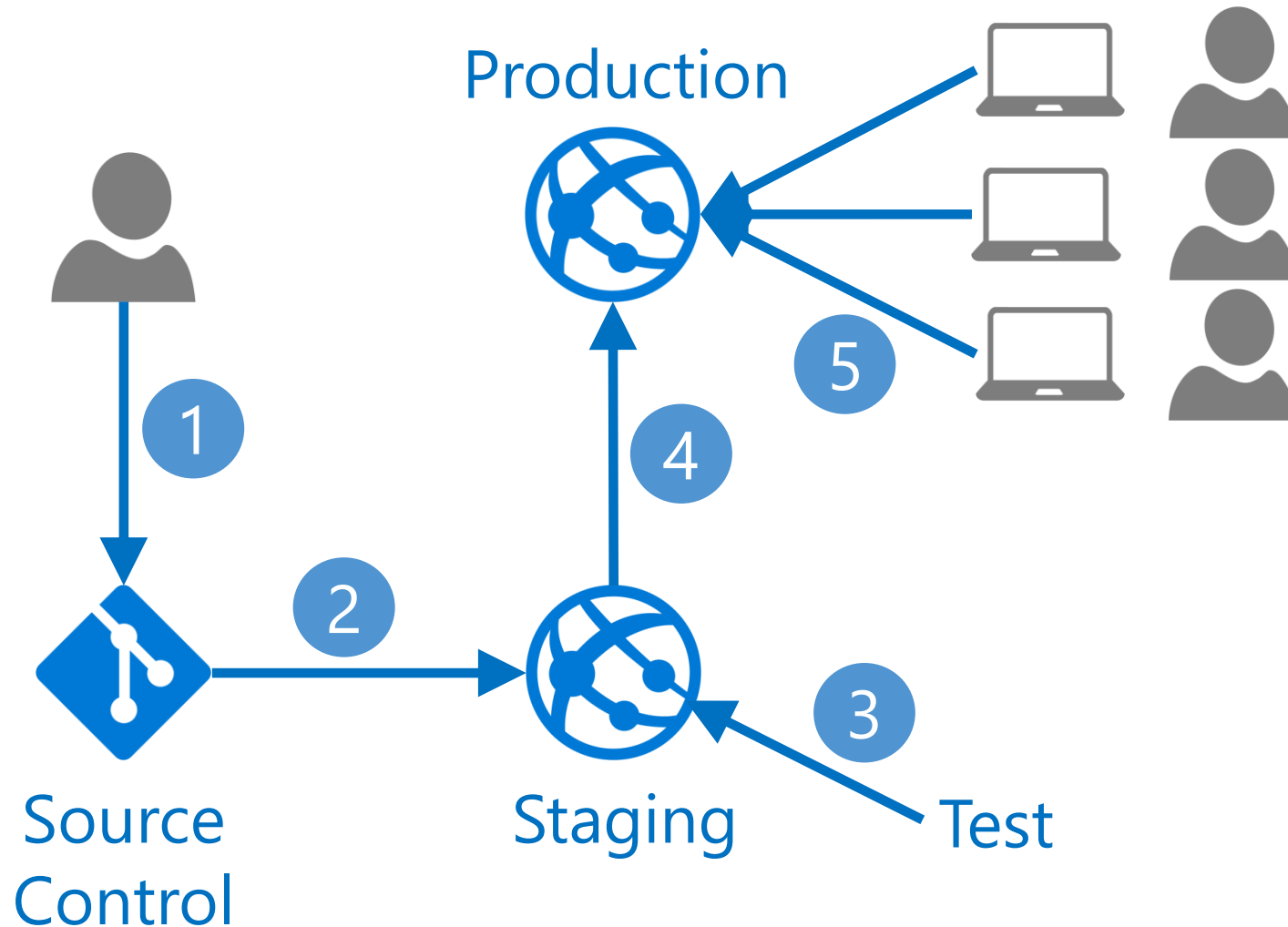


BitBucket



DropBox

# Continuous Integration + Deployment Slots



1. Developer commits code
2. Automated process builds/compiles and deploys to staging slot
3. Automated and other tests validate content in staging slot
4. Staging content promoted to production
5. Users see updated site

# App Service Plans

- Billing and provisioning for App Service resources

	Free	Shared	Basic	Standard	Premium
# of Apps	10	100	Unlimited	Unlimited	Unlimited
Shared Disk Space	1 GB	1 GB	10 GB	50 GB	500 GB
Maximum Instances	1	1	3	10	50
Autoscale	No	No	No	Yes	Yes
Staging Environments				5	20
Custom Domains	No	Yes	Yes	Yes	Yes
SLA			99.95%		

# Hands-On Lab

Azure Web Apps HOL.html



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