

MICROSOFT AZURE

Jees Augustine

DataBase Exploration Lab (DBXLab)

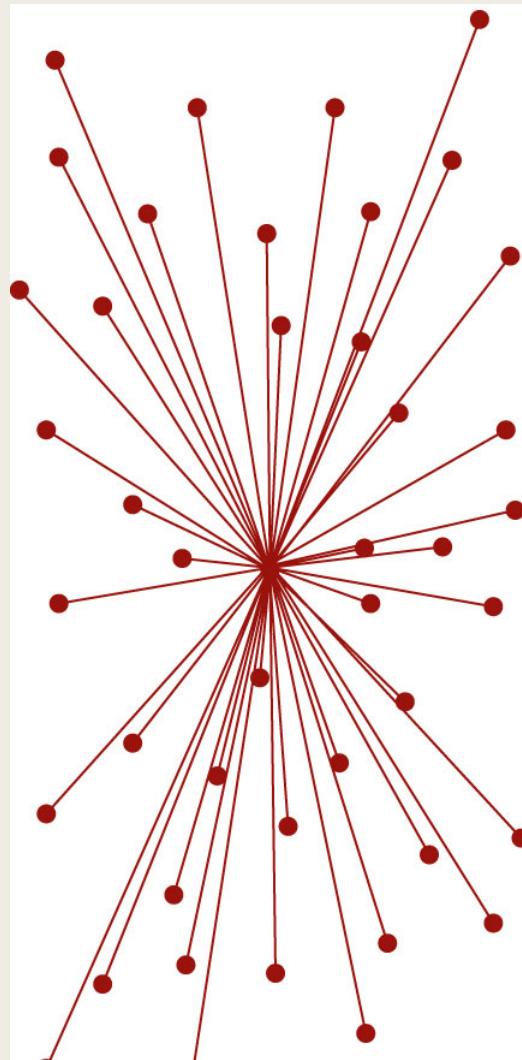


<https://github.com/jeesaugustine>

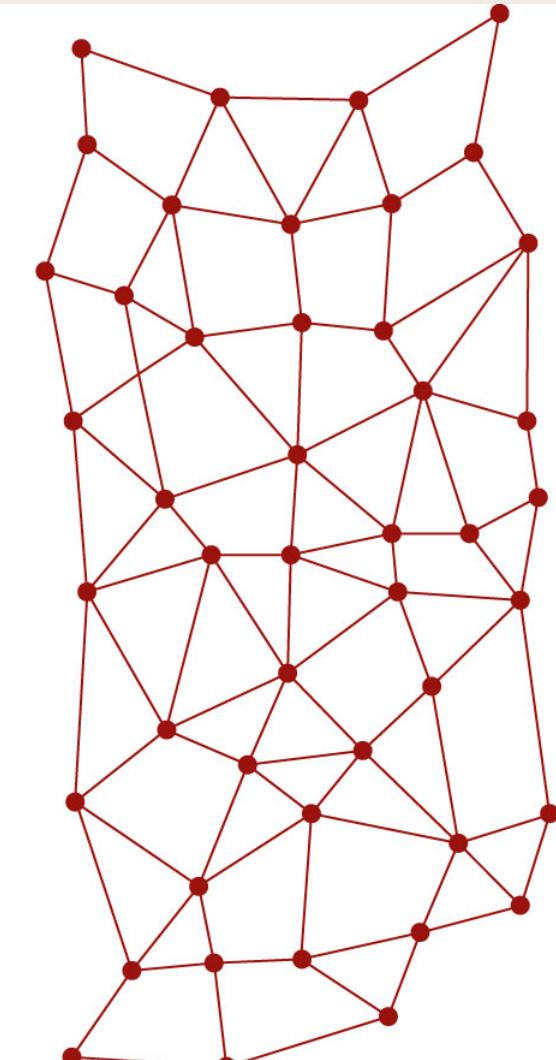
I have used material from internet which require proper citation however I am planning to spent my time rather on explaining stuff rather than citations. Please do not distribute.

Introduction

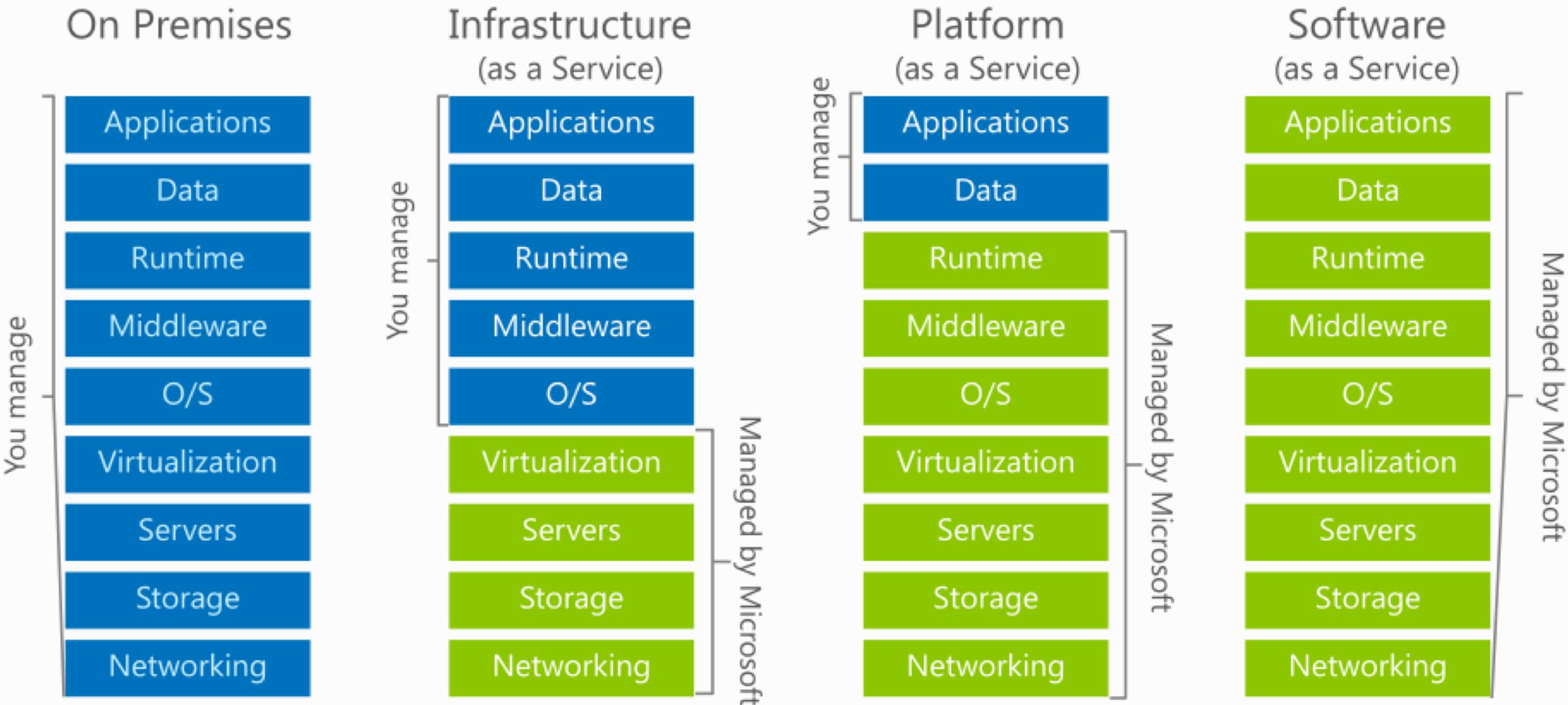
- 1970s
- 1989
- 1991
- 1991
- 1997
- 2008
- [2008] Why to buy a computer ?



Centralized Network



Distributed Network





Microsoft Azure (Mid 2015)

>80%

Fortune 500 using Azure

>300k

Active websites

More than
1,000,000

SQL Databases in Azure

>30 TRILLION
storage objects

>500 MILLION
AAD users

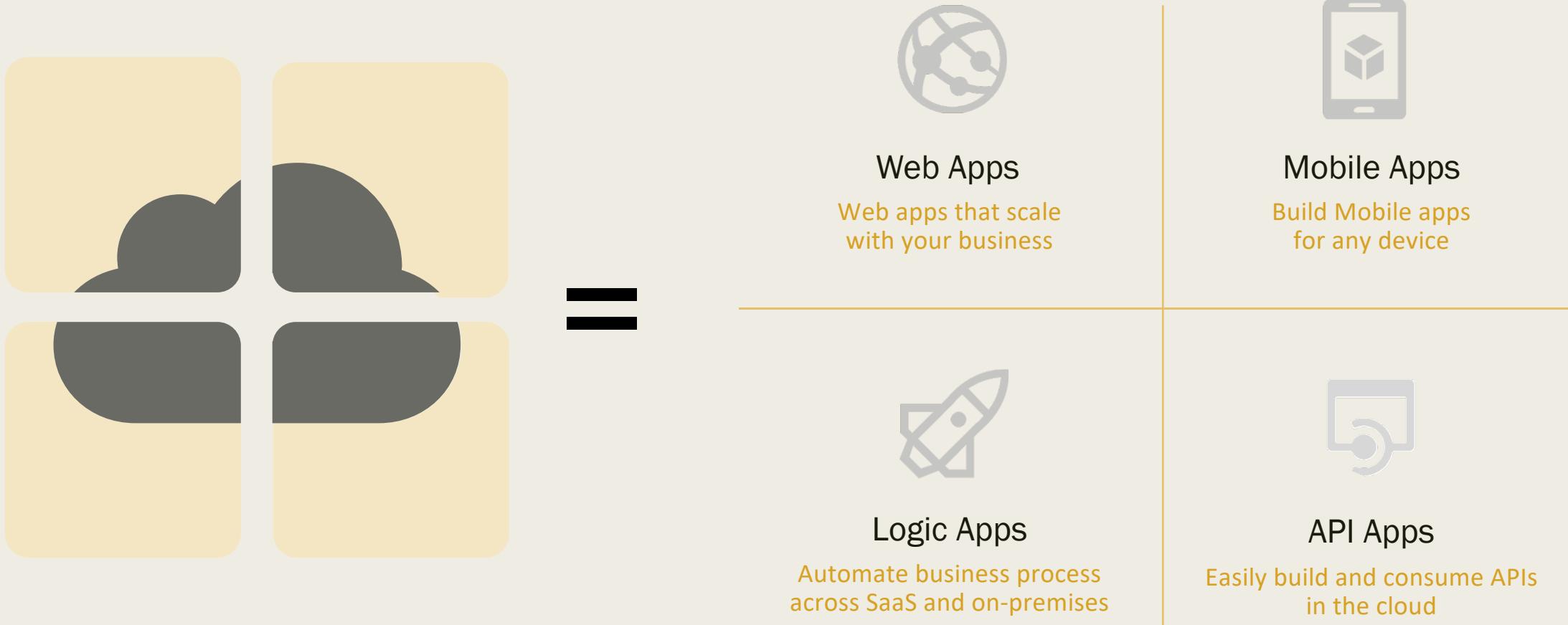
>1.65

>3 MILLION
requests/sec

>13 BILLION
authentication/wk

MILLION
Developers registered with
Visual Studio Online

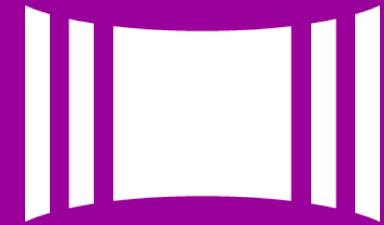
Azure App Service: One Integrated Offering



Introduction

Move Faster

Save Money



Hybrid Consistency

pay only for what you use



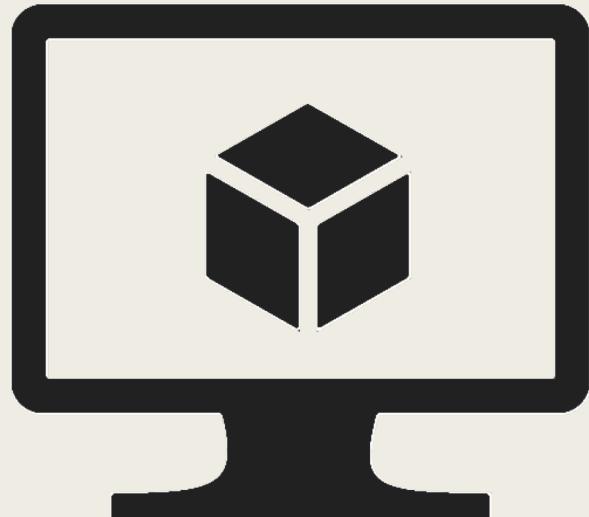
■ no upfront costs



per minute billing



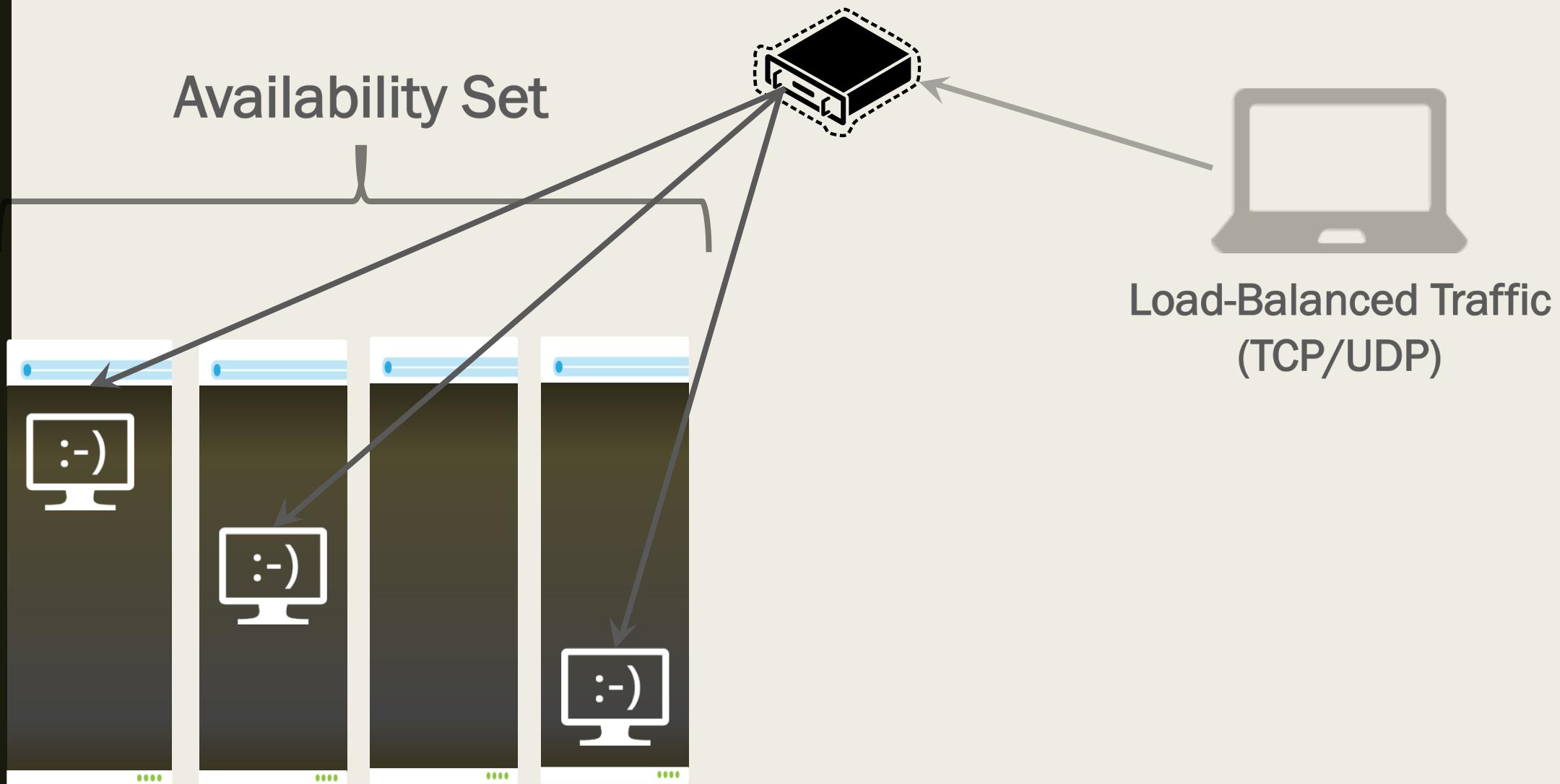
no charge for
stopped VMs



Virtual Machines

- ← Windows Server and Linux Virtual Machines
- ← Flexible Workload Support
- ← Virtual Private Networking

Load Balancing and High Availability



A photograph of a workspace setup. A silver laptop is open, showing its keyboard and trackpad, resting on a dark wooden desk. In front of the laptop lies an open notebook with white grid paper. A black Precise V7 fineliner pen is placed diagonally across the notebook's pages. The background is slightly blurred, showing a window with a bookshelf and some warm lighting.

Go to azure.microsoft.com

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Microsoft Build highlights

[Extend AI and analytics to edge devices with Azure IoT Edge >](#)

[Develop and infuse custom AI into apps with ML.NET >](#)

[Using Kubernetes is simpler than ever with Azure Kubernetes Service \(AKS\) >](#)

[Learn more about Microsoft Build highlights >](#)

A photograph of a silver laptop, an open notebook with a black pen resting on it, and a dark book in the background, all sitting on a light-colored wooden surface.

Create the account and login

Phone Number + Address +
Credit Card Information

A photograph of a workspace featuring a silver laptop, an open notebook with a black grid pattern, and a black Precise V7 marker pen. The laptop is positioned in the upper left, the notebook is in the lower right, and the pen lies across the notebook's pages. The background is a dark, out-of-focus room.

Once logged in and you are
done

Let's start our first project

Requirements

1. Git
2. Python



Azure WebApp

Clone the repository
‘azure_cloud’ from my git

Install the dependencies and
run the app in your local
drive



Create a Deployment User

```
az webapp deployment user set
```

```
az webapp deployment user set --user-name  
<username> --password <password>
```

Create a Resource Group

```
az group create
```

```
az group create --name myResourceGroup --location  
"West Europe"
```

Create an Azure App Service plan

```
az group create
```

```
az appservice plan create --name myAppServicePlan --  
resource-group myResourceGroup --sku FREE
```

Create a WebApp in Azure

```
az webapp create --resource-group myResourceGroup --  
plan myAppServicePlan --name <app_name> --runtime  
"python|3.4" --deployment-local-git
```

Each of the above commands gives you a JSON format results for the status of execution

Create a WebApp in Azure

```
az webapp create --resource-group myResourceGroup --plan  
myAppServicePlan --name <app_name> --runtime  
"python|3.4" --deployment-local-git
```

Local git is configured with url of
https://<username>@<app_name>.scm.azurewebsites.net/<app_name>.git

```
{  
  "availabilityState": "Normal",  
  "clientAffinityEnabled": true,  
  "clientCertEnabled": false,  
  "cloningInfo": null,  
  "containerSize": 0,  
  "dailyMemoryTimeQuota": 0,  
  "defaultHostName": "<app_name>.azurewebsites.net",  
  "deploymentLocalGitUrl":  
    "https://<username>@<app_name>.scm.azurewebsites.net/<app_name>.git"
```

This web site is running Python 3.4.1

There's nothing here yet, but Microsoft Azure makes it simple to publish content with [GIT](#), [FTP](#) or your favorite development tool such as [Visual Studio](#), [Visual Studio Online](#) or [WebMatrix](#)

Tell me more →

Deployment

Now you have a running app both at
your client side as well as on Azure

Push your local webapp to cloud using
git

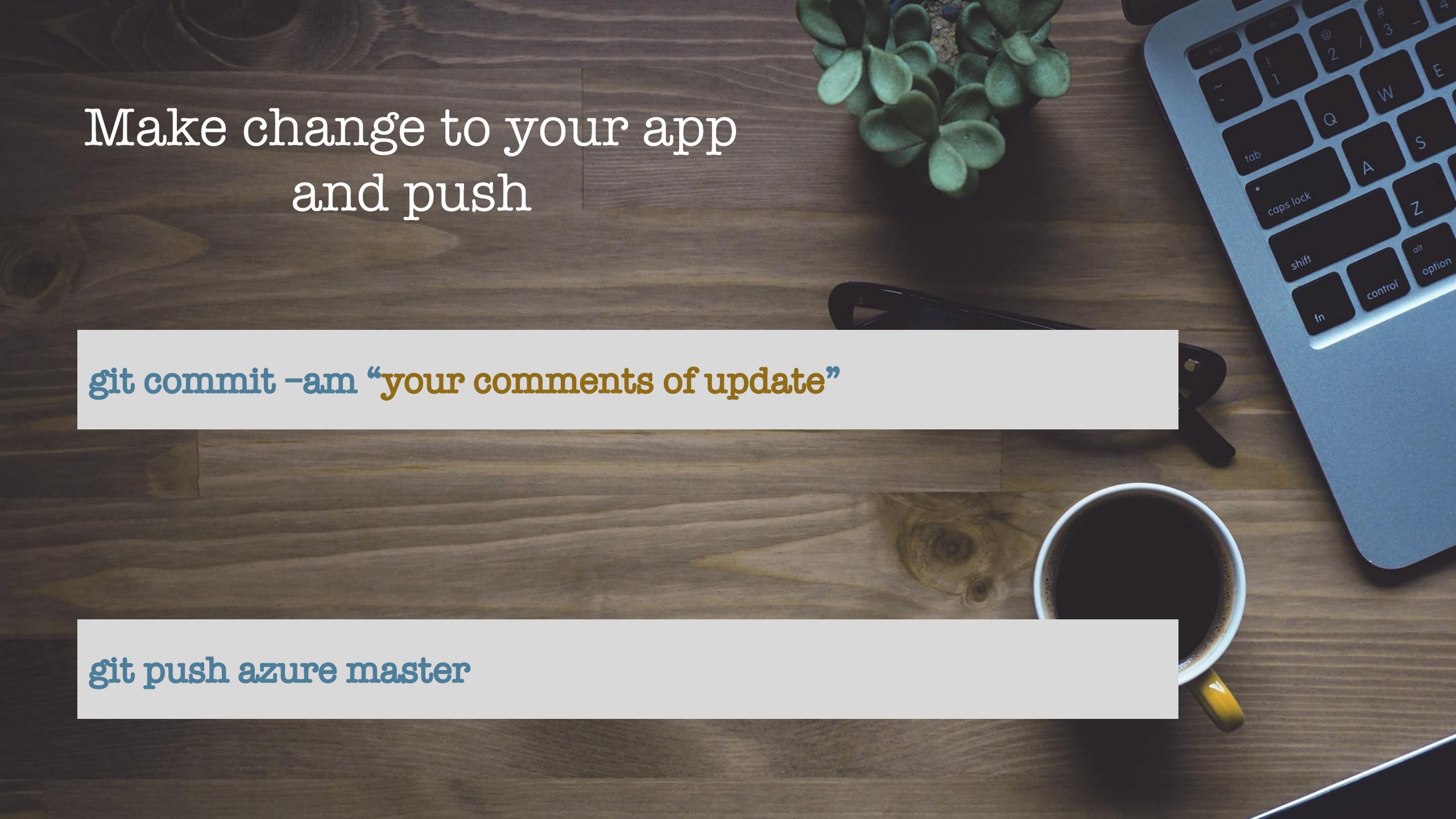


Push the webapp to Azure

```
git remote add azure <deploymentLocalGitUrl-from-create-step>
```

```
git push azure master
```

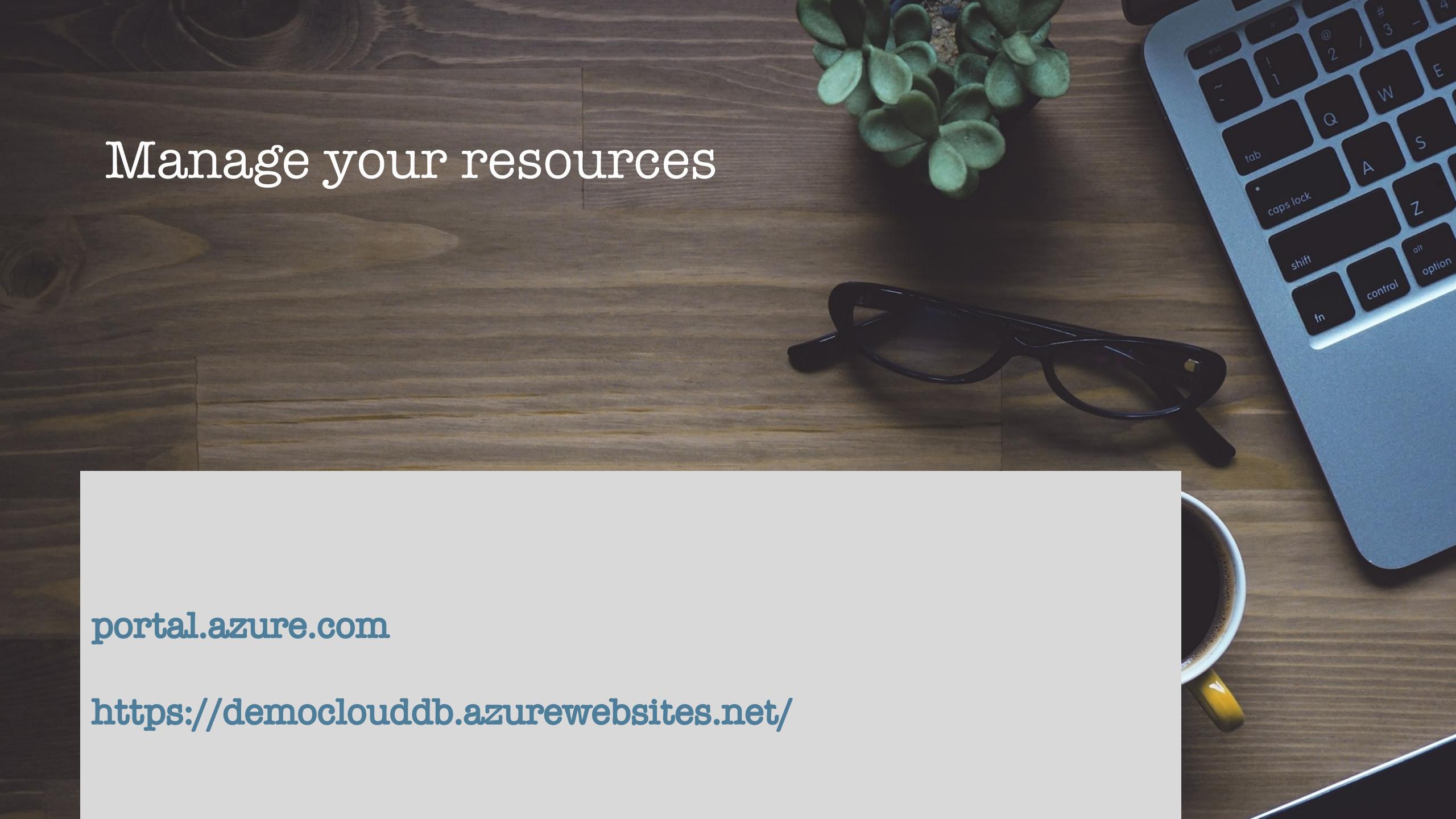
```
http://<app_name>.azurewebsites.net
```

The background image shows a top-down view of a dark wood-grain desk. On the desk, from left to right, is a small green succulent in a white pot, a portion of a silver laptop keyboard showing keys like 'esc', '1', 'Q', 'S', 'caps lock', 'shift', 'control', and 'option', and a white ceramic mug with a yellow handle containing dark coffee. The lighting is warm and focused on the center of the desk.

Make change to your app
and push

`git commit -am "your comments of update"`

`git push azure master`



Manage your resources

portal.azure.com

<https://democloudapp.azurewebsites.net/>

- [!\[\]\(c751cb6741e1e0318ba9852832e07ff9_img.jpg\) Create a resource](#)
- [!\[\]\(a38c897b15b546b1da0605aab96c93f1_img.jpg\) All services](#)
- [!\[\]\(909b96b7db47b2714cb8619778c59a85_img.jpg\) Favorites](#)
- [!\[\]\(a9d47c3be488154830b913c625b957a4_img.jpg\) Dashboard](#)
- [!\[\]\(ebb9e5d70f8af2adceacc5104b529ca7_img.jpg\) All resources](#)
- [!\[\]\(23085005c59ebe7f8ffd25b8d40f6846_img.jpg\) Resource groups](#)
- [!\[\]\(fecaf07dcd2cf37a0317f3434b94d6e5_img.jpg\) App Services](#)
- [!\[\]\(49320c861fb7b63a4dfc60a1a92b56f1_img.jpg\) Function Apps](#)
- [!\[\]\(4b7d1bf4dc119b7692e9feac78ecbc03_img.jpg\) SQL databases](#)
- [!\[\]\(28a2da952403019681b8380b0665ce7d_img.jpg\) Azure Cosmos DB](#)
- [!\[\]\(7c6fd726161a7d3c9d6a8dc65ec17eb8_img.jpg\) Virtual machines](#)
- [!\[\]\(23a7e9fa9539350865e2401328e02b02_img.jpg\) Load balancers](#)
- [!\[\]\(57b8d67c906a6ec969a77a33de934e25_img.jpg\) Storage accounts](#)
- [!\[\]\(bd4986b306ce6a4b9a3bb28033358c41_img.jpg\) Virtual networks](#)
- [!\[\]\(463914fe7dc0e9b25055f8109d4af41a_img.jpg\) Azure Active Directory](#)
- [!\[\]\(6a68c756db0aeeaee3a061d92c1fcc88_img.jpg\) Monitor](#)
- [!\[\]\(7a70ff823da11729d5e9ab1b69cfc155_img.jpg\) Advisor](#)
- [!\[\]\(eae8fa7db79b1fbfbc365ef3b3979376_img.jpg\) Security Center](#)
- [!\[\]\(17dda6a93066bcd8fd579a9e9f91f3e6_img.jpg\) Cost Management + Billing](#)
- [!\[\]\(3be80e6457e254236945d6b85cfa4fdf_img.jpg\) Help + support](#)

Dashboard

Dashboard

+ New dashboard  Upload  Download  Edit  Share  Full screen  Clone  Delete

All resources ALL SUBSCRIPTIONS 

 clouddemo2018	App Service
 cs2fd44bfa23f8dx44d0xa1b	Storage account
 democlouddb	App Service
 latestdemo123	App Service
 myAppServicePlan	App Service plan

Azure getting started made easy!

Launch an app of your choice on Azure in a few quick steps

[Create DevOps Project](#)



Quickstart tutorials

-  [Windows Virtual Machines](#) 
Provision Windows Server, SQL Server, SharePoint VMs
-  [Linux Virtual Machines](#) 
Provision Ubuntu, Red Hat, CentOS, SUSE, CoreOS VMs
-  [App Service](#) 
Create Web Apps using .NET, Java, Node.js, Python, PHP
-  [Functions](#) 
Process events with a serverless code architecture
-  [SQL Database](#) 
Managed relational SQL Database as a Service

testerdemo

Deleted



testercloud1

Deleted



testercloud

Deleted



 Service Health

 Marketplace

- [Create a resource](#)
- [All services](#)
- [FAVORITES](#)
- [Dashboard](#)
- [All resources](#)
- [Resource groups](#)
- [App Services](#)
- [Function Apps](#)
- [SQL databases](#)
- [Azure Cosmos DB](#)
- [Virtual machines](#)
- [Load balancers](#)
- [Storage accounts](#)
- [Virtual networks](#)
- [Azure Active Directory](#)
- [Monitor](#)
- [Advisor](#)

Dashboard

+ New dashboard Upload Download Edit Share Full screen Clone Delete

All resources
ALL SUBSCRIPTIONS

[clouddemo2018](#) App Service

[cs2fd44bfa23f8dx44d0xa1b](#) Storage account

[democlouddb](#) App Service

[latestdemo123](#) App Service

[myAppServicePlan](#) App Service plan

Refresh

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[SQL Database](#)
Managed relational SQL Database as a Service

testerdemo

Deleted

testercloud1

Deleted

testercloud

Deleted

Service Health Marketplace

Home > clouddemo2018

clouddemo2018

App Service

Search (Ctrl+)

Browse Start Swap Restart Delete Get publish profile Reset publish profile

Stopped

Resource group (change) myResourceGroup1

Status Stopped

Location West Europe

Subscription (change) Free Trial

URL https://clouddemo2018.azurewebsites.net

App Service plan/pricing tier myAppServicePlan (Free: 0 Small)

Git/Deployment username jees

Git clone url https://jees@clouddemo2018.scm.azurewebsites.net:443/clouddemo2018.git

FTP hostname ftp://waws-prod-am2-089.ftp.azurewebsites.windows.net

Overview Activity log Access control (IAM) Tags Diagnose and solve problems

DEPLOYMENT Quickstart Deployment credentials Deployment slots Deployment options Deployment Center (Preview)

SETTINGS Application settings Authentication / Authorization Application Insights Managed service identity (Preview) Backups Custom domains SSL settings Networking Scale up (App Service plan) Scale out (App Service plan)

Diagnose and solve problems
Our self-service diagnostic and troubleshooting experience helps you identify and resolve issues with your web app.

Application Insights
Application Insights helps you detect and diagnose quality issues in your apps, and helps you understand what your users actually do with it.

App Service Advisor
App Service Advisor provides insights for improving app experience on the App Service platform. Recommendations are sorted by freshness, priority and impact to your app.

Http 5xx
100
80
60
40
20
0
12:30 AM 12:45 AM 1 AM 1:15 AM
HTTP SERVER ERRORS 0

Data In
100B
80B
60B
40B
20B
0B
12:30 AM 12:45 AM 1 AM 1:15 AM
DATA IN 0 B

Data Out
100B
80B
60B
40B
20B
0B
12:30 AM 12:45 AM 1 AM 1:15 AM
DATA OUT 0 B

Requests
100
80
60
40

Average Response Time
2mins
1.5mins
1mins



Browse Start Swap Restart Delete Get publish profile Reset publish profile

Stopped

Resource group [\(change\)](#)
myResourceGroup1

Status

Stopped

Location

West Europe

Subscription [\(change\)](#)
[Free Trial](#)

Subscription ID

URL
<https://clouddemo2018.azurewebsites.net>

App Service plan/pricing tier
[myAppServicePlan](#) (Free: 0 Small)

Git/Deployment username
jees

Git clone url
<https://jees@clouddemo2018.scm.azurewebsites.net:443/>

FTP hostname
<ftp://waws-prod-am2-089.ftp.azurewebsites.windows.net>

Overview

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Application Insights helps you detect and diagnose quality issues in your apps, and helps you understand what your users actually do with it.



App Service Advisor

App Service Advisor provides the App Service platform priority and impact to yo

Http 5xx



Data In



Data Out

