DVSTechnologies

Dvs Technologies Azure adminstration

Compiled and Scrutinized by Mr. Shaan Shaik (Senior DevOps Lead)

Words To The Students

Though we have taken utmost efforts to present you this book error free, but still it may contain some errors or mistakes. Students are encouraged to bring, if there are any mistakes or errors in this document to our notice. So that it may be rectified in the next edition of this document.

"Suppressing your doubts is Hindering your growth".

We urge you to work hard and make use of the facilities we are providing to you, because there is no substitute for hard work. We wish you all the best for your future.

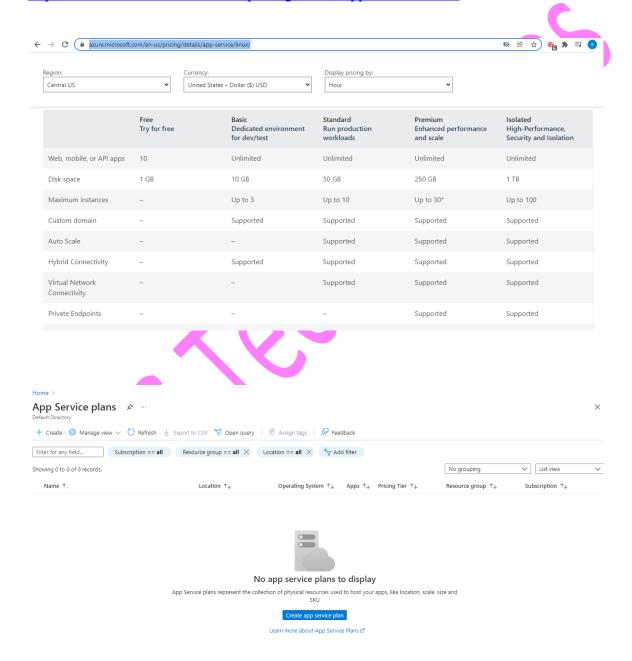
"The grass isn't greener on the other side; the grass is greener where you water it."

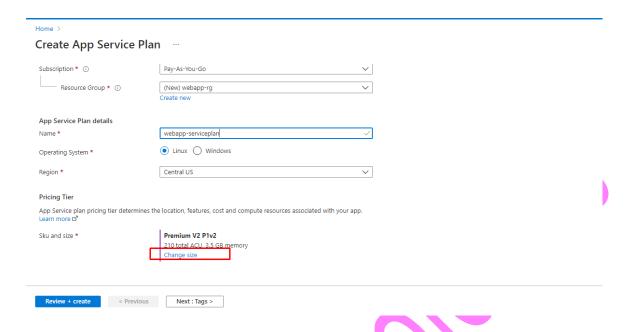
You and your suggestions are valuable to us; Help us to serve you better. In case of any suggestions, grievance, or complaints, please feel free to write us your suggestions, grievance and feedback on the following

Dvs.training@gmail.com

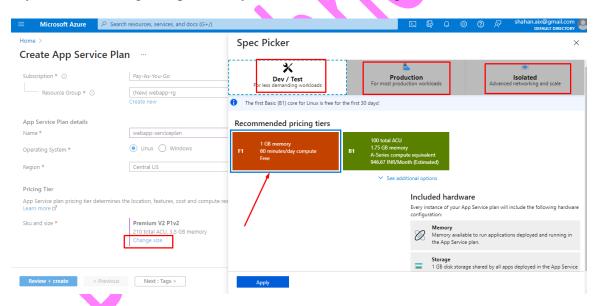
1 Service Plan creation

https://azure.microsoft.com/en-us/pricing/details/app-service/linux/



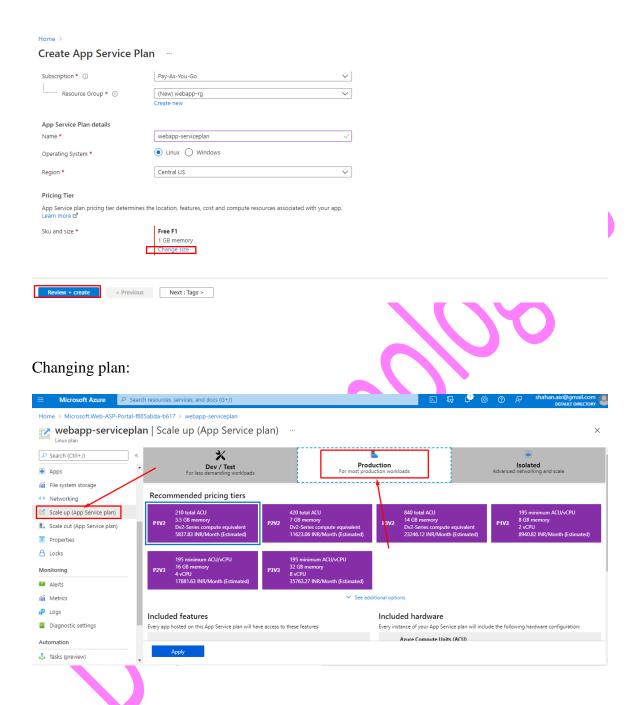


If you want to change the plan then you can use the below option



Here we are going to use the free tier under free tier you are going to get max of 60 minutes of cpu per day.

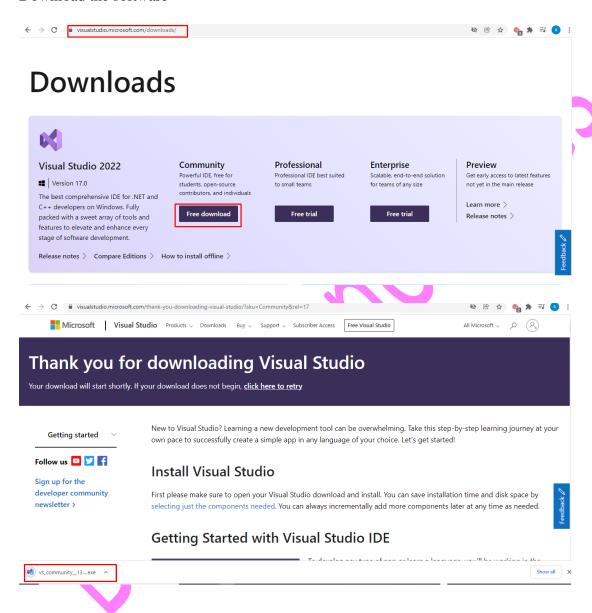
Let's activate the free tier for now



If you want to change the plan then you can perform the above steps

2 Using Visual Studio

Download the software



Visual Studio Installer

Before you get started, we need to set up a few things so that you can configure your installation.

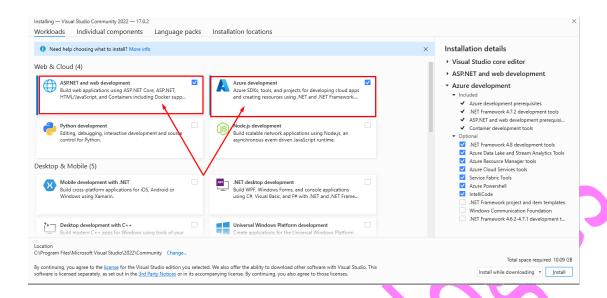
To learn more about privacy, see the Microsoft Privacy Statement.

By continuing, you agree to the Microsoft Software License Terms.

Continue

Visual Studio Installer

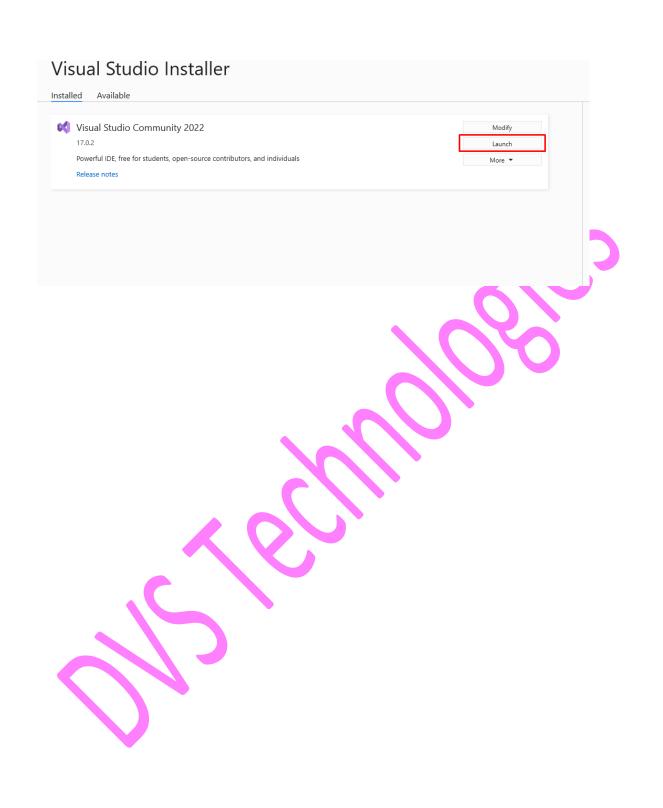
- Getting the Visual Studio Installer ready.
- Downloaded
- Installed



Click on launch



It will take some time to install please wait ...



×

Visual Studio

Sign in to Visual Studio

- Sync settings across devices
- Collaborate in real time with LiveShare
- Integrate seamlessly with Azure Services

Sign in

No account? Create one!

Not now, maybe later.

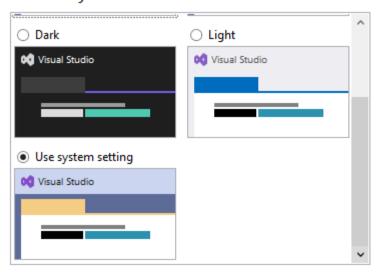


Visual Studio

Start with a familiar environment

Development Settings: General

Choose your color theme

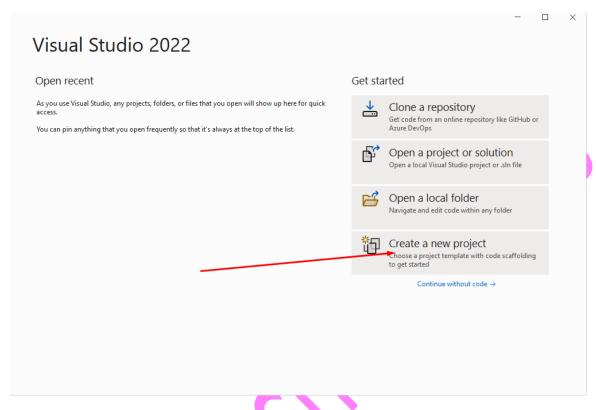


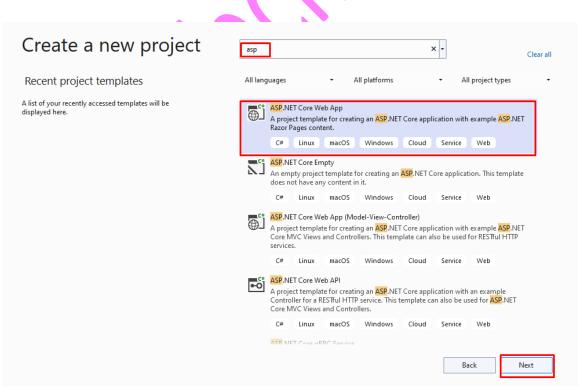
You can always change these settings later.

Start Visual Studio

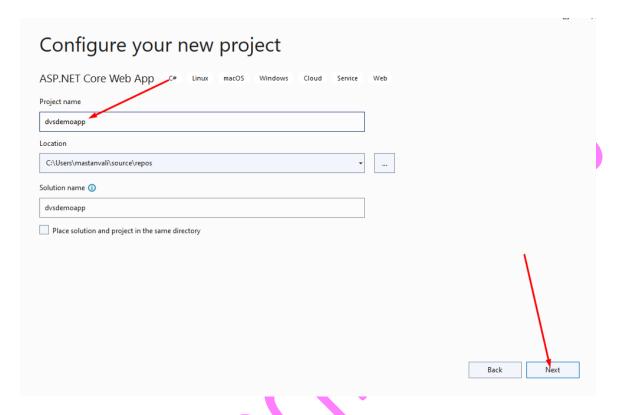


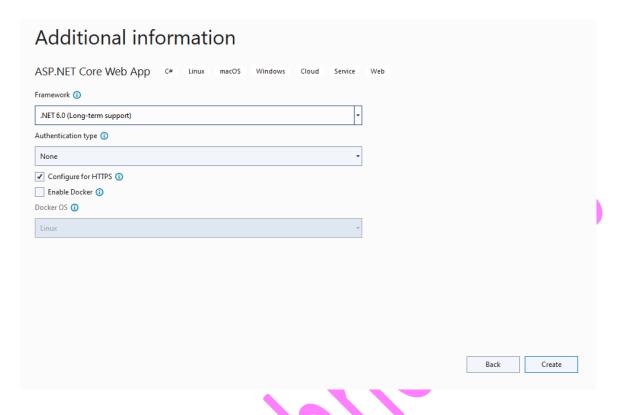
3 Create a sample app

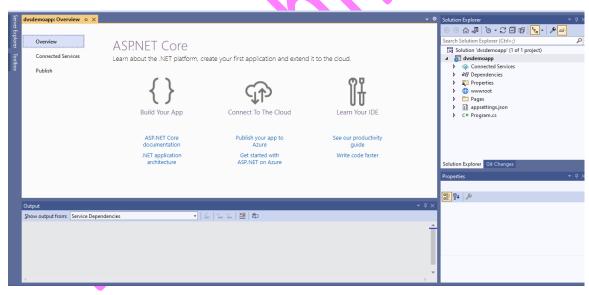


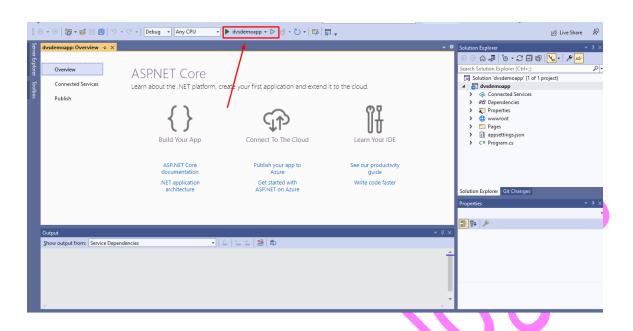


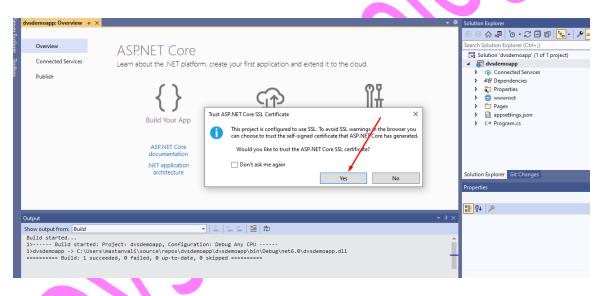
Let's create .net core web application

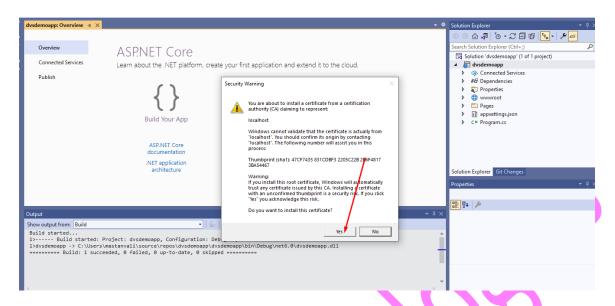












This will verify our application in local

```
Info: Microsoft.Hosting.Lifetime[14]
    Now listening on: https://localhost:7013
info: Microsoft.Hosting.Lifetime[14]
    Now listening on: http://localhost:5013
info: Microsoft.Hosting.Lifetime[14]
    Now listening on: http://localhost:5013
info: Microsoft.Hosting.Lifetime[0]
    Application started. Press Ctrl+C to shut down.
info: Microsoft.Hosting.Lifetime[0]
    Hosting environment: Development
info: Microsoft.Hosting.Lifetime[0]
    Content root path: C:\Users\mastanvali\source\repos\dvsdemoapp\dvsdemoapp\
```

Now if you hit the url in the browser you see you application running



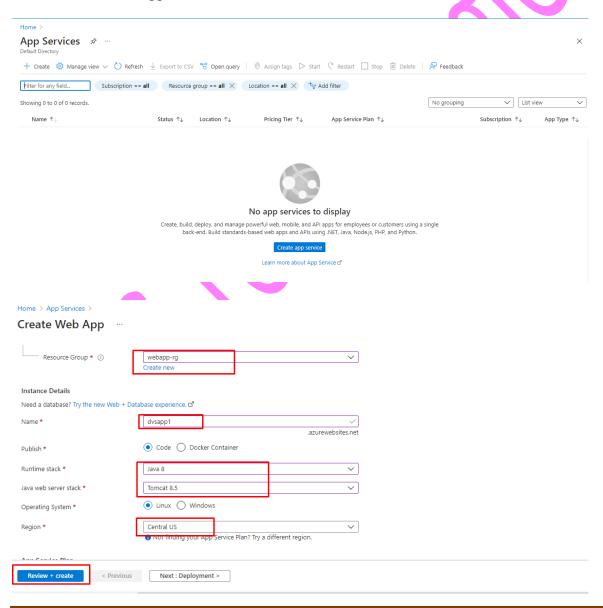
Learn about building Web apps with ASP.NET Core.

4 AZ webapp creation

Azure provides web service as PaaS solution. In simple terms let's say your application code if you want to run the code then we need to have servers, infrastructure & etc but if you are using azure web app service then you no need to have infrastructure. Just create the web app service and run your code inside in it.

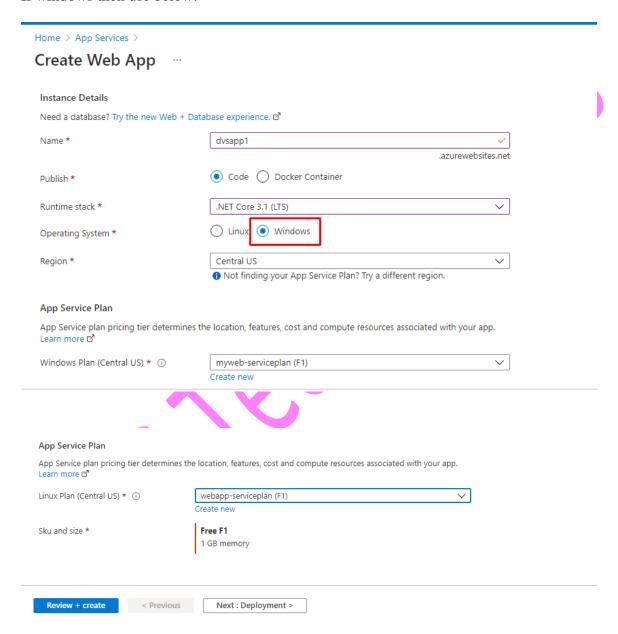
Hence we use app service plan, this plan help you to create your infrastructure like mem, cpu resources. You can run many web services on a single app service plan. In simple based on your consumption you can run as many web services as you can on one app service.

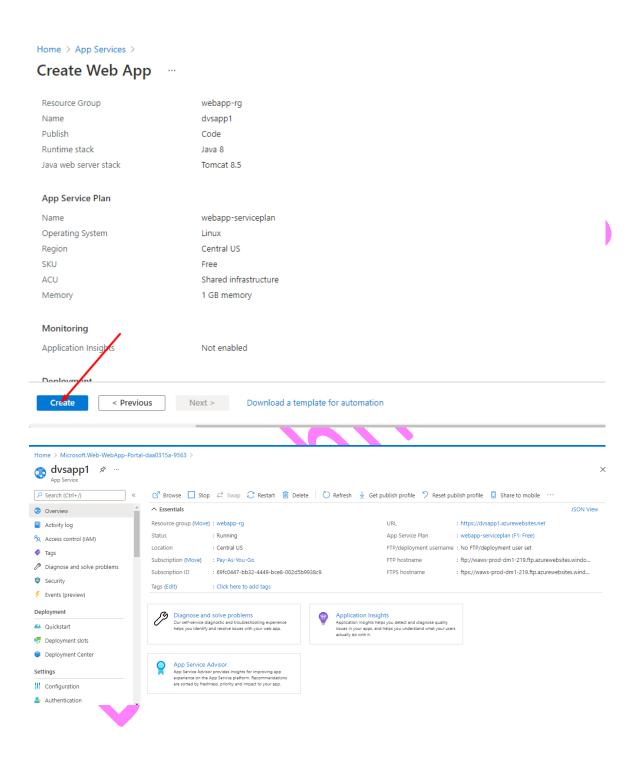
Let's create the web application:

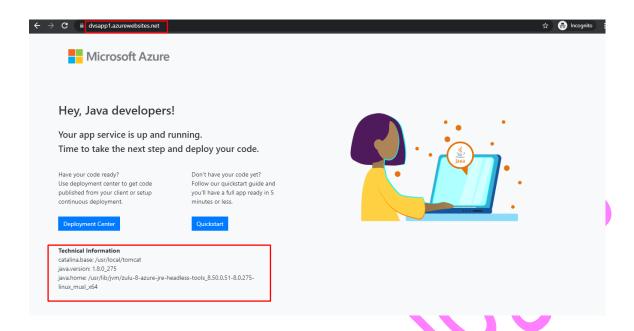


Note: you cannot club linux & windows servers together in the webapp. You can have only one.

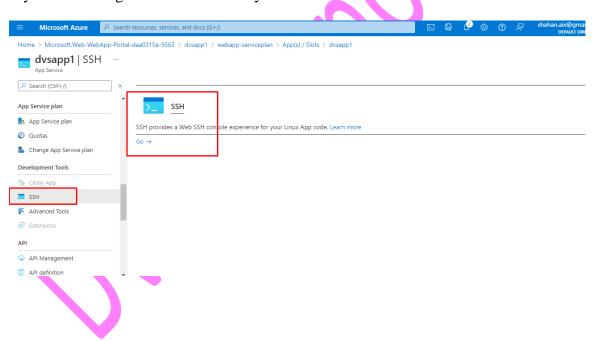
If windows then use below:

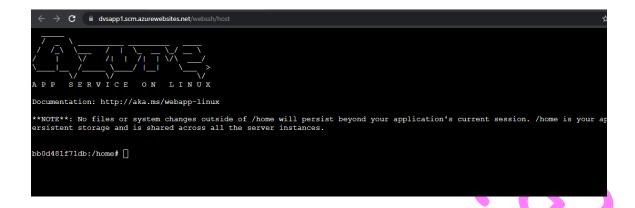




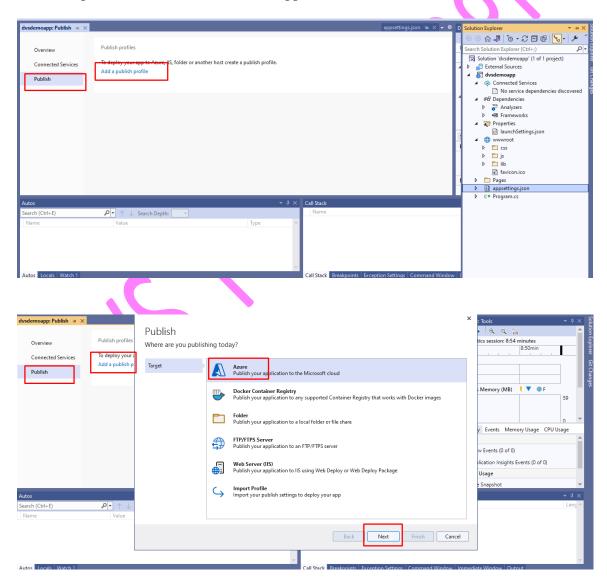


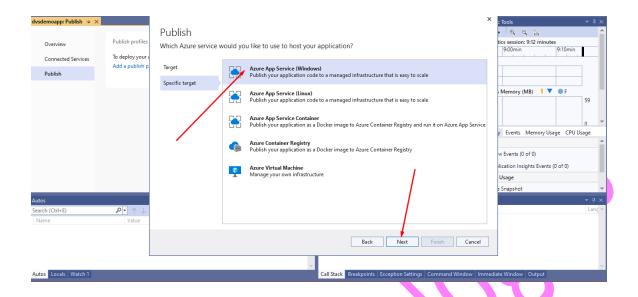
If you want to login to the server then you can use the below

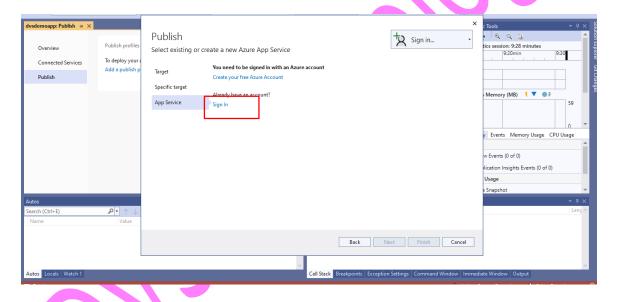


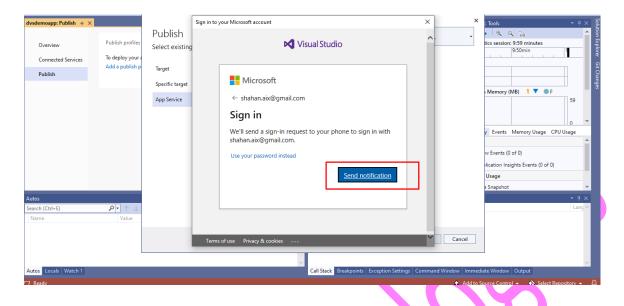


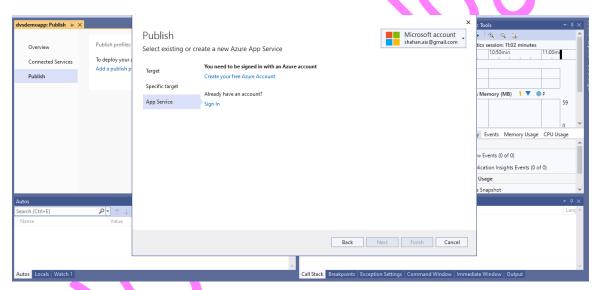
Now let's push our local code to our webapp:





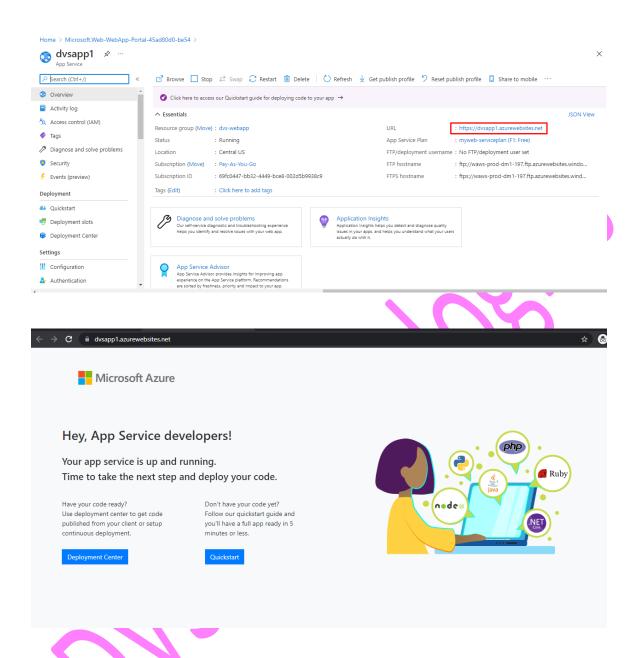




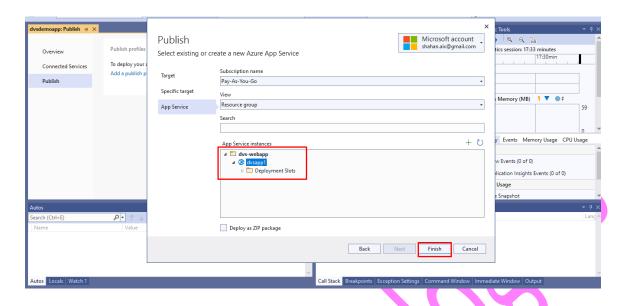


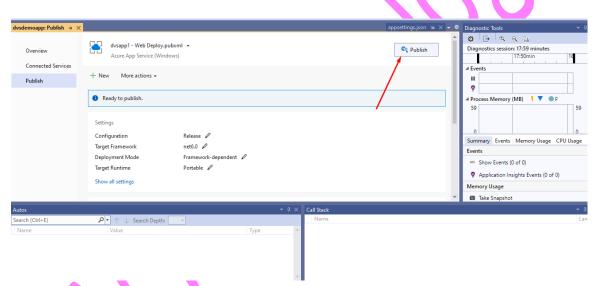
Once I approved code from mobile it shows now I logged in.

Before we push the code our web app looks like below.

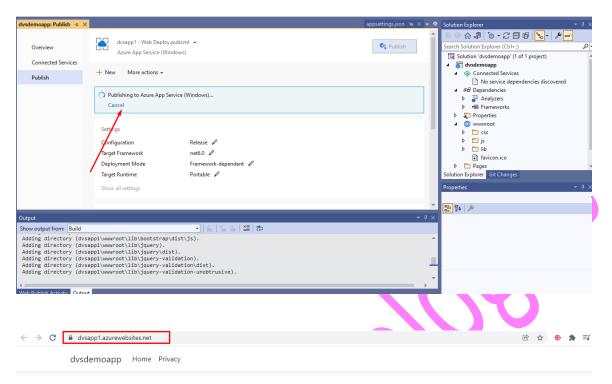


Now let's push the code





Press yes when it prompts



Welcome

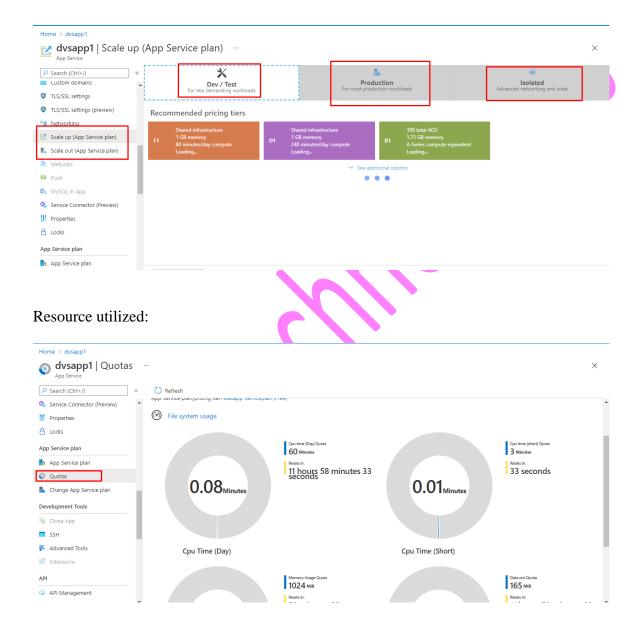
Learn about building Web apps with ASP.NET Core.

Now if you observe the above we see our application deployed successfully

5 Explore webapp

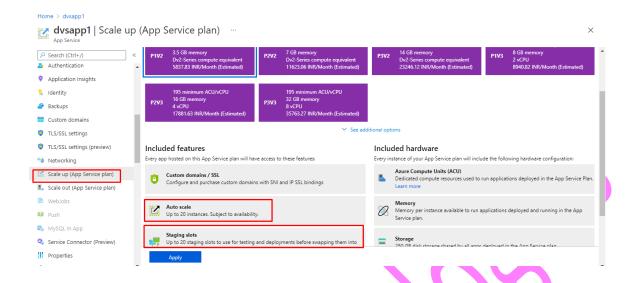
Scale up & down

At any point of time if you feel like updating the plan then you can use this option



Increase instances:

By free account you will get only 1 instance to use if you want to increase the instance count then you need to upgrade your plan.



Under premium support plans you will get more slots & vm's for running you application

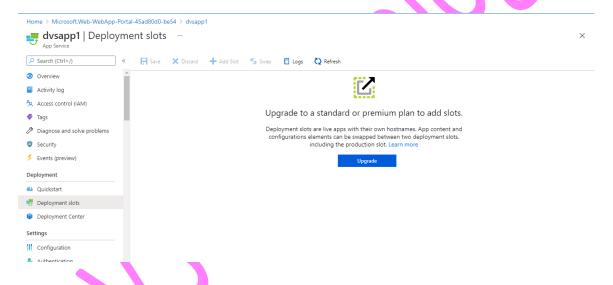
6 Deployment slots

Let's assume that you are having one web app service and you are doing the current deployment. Imagine that you are deploying as version 1.0 and it's in production. Now you have developed a new code and let's say its version as 2.0 before we disturb the production we should test this code end to end. Hence what we are going to do is to opt for deployment slots, one important thing is deployment slots are available for premium and standard service plans. Under free tier we are not eligible to test the deployment slots.

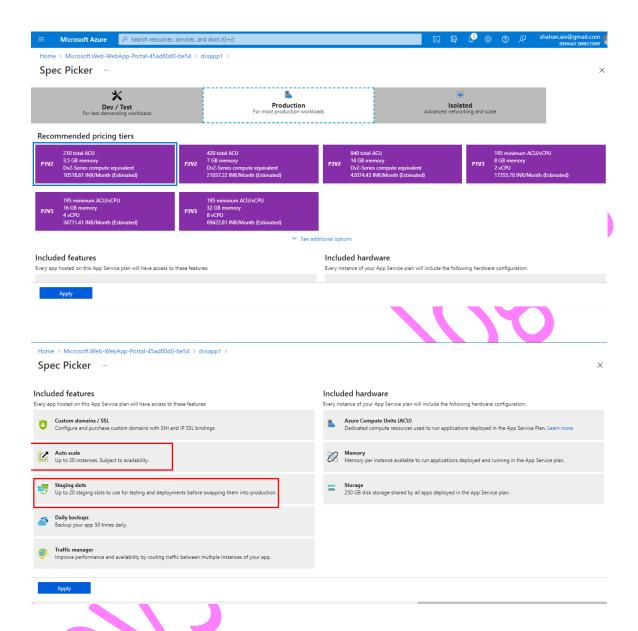
Here what we can do is simply create two slots let's say one as "staging" & other one as "production"

Test end-to-end application in staging & if you feel everything works fine then just swap the slots.

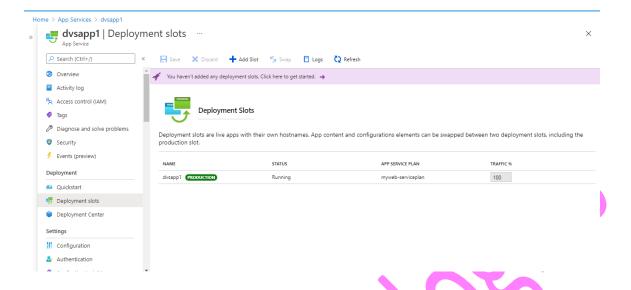
When you try to deploy the code in diff slots it will not support under free tier.



Let's upgrade our plan to standard



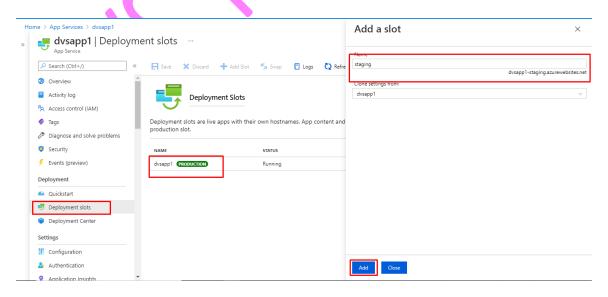
Now we can create multiple slots & host our application on diff slots & test the setup.

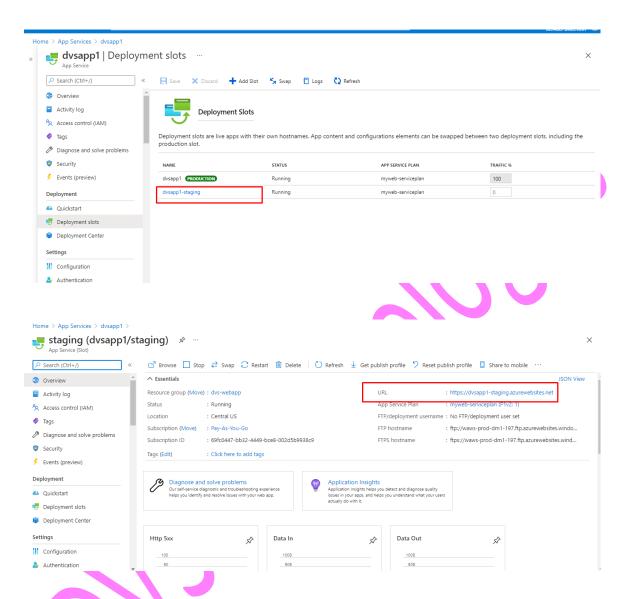


Before we create a new slot let's see the application

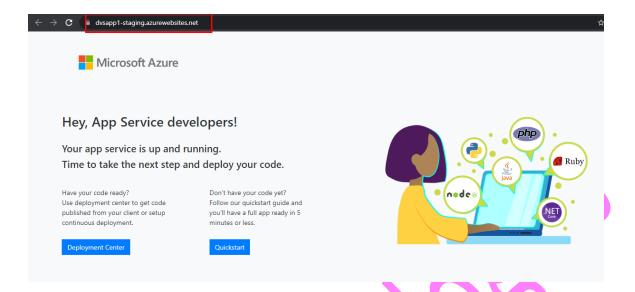


Now let's create our slot and try to push the changes to the new slot

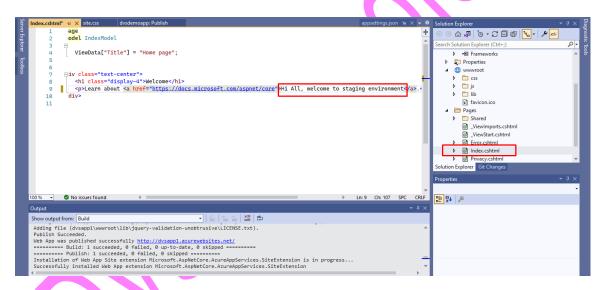




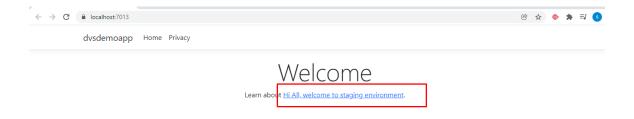
Let's check the application running before we push it



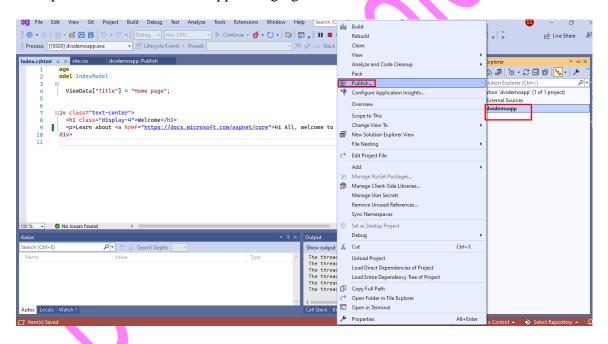
Now let's do the changes to the application code & then push it to the staging environment.

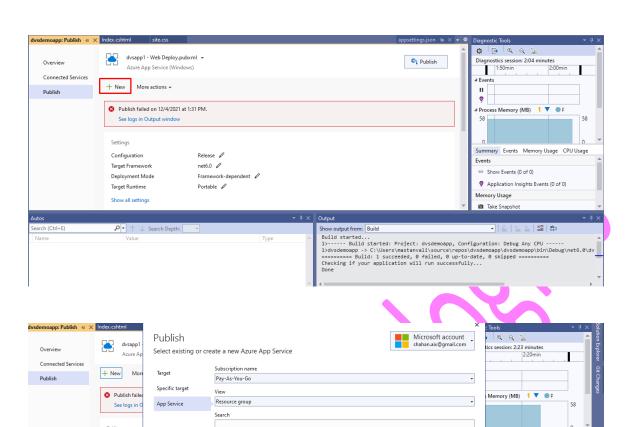


Test app locally:



Now push the code to the webapp to staging slot.





Events Memory Usage CPU Usage

n: Debug Any CPU ----pp\dvsdemoapp\bin\Debug\net6.0\dv skipped ========

Events (0 of 0)

Back Next Finish Cancel

lication Insights Events (0 of 0)

Note: Make sure that you are pushing it to staging slot.

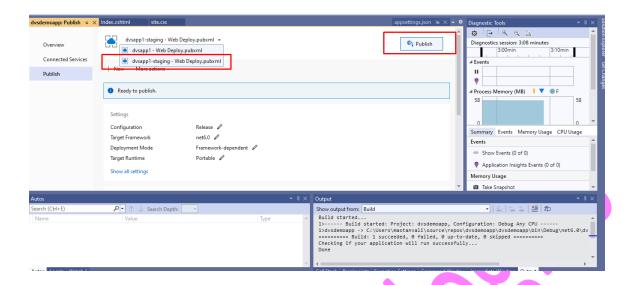
Configuration Target Framev

Deployment Mo

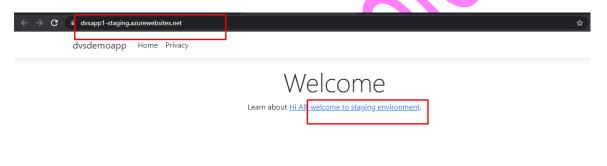
Target Runtime

App Service instances

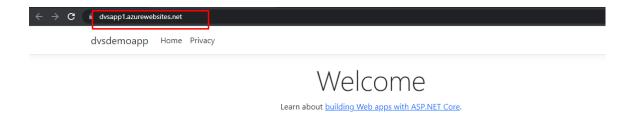
Deploy as ZIP package



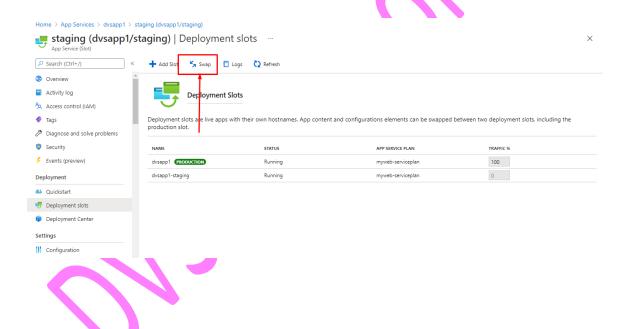
Once publish is completed then we can test our staging url.

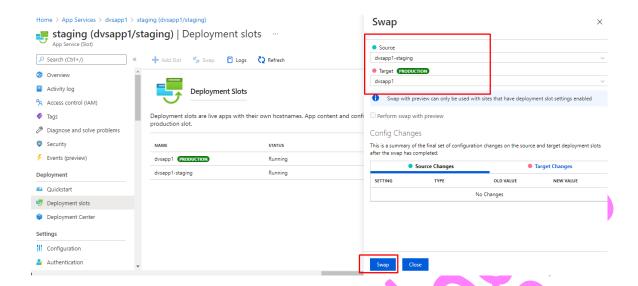


If you see production slot then our website looks like below

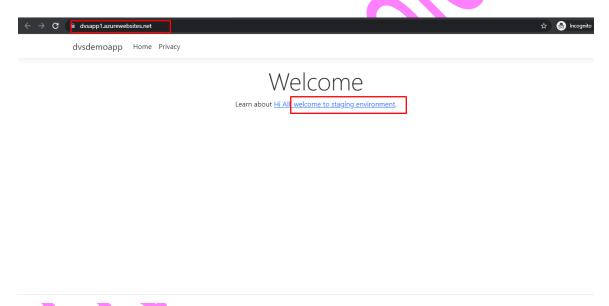


Now if you feel that your staging is working good and everything works fine then you can simply swap the slots .





Now let's verify the application in production slot.



It's a great option to do out end to end testing.

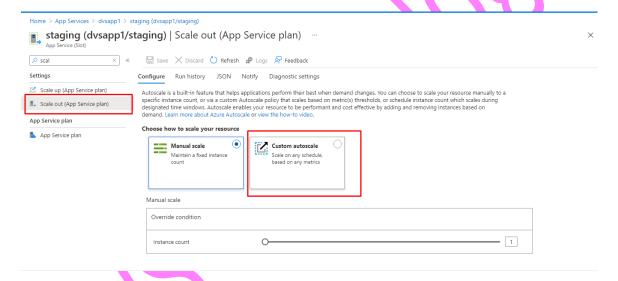
7 Web app autoscalling

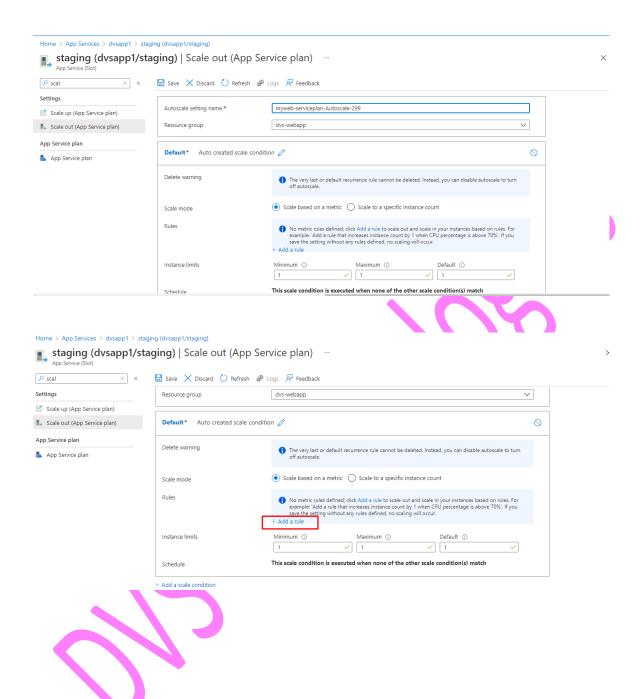
Just imagine that you are deploying the application in the webapp service and this application is running on the allocated slave nodes. If in case that the load is more and if your application running on webapp service need more resources then you need to scale up the servers for your service plan other wise your application will go down.

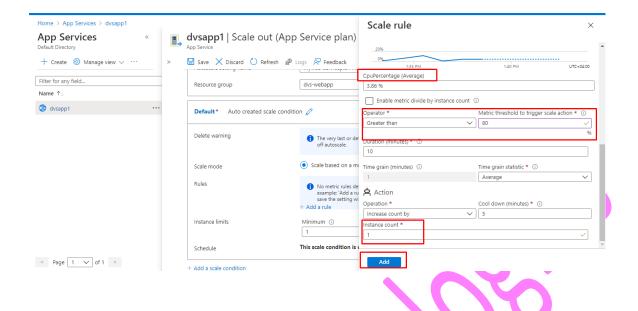
If you want this one to automatically create the servers for your webapp service we can simply opt for autoscalling option. Using this in our service plan we can increase the server count to max value. In the same way we can reduce the server count as well.

Note: for free tier it's not possible to opt for autos calling. Only premium & standard service plans have this feature enabled.

Let's configure autoscalling for our application:



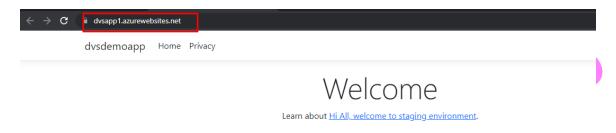




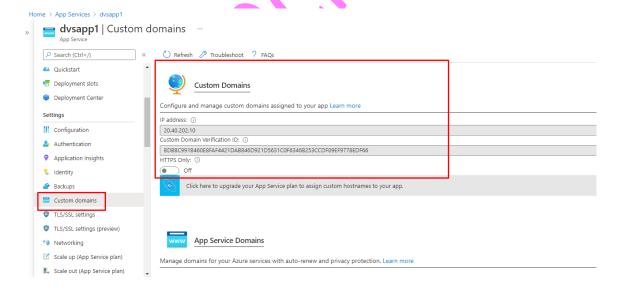
8 Azure Web App - Custom Domains

If you want to create the custom domain for your webapp then you can create it using custom domain option.

Our application domain name is



If you want to change the domain name to your own name. Let's say that we have our own domain "shaans.in" now I want to bring up my application on this page then.



Once you upgrade the plan then you can add it