MERN Stack

Version:	1.0.0
Created by:	cloudimg

Table of Contents

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1.) Overview

This document is provided as a user guide for the MERN Stack product offering on the AWS Marketplace. Please reach out to support@cloudimg.co.uk if any issues are encountered following this user guide for the chosen product offering.

2.)Access & Security

Please update the security group of the target instance to allow the below ports and protocols for access and connectivity.

Protocol	Type	Port	Description
RDP	TCP	3389	Remote Desktop Access
TCP	TCP	27017	MongoDB Database Listener Port
Custom TCP	TCP	3000	Express sample application front end
Custom TCP	TCP	8088	ReactJS sample application front end

3.)System Requirements

The minimum system requirements for the chosen product offering can be found below

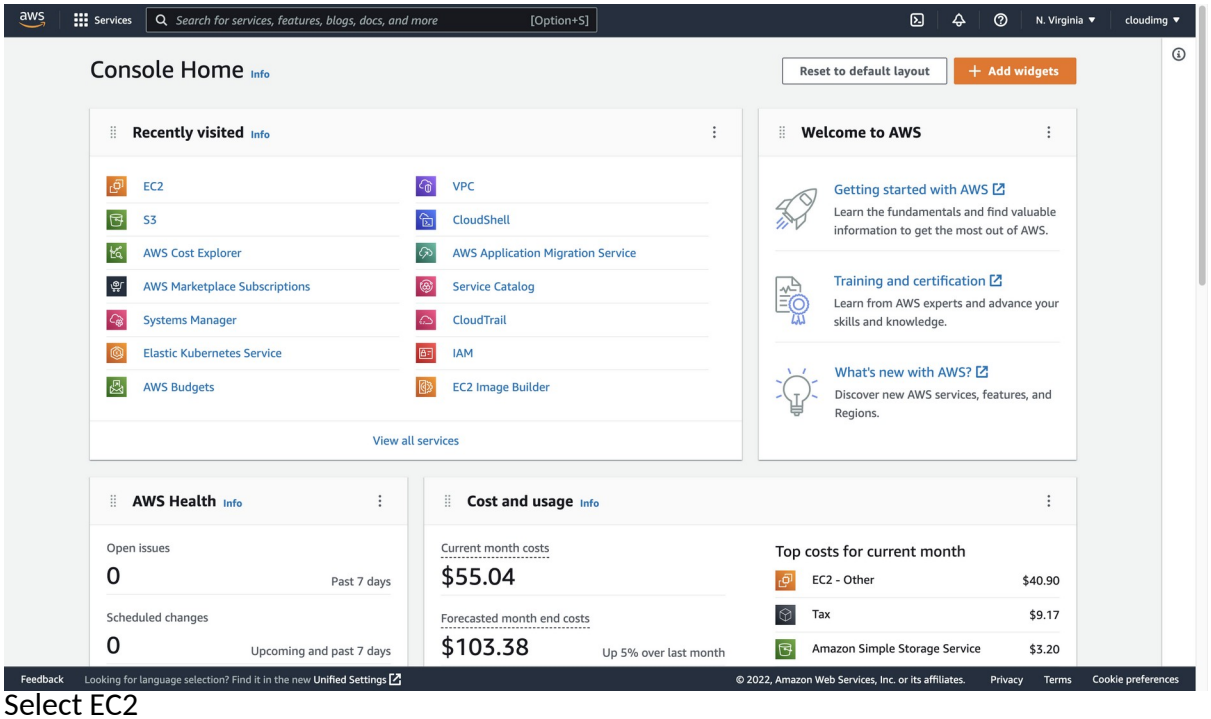
Minimum CPU	Minimum RAM	Required Disk Space
1	1 GB	30GB

4.) Connecting to the Instance

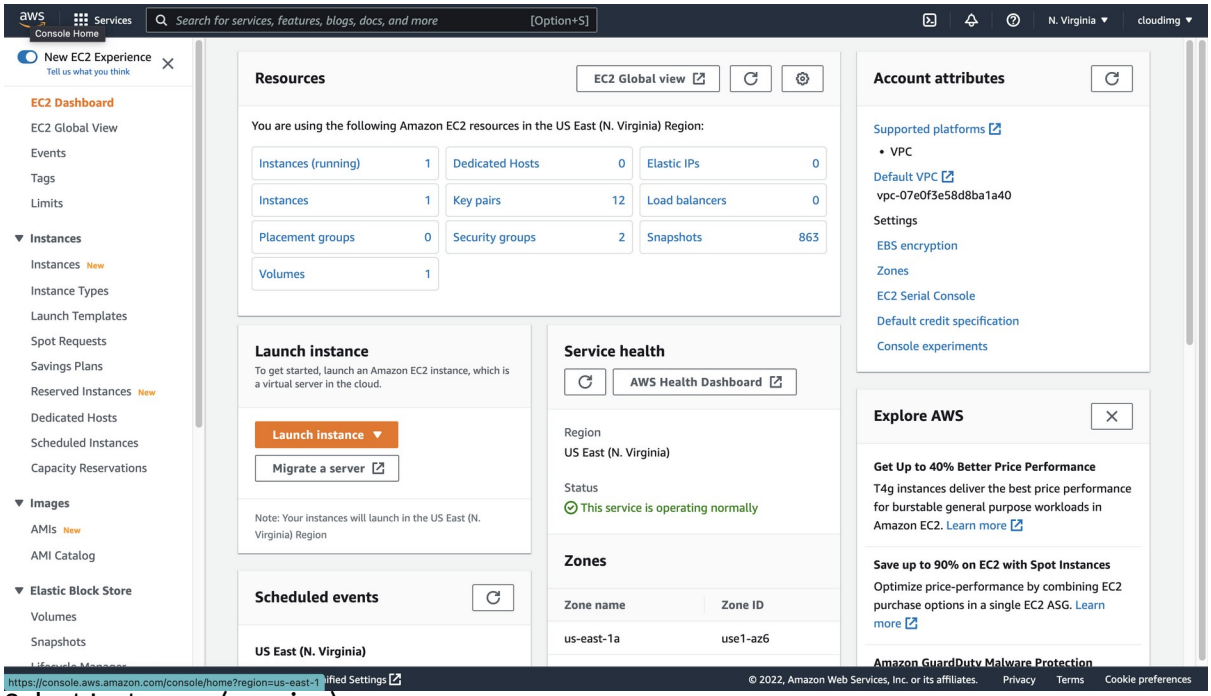
Once launched in the Amazon EC2 Service, please connect to the instance via an RDP client using the **Administrator** user. Please allow the EC2 Instance to pass 2/2 status checks before connecting via RDP to allow the system enough time to complete the boot process.

To obtain the randomly generate password on boot for the Administrator user, please follow the below steps in the AWS Console.

Log into the Target AWS Account > Select the region of which was chosen to host the newly launched cloudimg AMI



Select EC2



Select Instances (running)

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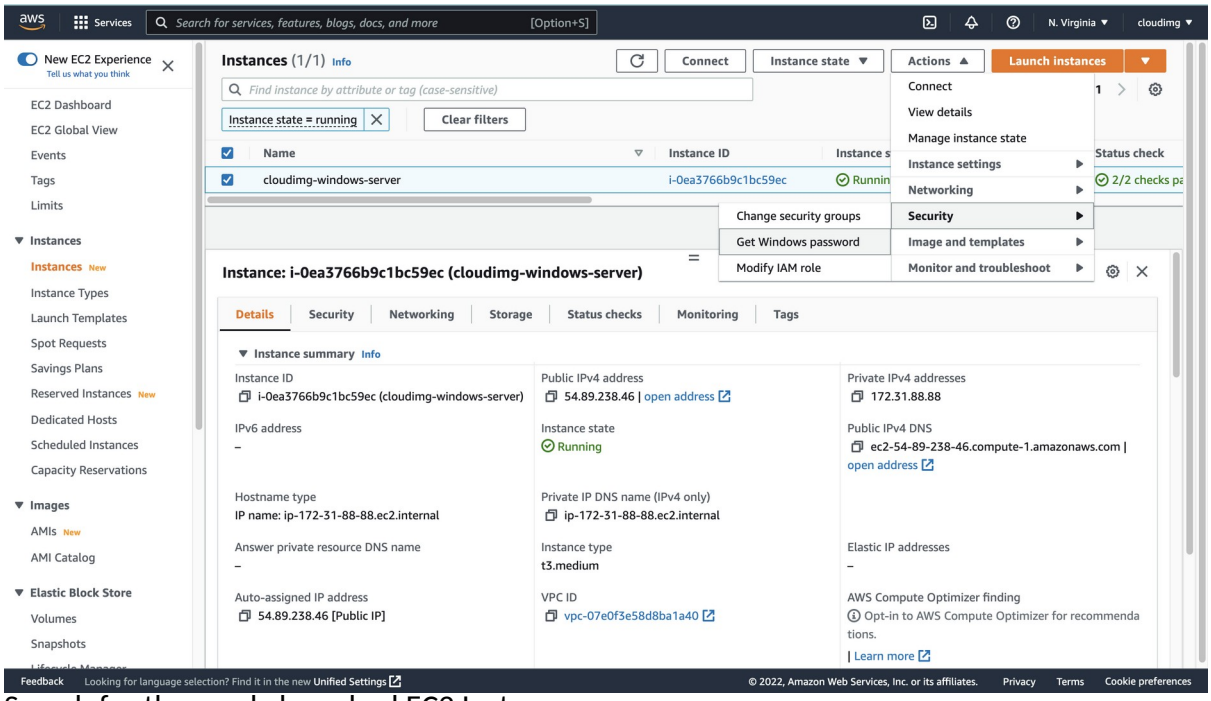
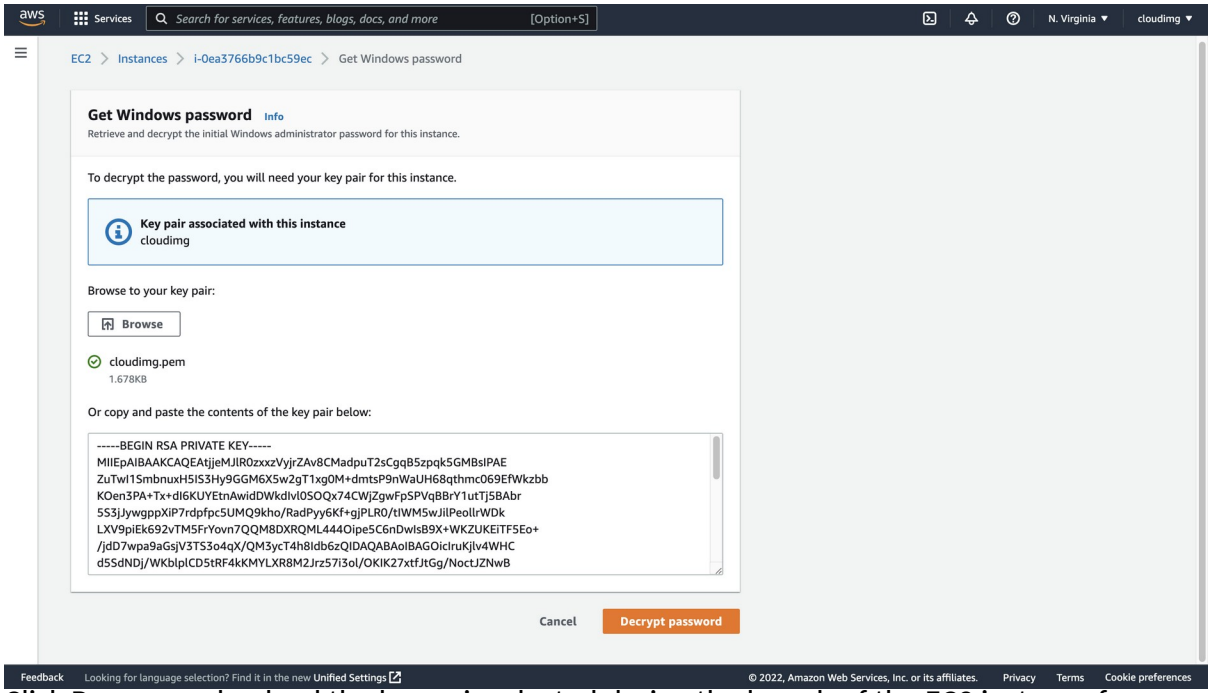


Search for the newly launched EC2 Instance
Select the Radio button above for the instance
Click Actions > Security > Get Windows password



Click Browse and upload the key pair selected during the launch of the EC2 instance from the AWS Marketplace.
Click Decrypt password

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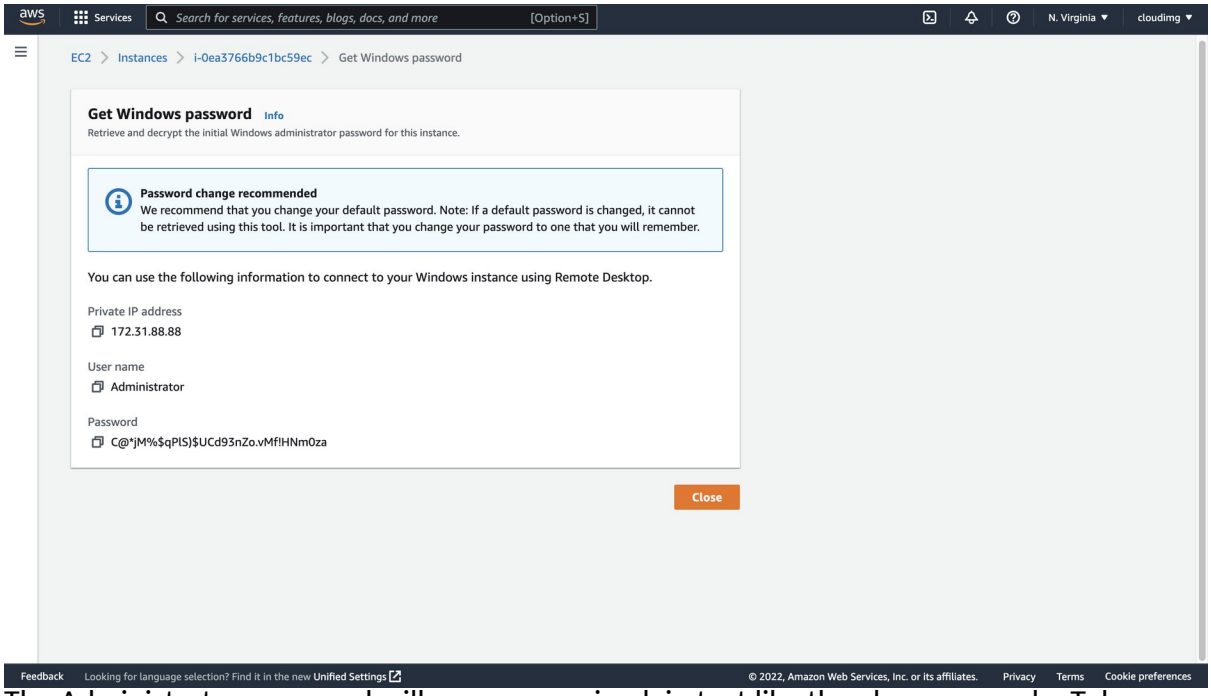
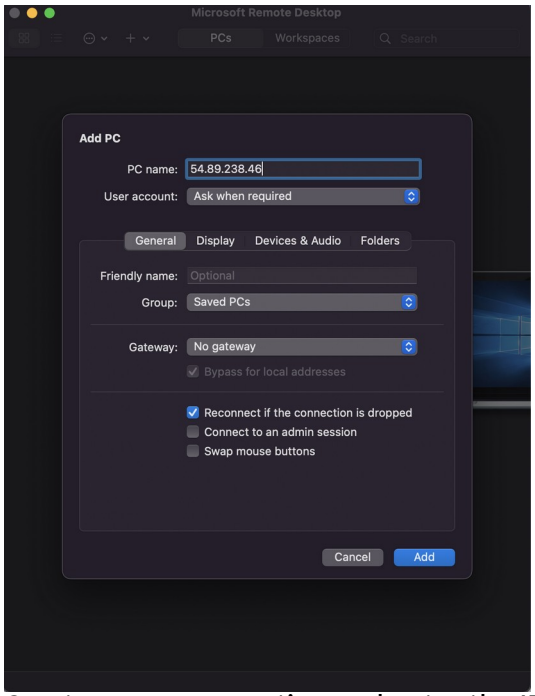


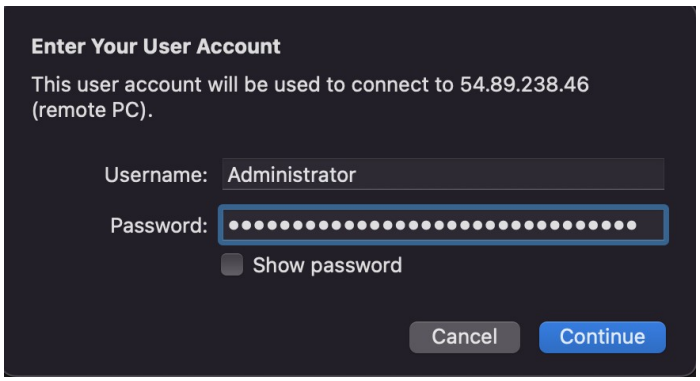
The Administrator password will now appear in plain text like the above example. Take a copy of this value and open a Remote Desktop Client Application.



Create a new connection and enter the IP address of the newly launched EC2 Instance. For this example, the public IP address will be used as the server has been launched in a public subnet. Use the private IP address where applicable for your environment if you have a private connection into the AWS VPC of which hosts the EC2 Instance. These Private connections often take the form of a VPN connection.

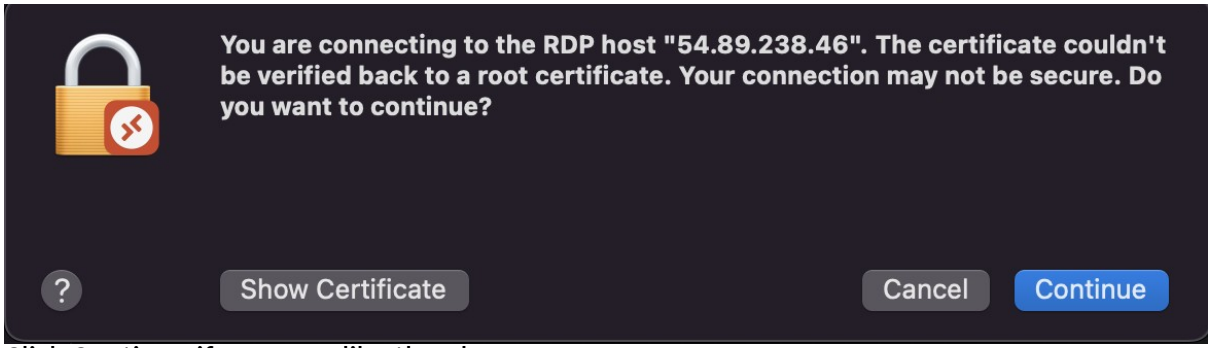
Click Add

Once added, double click the connection profile created in the above step, you will be prompted for a username & password. Enter the below values.



Username: Administrator
Password: DECRYPTED VALUE RETRIEVED FROM THE ABOVE STEPS

Click Continue



Click Continue if a pop up like the above appears.

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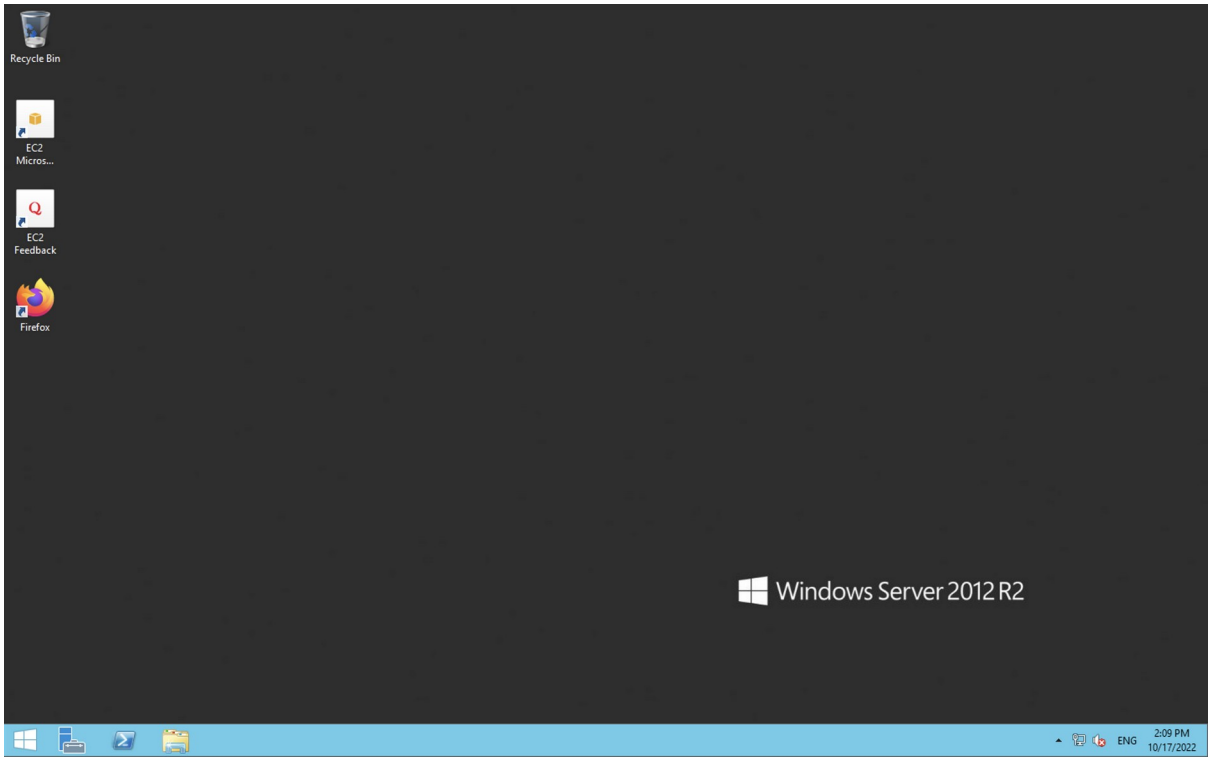
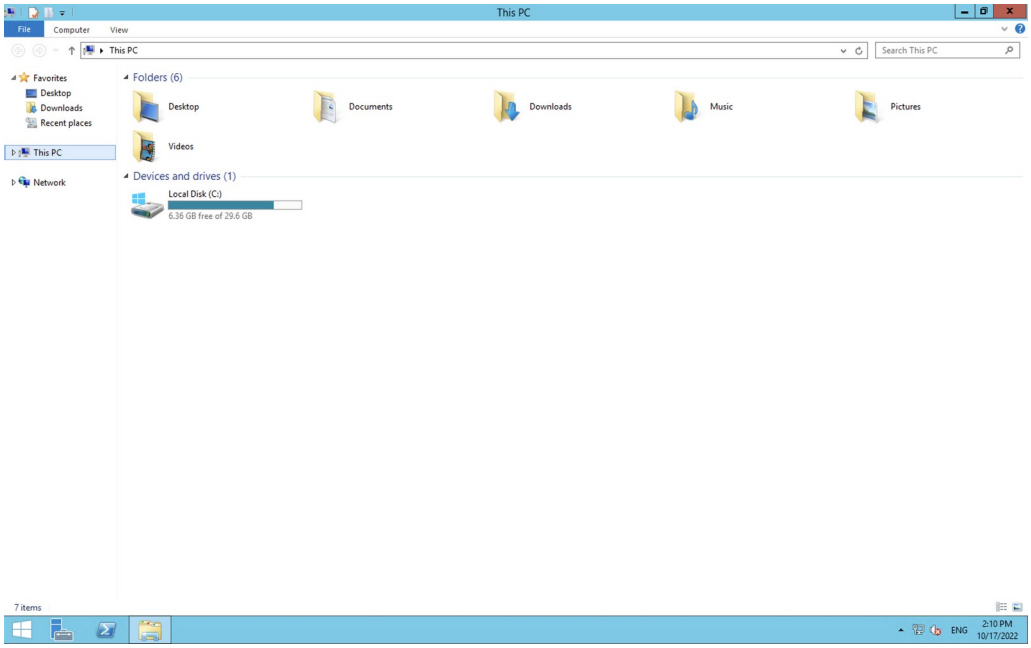


You have now successfully connected to the Windows Server hosted in AWS.

5.) Filesystem Configuration

Please see below for a screenshot of the server disk configuration and specific mount point mappings for software locations.



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6.) Server Components

Please see below for a list of installed server components.

Component
MongoDB Community
MongoDB Compass
NodeJS
Express
ReactJS
Git for Windows
Chocolatey
Python
Visual Studio Build Tools

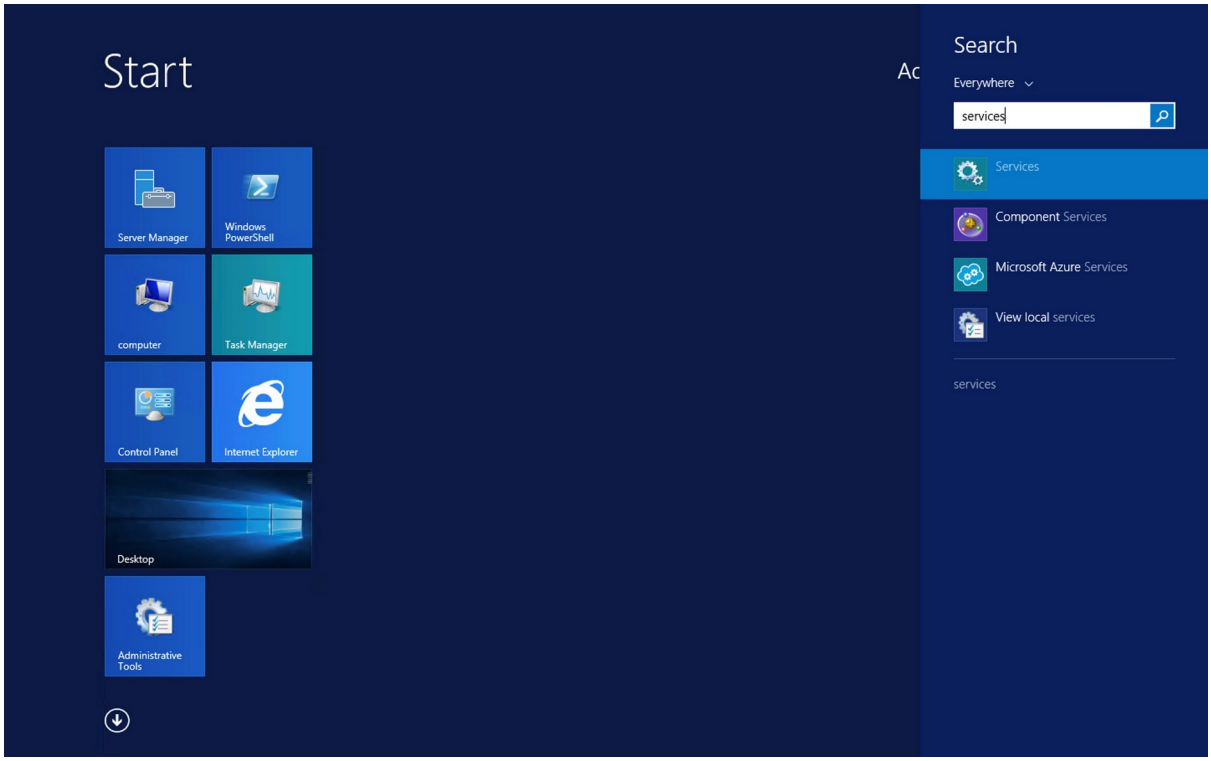
7.) Using System Components

Instructions can be found below for using each component of the server build mentioned in section 7 of this user guide document.

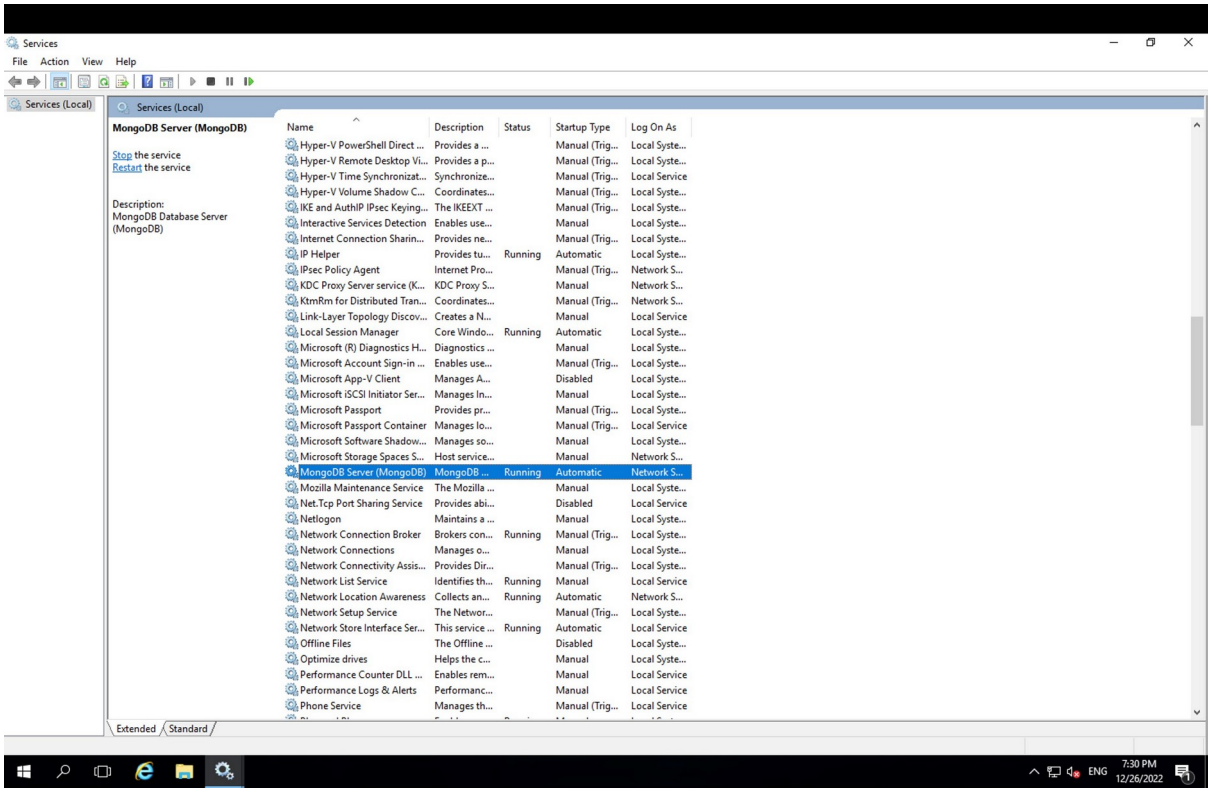
MongoDB

The monogdb database service has been configured to start on boot via a Windows Service. You can stop, start or check the status of the mongodb service by following the below steps.

From the Windows Start Menu > Search for Services



Click Services



Search for the Service – Mongo DB Server* > Double Click

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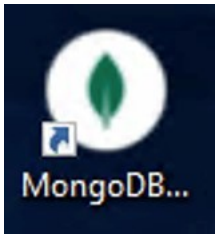
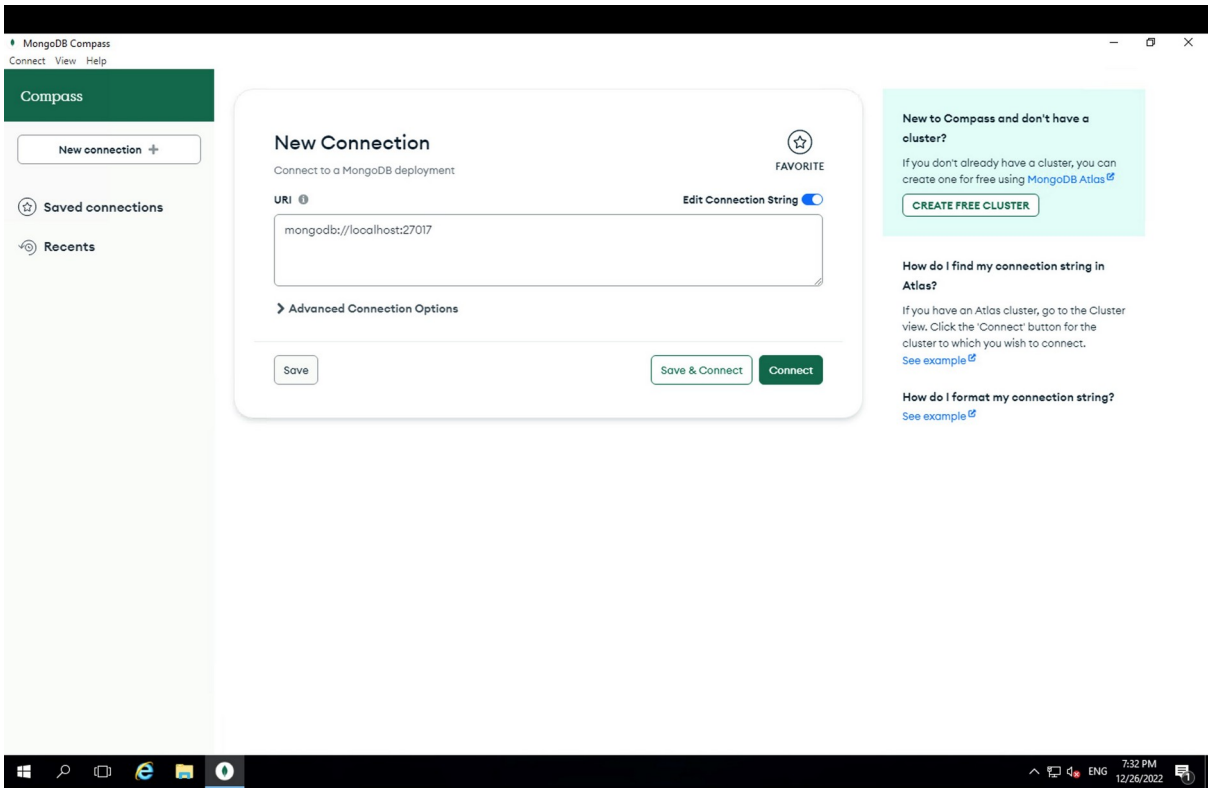
From the above menu you can reconfigure the service to not start on boot, stop, start and or restart the service manually.

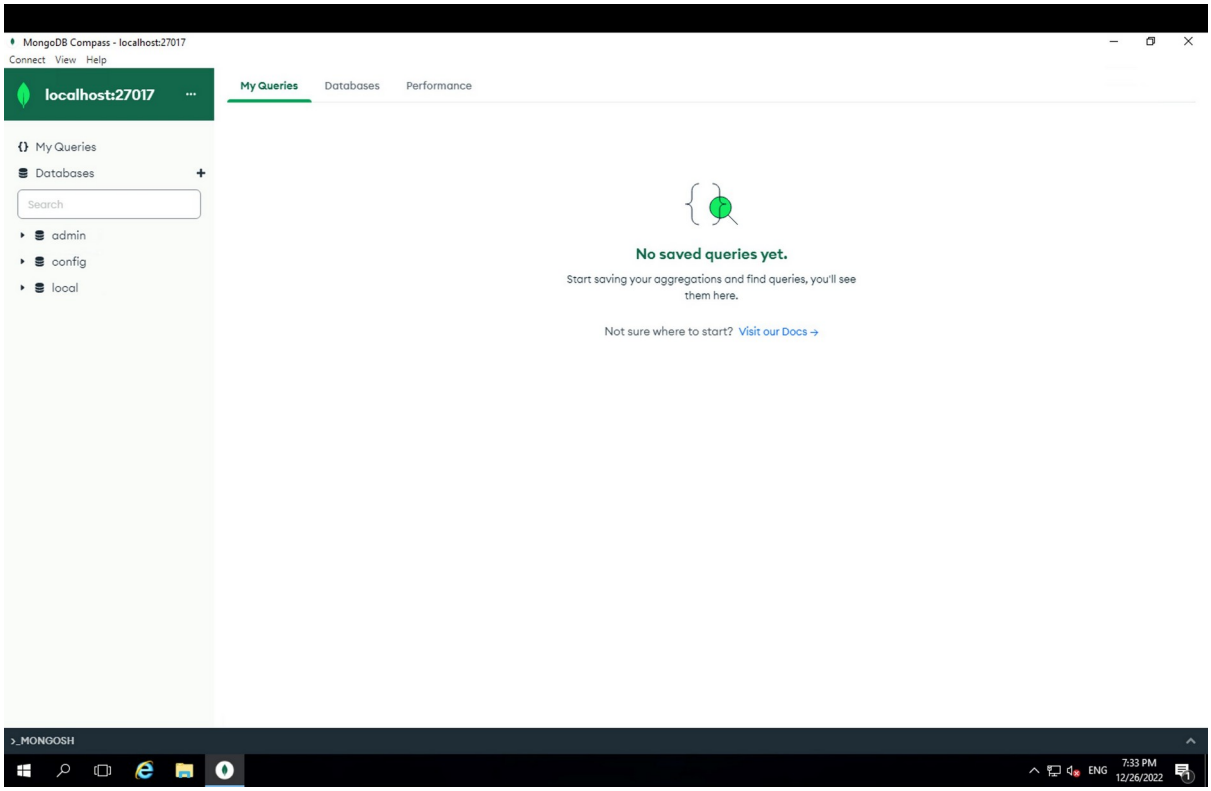
MongoDB Compass

A connection to the mongodb database running on the instance can be made from the MongoDB Compass programme preinstalled. You can access the program via the Desktop .exe shown below as the Administrator user.





Select ‘Connect’ to establish a local connection to the running MongoDB Database instance.



You have now successfully connected to the MongoDB Database Instance.

NodeJS

Node.js has been preinstalled. You can check the version of the installed Node.js package from the CMD programme via the below command.

```
node --version
```

You may also interact with Node.js via the Administrator user Desktop shortcut shown below.

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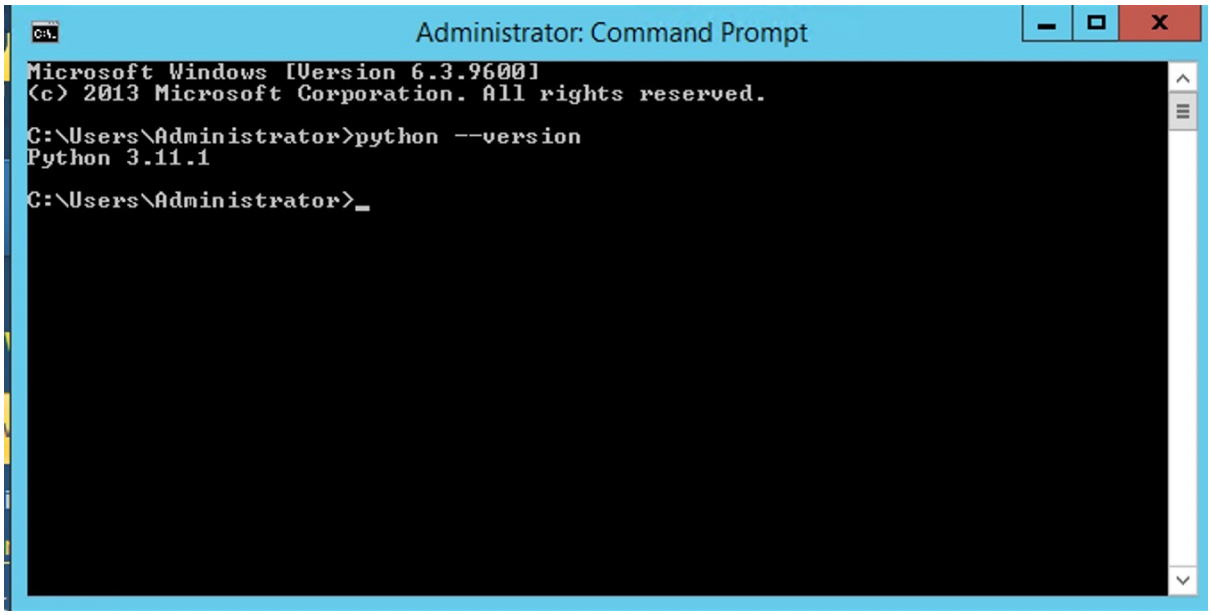
Python

Python 3 has been preinstalled. You can check the version of Python via the CMD program via the below command.

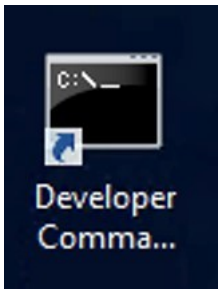



```
python --version
```

You may also interact with Python via the Administrator user Desktop shortcut shown below.

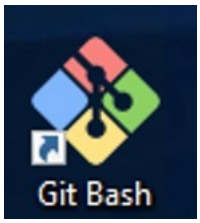
Visual Studio Build Tools

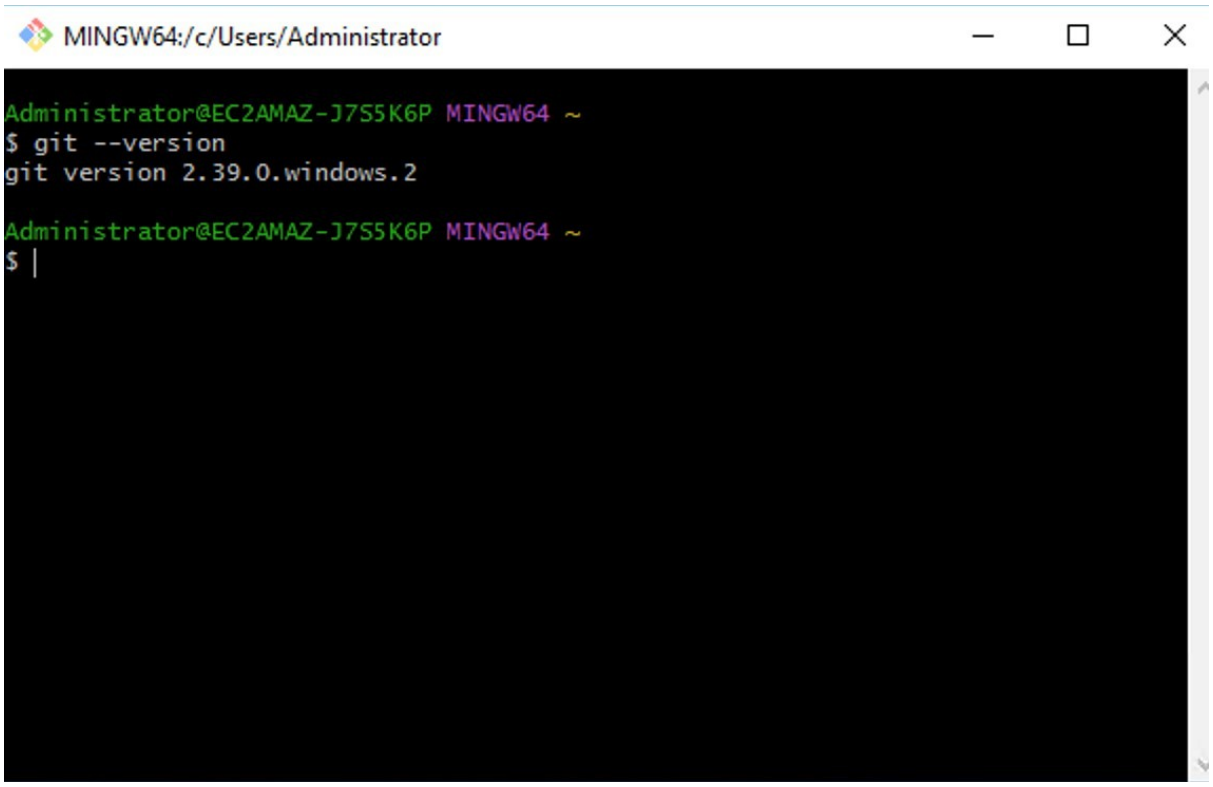
Visual Studio Build Tools have been preinstalled. An exe for the program can be found on the Desktop of the Administrator user. Example of the icon can be found below.



GIT for Windows

GIT for Windows has been preinstalled. You can check the version of GIT via the GIT Bash programme shortcut located on the Desktop of the Administrator user.

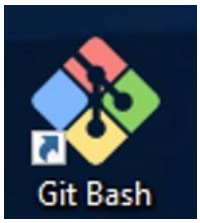




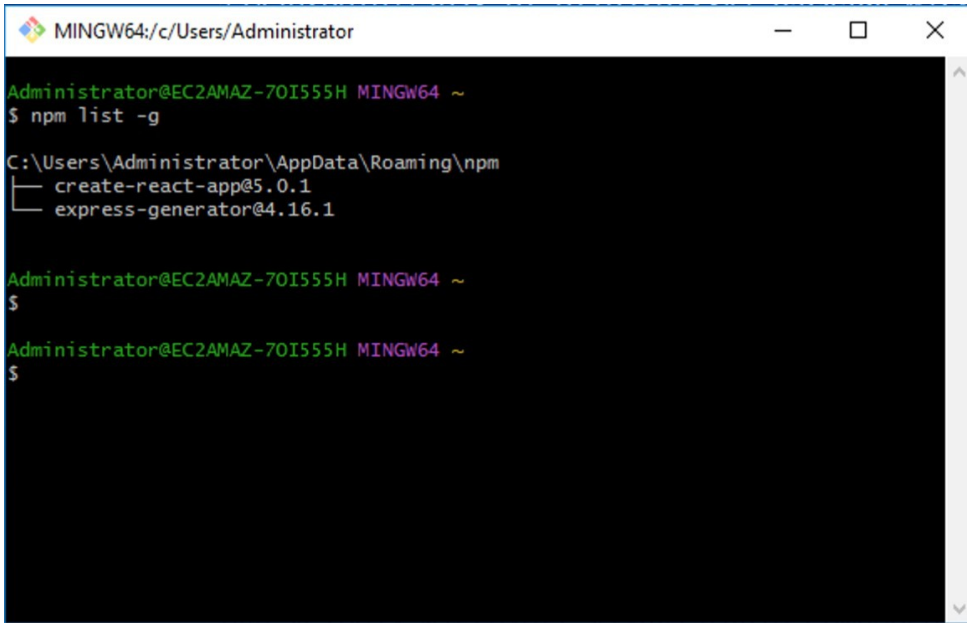
```
git --version
```

ReactJS

ReactJS has been preinstalled via npm. You can verify the version installed by running the below command from the GIT Bash programme shortcut located on the Desktop of the Administrator user.

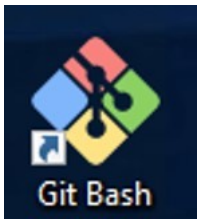



```
npm list -g
```

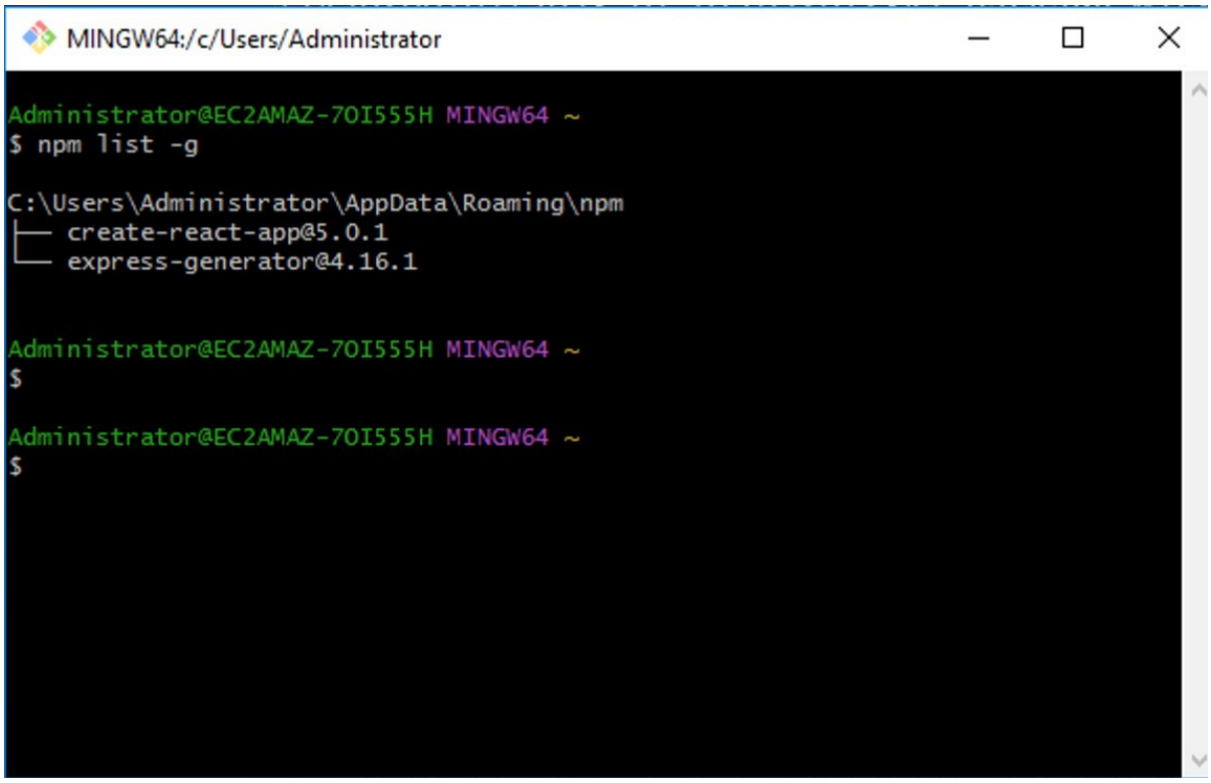


ExpressJS

ExpressJS has been preinstalled via npm. You can verify the version installed by running the below command from the GIT Bash programme shortcut located on the Desktop of the Administrator user.




```
npm list -g
```



Sample Projects (Express & ReactJS)

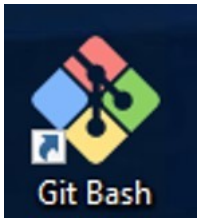
A sample project has been created for both Express & ReactJS under the directories listed below to demonstrate the successful installation of both packages on the system.

C:\reactjs-example-project
C:\express-example-project

Please follow the below steps for both components for the starting of either example projects.

Starting example Express Project

Via the GIT Bash programme shortcut located on the Desktop of the Administrator user.

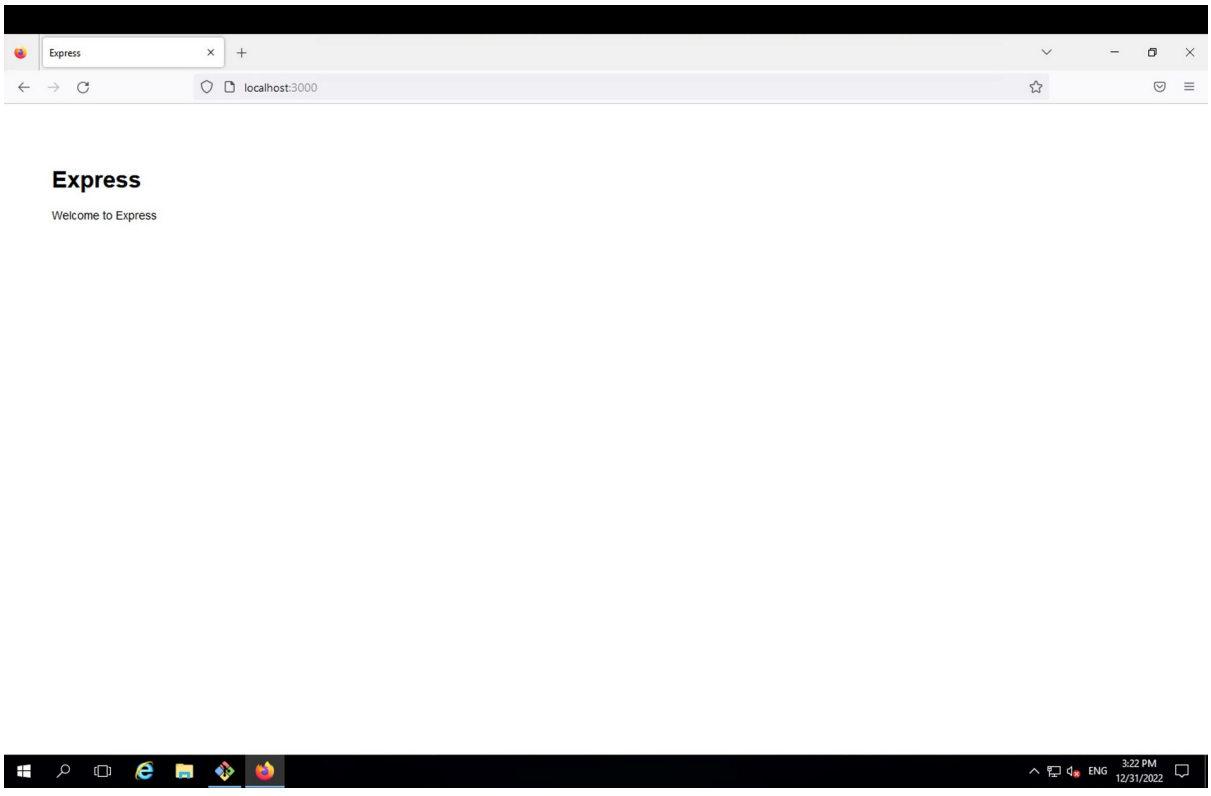


Run the below command to start the example project.

```
cd /c/express-example-project && DEBUG=app:* npm start
```

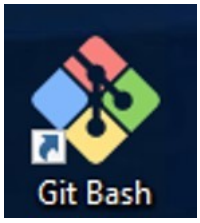
You will now be able to access the example Express application from the instance Web Browser (Firefox or IE) via the below URL.

http://localhost:3000



Starting example ReactJS Project

Via the GIT Bash programme shortcut located on the Desktop of the Administrator user.

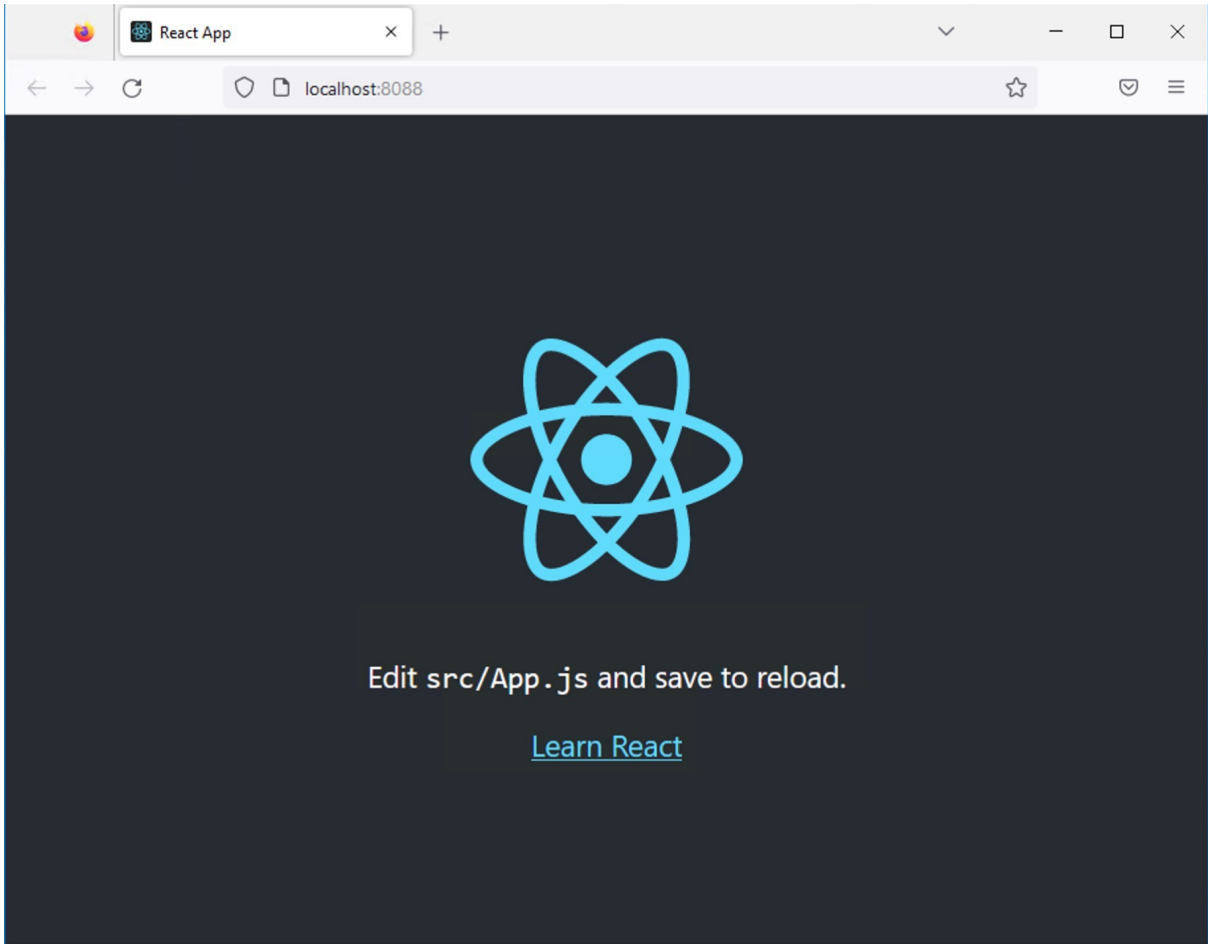


Run the below command to start the example project.

```
cd /c/reactjs-example-project && npm start react-native start –port
8088
```

You will now be able to access the example ReactJS application from the instance Web Browser (Firefox or IE) via the below URL.

http://localhost:8088



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