

PROFESSIONAL TRAINING
AT
SATHYABAMA INSTITUTE OF SCIENCE
AND TECHNOLOGY
(Deemed to be University)

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Technology Degree in Information Technology

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BONAFIDE
CERTIFICATE

This is to certify that this Project Report is the Bonafide work of **AISHWARYA R (Reg no:38120008)** who carried out the project entitled“ **AZURE TRAFFIC MANAGER PROFILE** ”under our supervision from OCTOBER 2021 to NOVEMBER 2021.

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DECLARATION

I, **AISHWARYA R** hereby declare that the Project Report entitled **AZURE TRAFFIC MANAGER PROFILE** done by me under the guidance of **Dr.V.Nirmalrani.M.E.Ph.D** at Sathyabama Institute of Science and Technology (Deemed to be University), Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600119 is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology degree in Information Technology.

DATE: 15/10/2021

PLACE: Chennai

SIGNATURE OF THE CANDIDATE

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TRAINING CERTIFICATE

ABSTRACT

AZURE TRAFFIC MANAGER PROFILE

Azure Traffic Manager allows you to regulate the distribution of user traffic by using **DNS** to direct requests to the most appropriate service endpoint supported on a **traffic-routing method** and therefore the health of the endpoints. Azure traffic manager selects an endpoint based on the configured **routing method**. It supports a variety of traffic-routing methods to suit different application needs. After the selection of endpoints, the client is connected directly to the appropriate service point. It also provides endpoint health checks and automatic failover. It also enables you to build a highly available application that is resilient to failure, including the failure of an entire Azure region. Traffic Manager uses DNS to direct client requests to the most appropriate service endpoint based on a traffic-routing method and the health of the endpoints. An endpoint is any Internet-facing service hosted inside or outside of Azure. It provides a range of traffic-routing methods and endpoint monitoring options to suit different application needs and automatic failover models. It is resilient to failure, including the failure of an entire Azure region. **Check out** this blog in which we discuss the basics of [Azure PowerShell](#) and how it plays a key role in the Microsoft Azure . **Azure Traffic Manager** distributes the traffic based on one of the **six traffic-routing methods** that determine which endpoint is returned within the DNS response.

Keywords: routing method , Azure Traffic Manger , Fuzzy Logic, Information Extraction, DNS .

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LIST OF ABBREVIATION

ACCRONYM

ABBREVIATION

DNS

Domain Name System

PAAS

Platform As a Service

SAAS

Software As a Service

IAAS

Infrastructure As a Service

VMs

Virtual Machine Software

CHAPTER 1

INTRODUCTION

1.1 GENERAL

Azure Traffic Manager is an Azure service that provides a load balancing for your applications at the DNS level. It offers a highly efficient approach to traffic routing that combines end-to-end application health checks, intelligent DNS, and global load balancing into a single platform. Azure Traffic Manager not only supports Azure-based services but also non-Azure based services. Therefore, it does not matter where you have your application whether it is on premises, Azure, or any other cloud. Azure Traffic Manager ensures redirecting every received request to a healthy node. Therefore, in case one of the nodes is down, it will failover the traffic to another node. Clients will enjoy a lower access time to the application, which will redirect them to the nearest node or the fastest node in response. As a result, if you have clients around the world, you do not have to worry, since it will provide the best access experience to them.

If you have multiple nodes, and you would like to maintain or replace any of these nodes, you do not have to worry about the downtime, since the service will direct the requests to other nodes. Therefore, the client will face no downtime. Microsoft offers Azure Traffic Manager for a reasonable price.

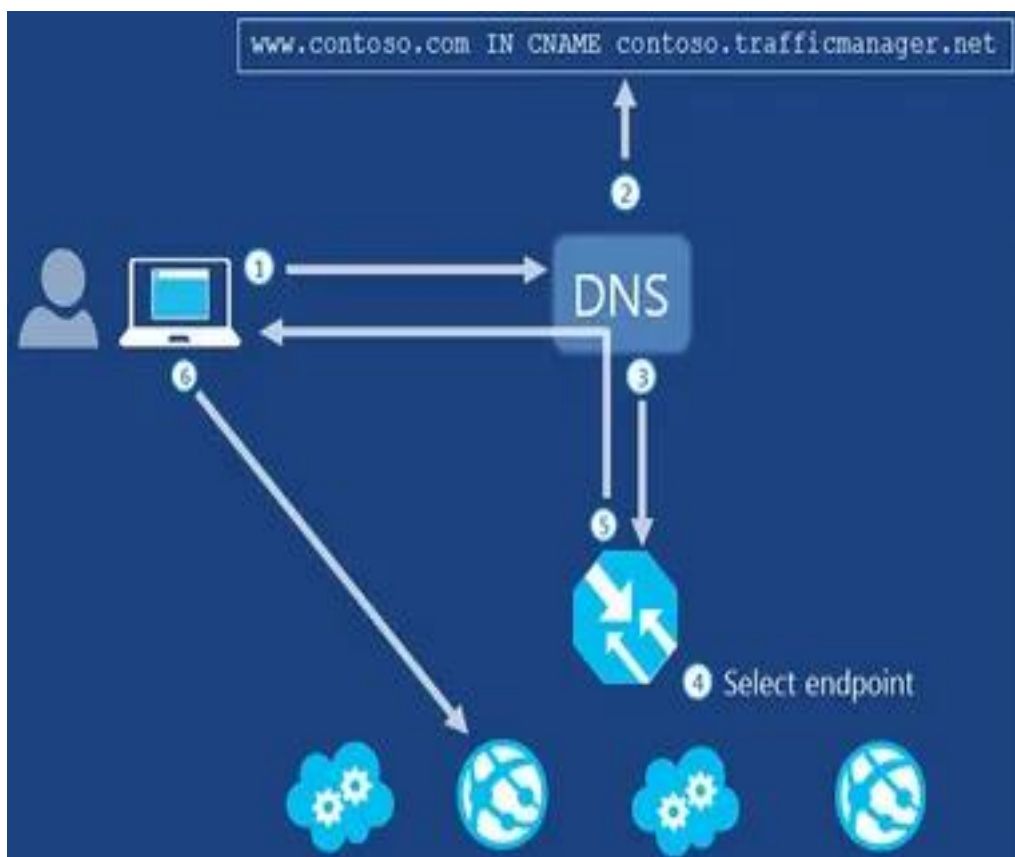


FIG 1.0 AZURE TRAFFIC MANAGEMENT PROFILE

CHAPTER 2

AIM AND SCOPE

2.1 AIM OF AZURE TRAFFIC MANAGEMENT PROFILE

Azure Traffic Manager is a DNS-based traffic load balancer. This service allows you to distribute traffic to your public facing applications across the global Azure regions. Traffic Manager also provides your public endpoints with high availability and quick responsiveness. Traffic Manager uses DNS to direct the client requests to the appropriate service endpoint based on a traffic-routing method. Traffic manager also provides health monitoring for every endpoint. The endpoint can be any Internet-facing service hosted inside or outside of Azure. Traffic Manager provides a range of [traffic-routing methods](#) and [endpoint monitoring options](#) to suit different application needs and automatic failover models. Traffic Manager is resilient to failure, including the failure of an entire Azure region.

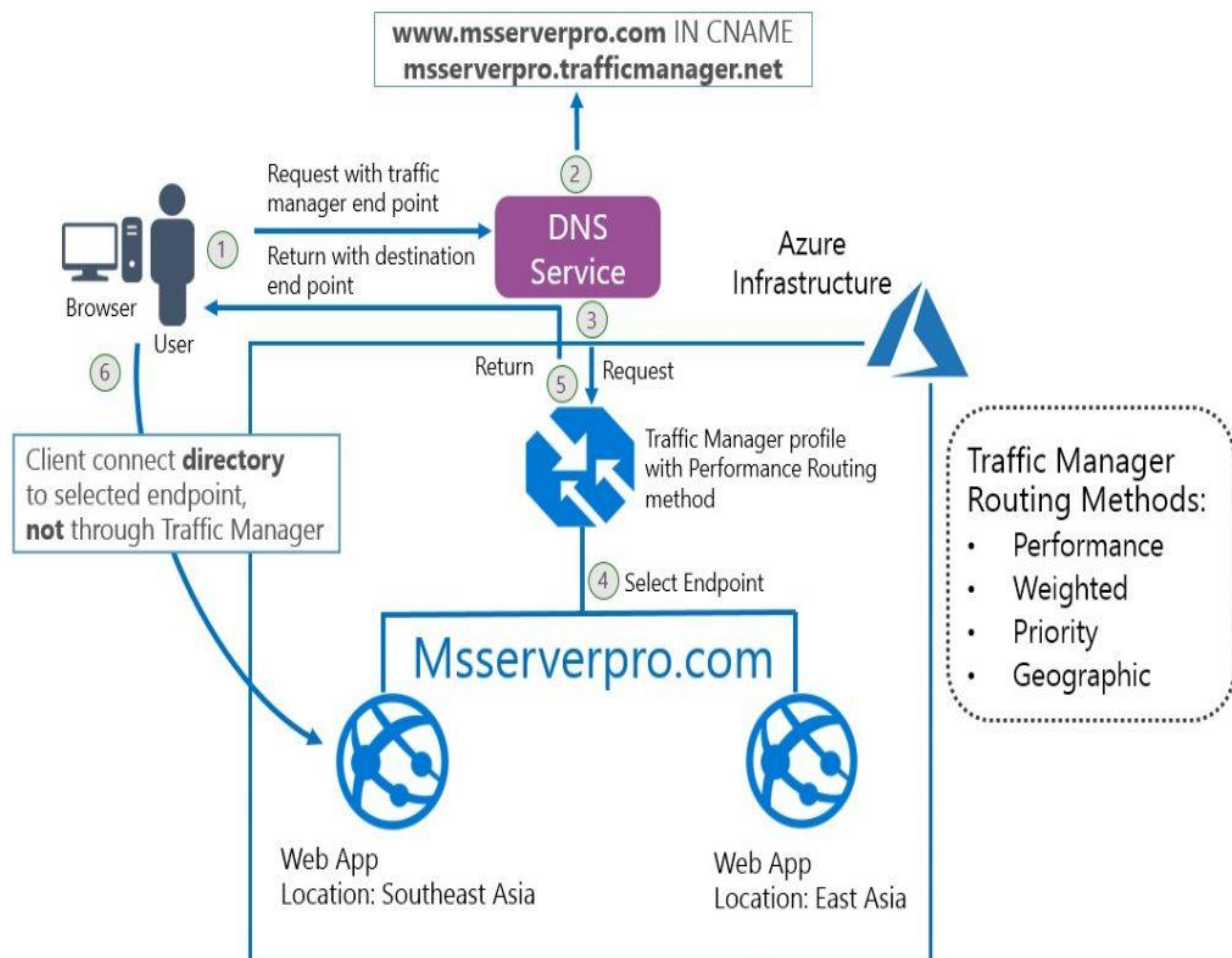


FIG 2.0 FLOW DIAGRAM OF USING TRAFFIC MANAGER IN AZURE

2.2 SCOPE OF AZURE TRAFFIC MANAGEMENT PROFILE

At the time of writing, Azure Traffic Manager supports six routing methods:

1. **Performance:** This method routes the traffic to the fastest responsive node.
2. **Priority:** This method routes the traffic to a specific node if the node goes down.
3. **Weighted:** This method routes the traffic based on the weight assigned to each node.
4. **Geographic:** This method routes the traffic to specific nodes based on the source location.
5. **Subnet:** This method routes the traffic to a specific node based on an IP address range specified for the end users.
6. **Multivalue:** This method routes the traffic to a specific number of nodes you can define, and all nodes will respond at the same time. This improves reliability in case the service did not handle the client request successfully.

Endpoints [^](#)

The term "endpoints" refers to the nodes across which the traffic load balancing occurs.

There are currently three types of endpoints:

Azure endpoints: This type is for Azure services, and it supports the following ones:

1. Classic platform-as-a-service (PaaS) cloud services
2. Web Apps
3. Web app slots
4. An Azure public IP (attachable to Azure VMs or Azure Load Balancers)

External endpoints: This type is for public IP addresses or services hosted on premises or on any other cloud platform.

Nested endpoints: This type is for sophisticated scenarios where you have a large environment and want to use different types of routing methods.

CHAPTER 3

SYSTEM ANALYSIS

3.1 SYSTEM REQUIREMENTS

Azure Traffic Manager Profile project developed by procedural Azure Portal . This application is based on web application and develop with procedural Microsoft Azure Portal This application provides the users to manage Traffic Manger Profile by DNS Routing . This system provides best Azure Traffic Manager Profile in Microsoft Azure Cloud Based features.

FEATURES

- **Increase application availability**
- **Improve application performance**
- **Perform service maintenance without downtime**
- **Combine hybrid applications**
- **Distribute traffic for complex deployments**
- **Hands-on Of Traffic Manager Profile**

3.2 BRIEF OVERVIEW OF THTECHNOLOGY

Microsoft Azure, often referred to as **Azure** is a **cloud computing** service operated by **Microsoft** for application management via Microsoft-managed **data centers**. It provides **software as a service (SaaS)**, **platform as a service (PaaS)** and **infrastructure as a service (IaaS)** and supports many different **programming languages**, tools, and frameworks, including both Microsoft-specific and third-party software and systems.

Azure, announced at Microsoft's Professional Developers Conference (PDC) in October 2008, went by the internal project codename "Project Red Dog", and formally released in February 2010, as **Windows Azure** before being renamed to Microsoft Azure on March 25, 2014.

Microsoft Azure



Developer(s)	Microsoft
Initial release	October 27, 2008; 13 years ago ^[1]
Operating system	Linux, Microsoft Windows, iOS, Android
License	Closed source for platform, Open source for client SDKs
Website	azure.microsoft.com 

FIG 3.0 MICROSOFT AZURE

3.3 SOFTWARE REQUIREMENT

1. MICROSOFT AZURE

3.4 INSTALLATION SETUP

- 1st Step : Login to Microsoft Azure**
- 2nd Step : Create App Service Resource Group**
- 3rd Step : Configure App Service**
- 4th Step : Click On Authentication**
- 5th Step : Add Identity as Facebook**
- 6th Step : Login using Developer.com in Facebook**
- 7th Step : Create Secrete Value & App Id**
- 8th Step : Copy the Id & Password**
- 9th Step : Come back to Azure Portal**
- 10th Step : Enter Client Id & Password**
- 11th Step : Click on go Page will be Displayed**

CHAPTER 4

DESIGN

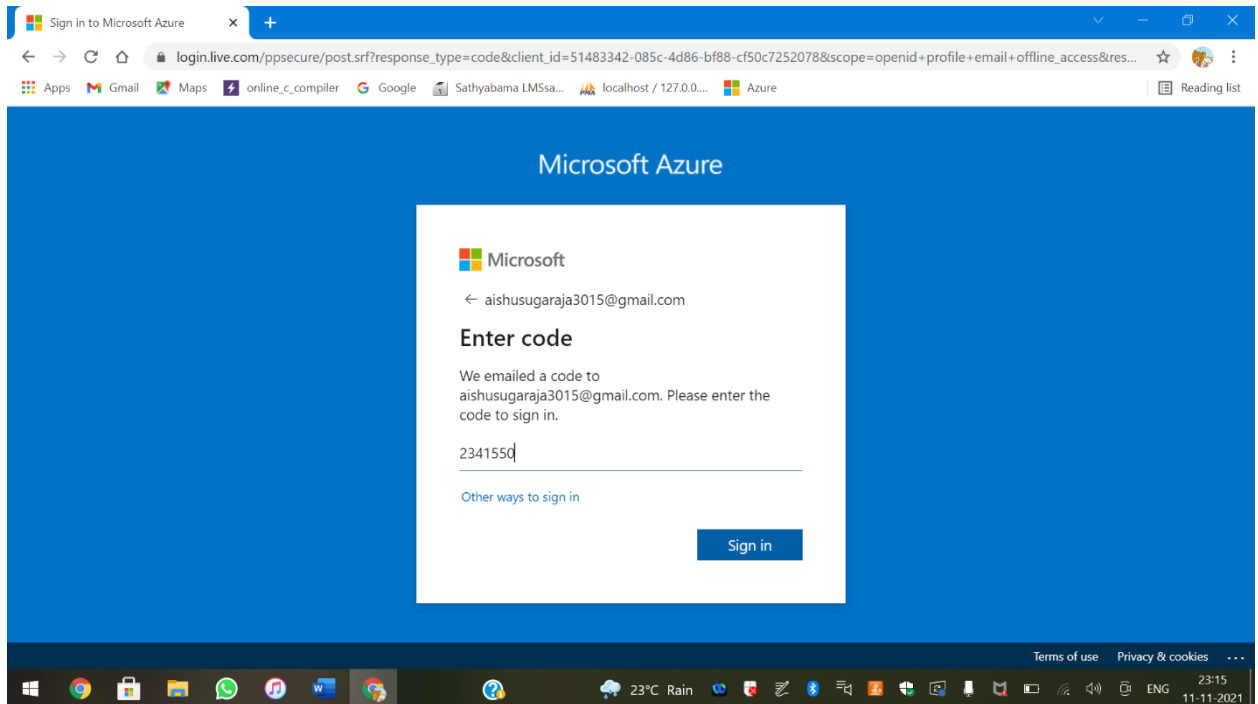


FIG 4.1 LOGIN PAGE

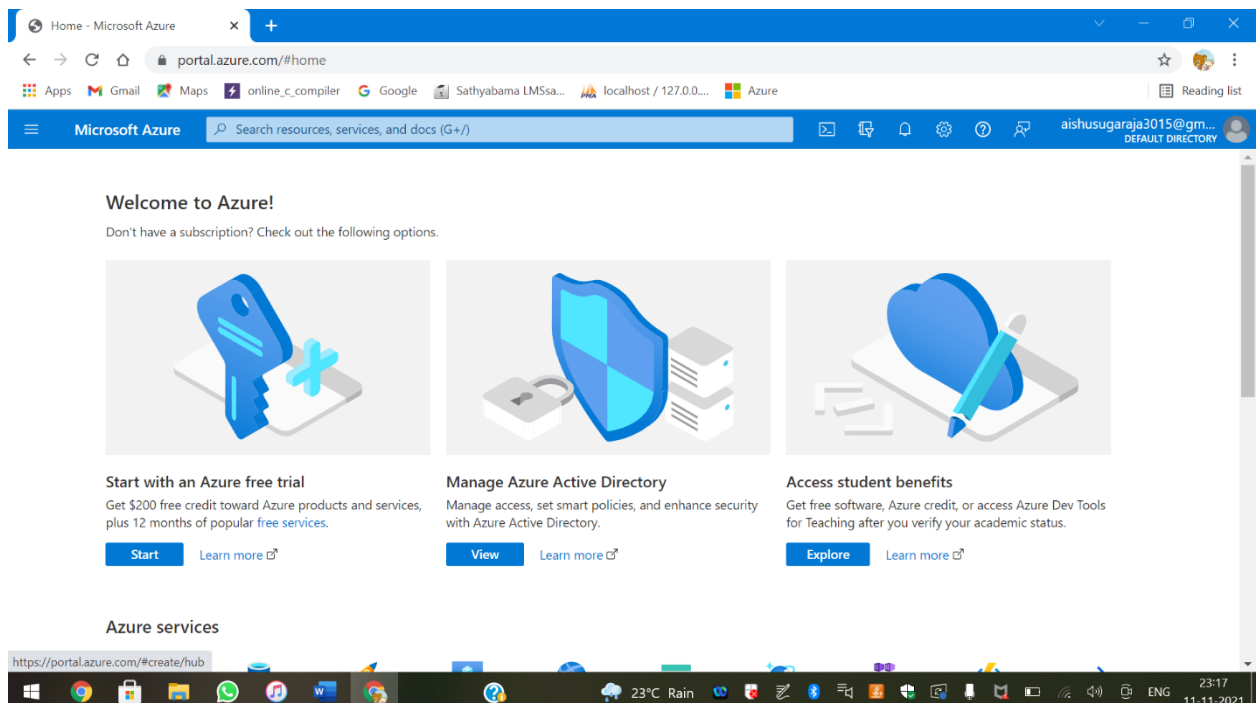


FIG 4.2 DEFAULT DIRECTORY PAGE

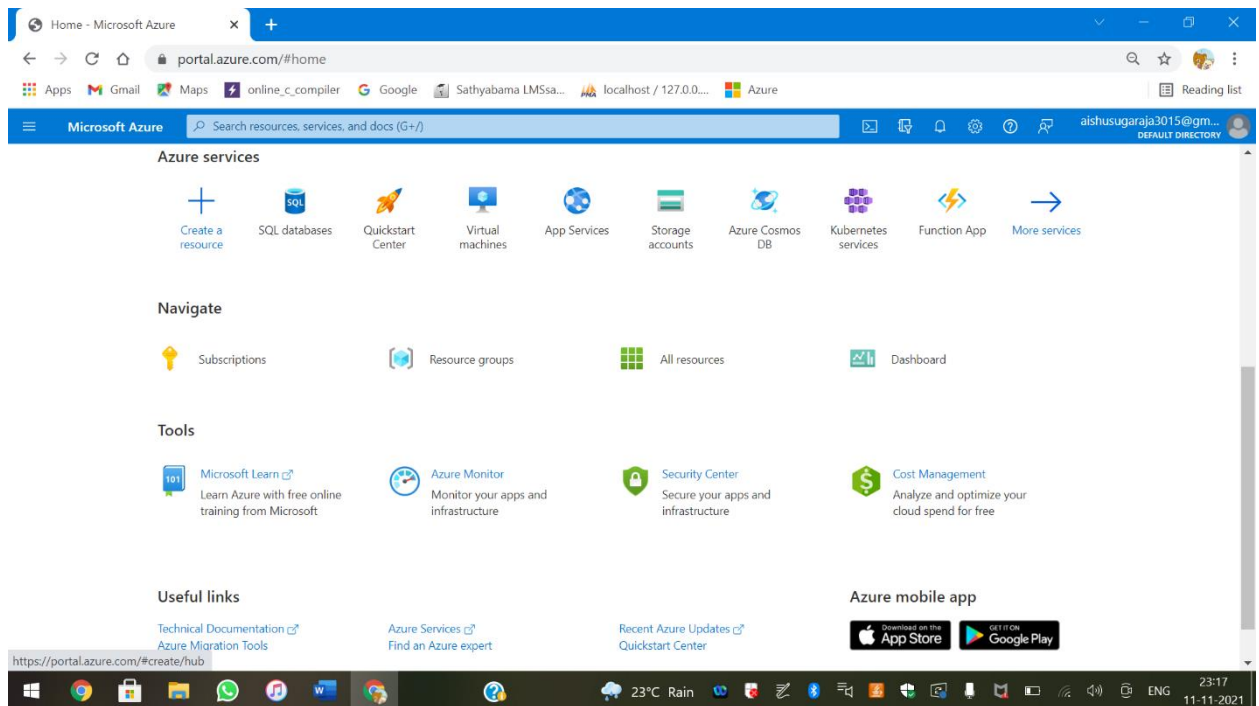


FIG 4.3 DEFAULT DIRECTORY SERVICE PAGE

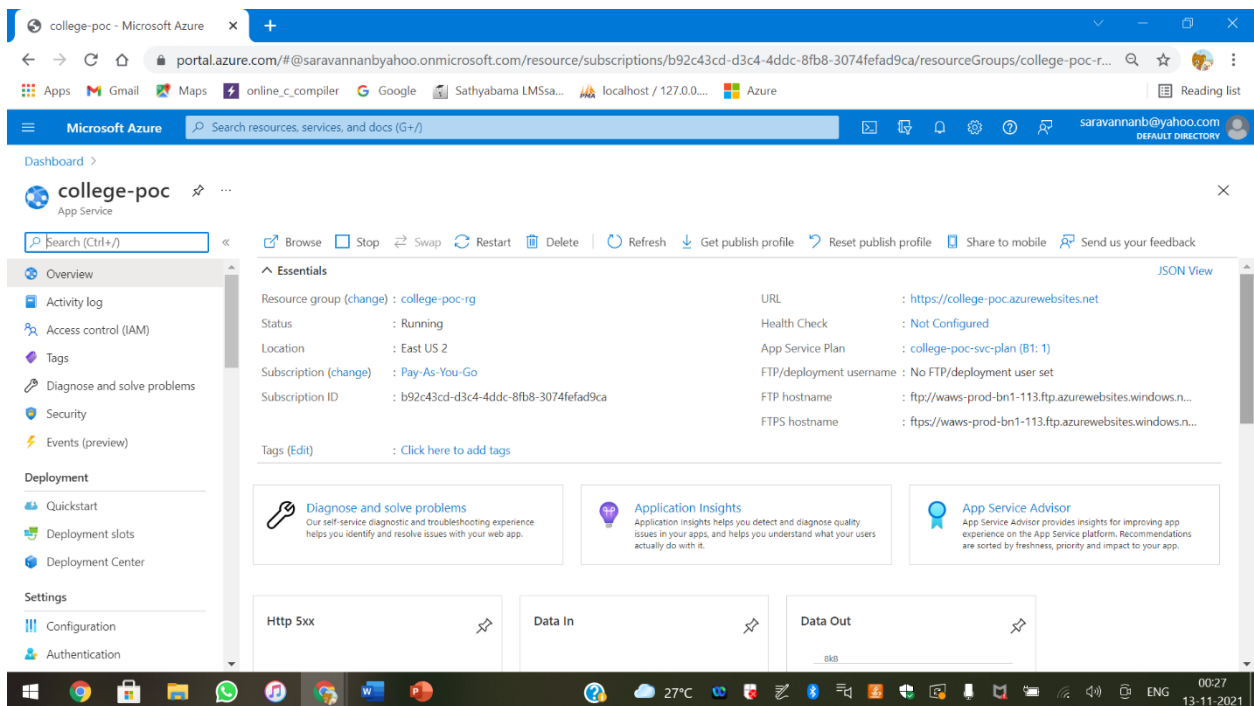


FIG 4.4 URL PAGE

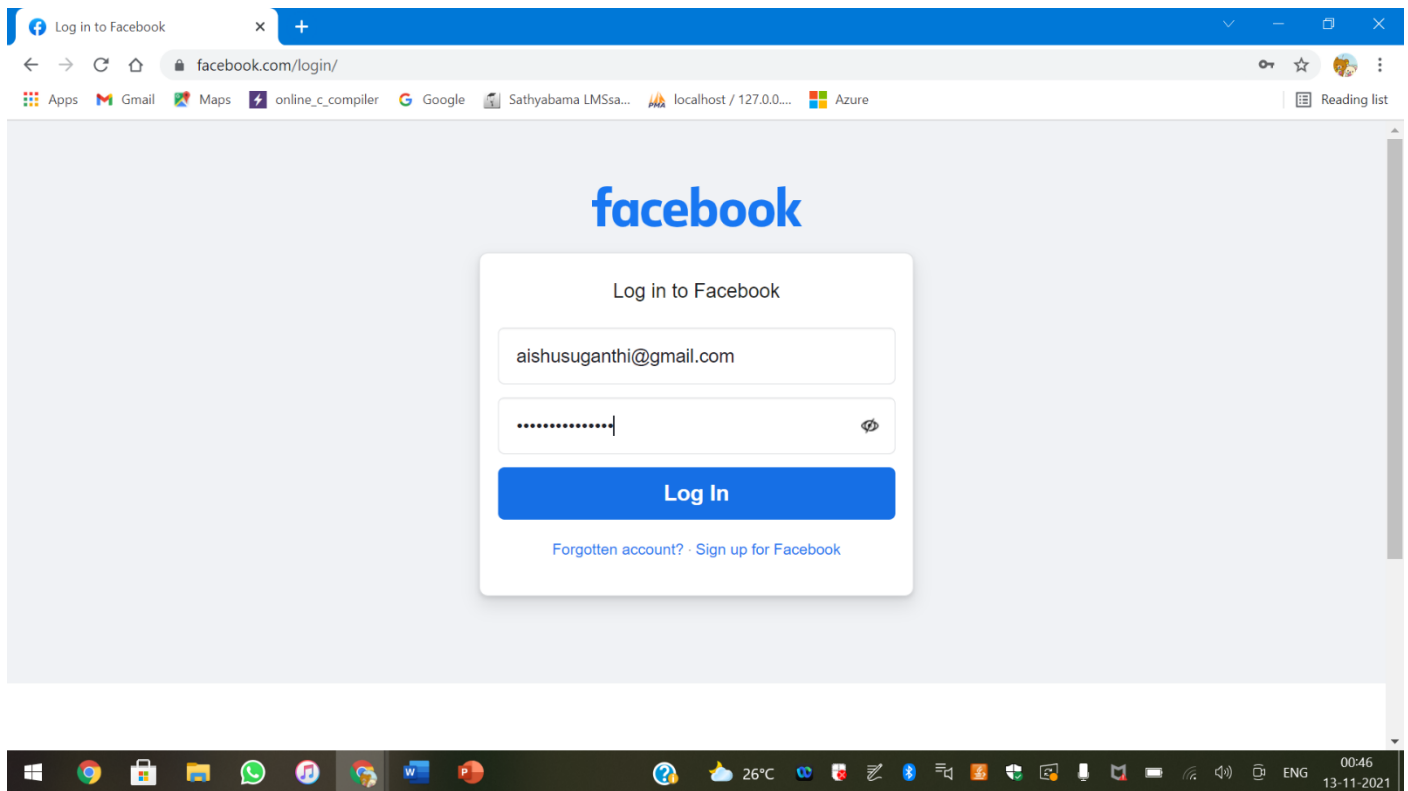


FIG 4.5 IDENTITY PROVIDER LOGIN PAGE

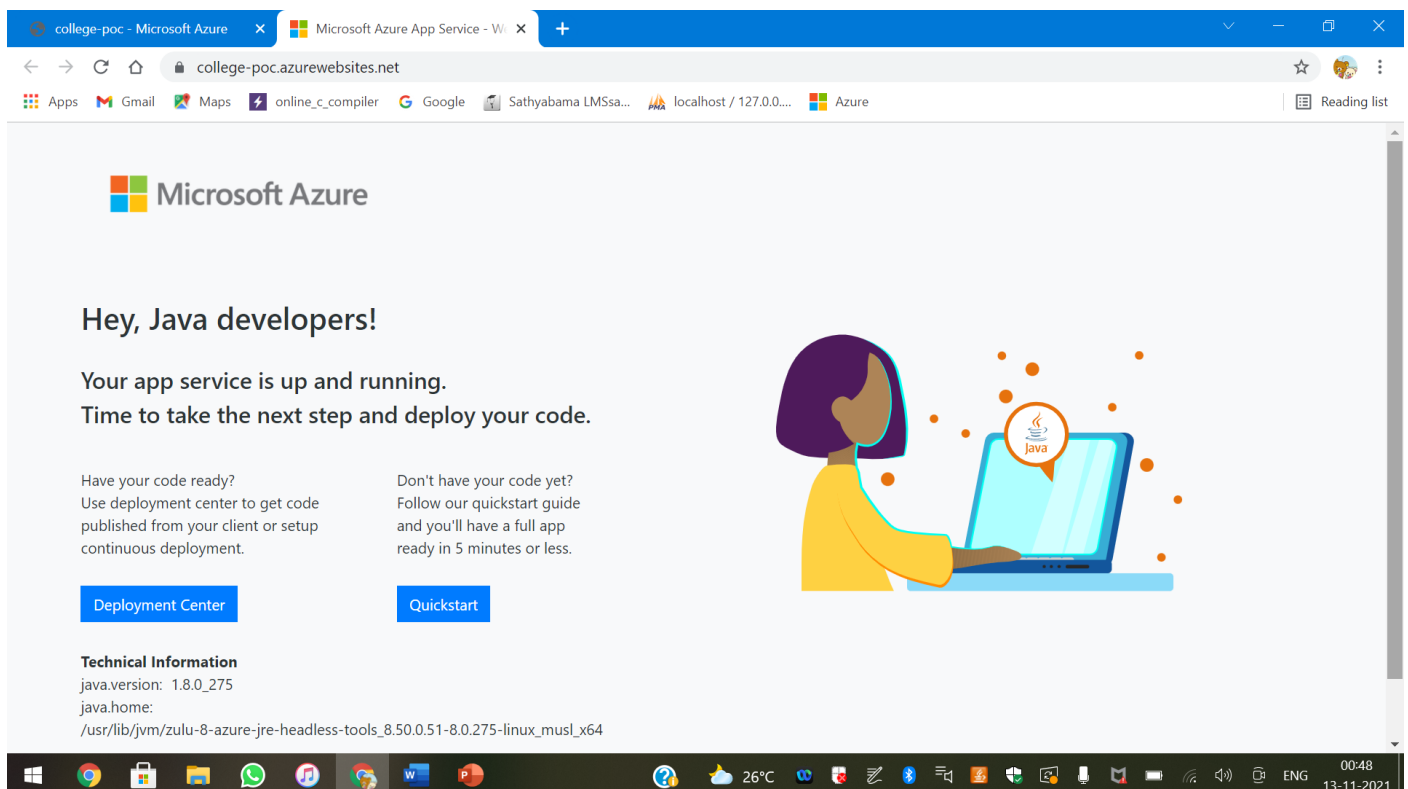


FIG 4.6 OUTPUT PAGE

CHAPTER 5

CONFIGURATION

The screenshot shows the Microsoft Azure portal interface for configuring an App Service named 'college-poc'. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Security, Events (preview), Deployment (Quickstart, Deployment slots, Deployment Center), and Settings (Configuration, Authentication). The main content area is titled 'college-poc | Configuration' and includes tabs for 'Application settings', 'General settings', and 'Path mappings'. The 'Application settings' tab is active, showing a list of application settings. Below the settings list, there is a section for 'Connection strings'.

Name	Value	Source	Deployment slot setting	Delete
FACEBOOK_PROVIDER_AUTHENTICATION_SE	Hidden value. Click to show value	App Service Config	✓	🗑️
GOOGLE_PROVIDER_AUTHENTICATION_SECF	Hidden value. Click to show value	App Service Config	✓	🗑️
MICROSOFT_PROVIDER_AUTHENTICATION_S	Hidden value. Click to show value	App Service Config	✓	🗑️

- Run Time Environment -**TOMCAT**
- Basic Developer As -**Java 8**

CHAPTER 6

CONCLUSION

The Azure traffic manager is an external DNS that is used to distribute user traffic, its routing methods help to distribute traffic in an effective way that determines which endpoint is returned within the DNS response. The practical Hands-on help us to understand concepts in more detail. Azure Traffic Manager is a great service that allows you to distribute traffic to your endpoints with different routing methods using the Azure infrastructure that covers many areas across the planet.

REFERENCE:

- Microsoft Azure Solution Architect AZ-303/AZ-304: Everything You Need To Know
- AZ-304 Microsoft Azure Architect Design: Step By Step Activity Guides (Hands-On Labs)
- AZ-303 Microsoft Azure Architect Technologies Step By Step Activity Guides (Hands-On Labs)
- Microsoft Certified: Azure Solutions Architect Expert
- Official Microsoft details can be found here for the AZ-303
- Exam AZ-305: Azure Solutions Architect Expert Certification
- AZURE POWER SHELL
- AZURE CLI