SYST8200 – Group 2 – Lab Configuration

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Description

The objective of this document is to provide the lab configuration details of the proposed project.

Requirements

Access to VMware's vSphere and Microsoft Azure cloud are the requirements for making use of the virtual machines and the services of the cloud.

Plan

The plan of the implementation is creation of a Virtual Network (Vnet), and two virtual machines in the Vnet. The Vnet will have two subnets for isolating a public and private network. Among the two virtual machines, we install an application server in the virtual machine, which has the public subnet, and a database server in the virtual machine, which has the private subnet. The application server will be installed in the virtual machine containing the public subnet, whereas the database server will be installed in the virtual machine containing the private subnet. The application will be exposed to the Internet, but the database server will not be exposed for public access. A web application is designed and developed for Infinity Premium Sports using Odoo ERP system.

Odoo URL and Credentials

Application: http:// http://10.173.17.60:8069

Email: oshahmadar@conestogac.on.ca

Password: Secret55

Observations and Screenshots

1. We created a resource group called proj-rg.

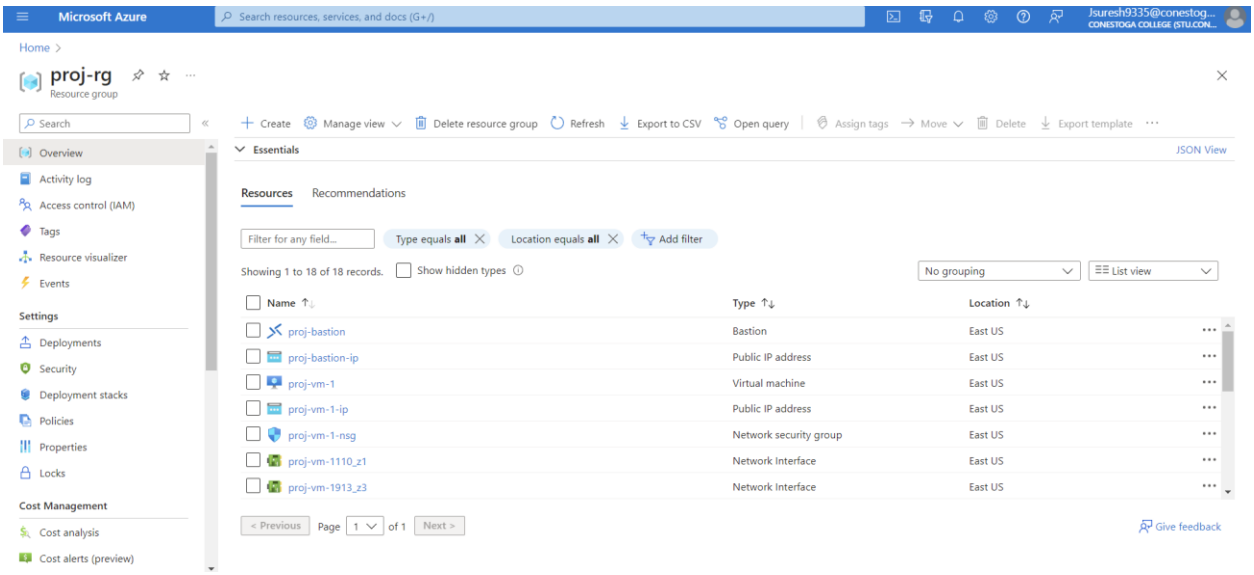

Figure 1: Resource Group

2. Under the resource group, we created a virtual network called proj-vnet. While creating the Vnet, under Networking section, we enable Bastion for SSH into the virtual machine containing the private subnet.

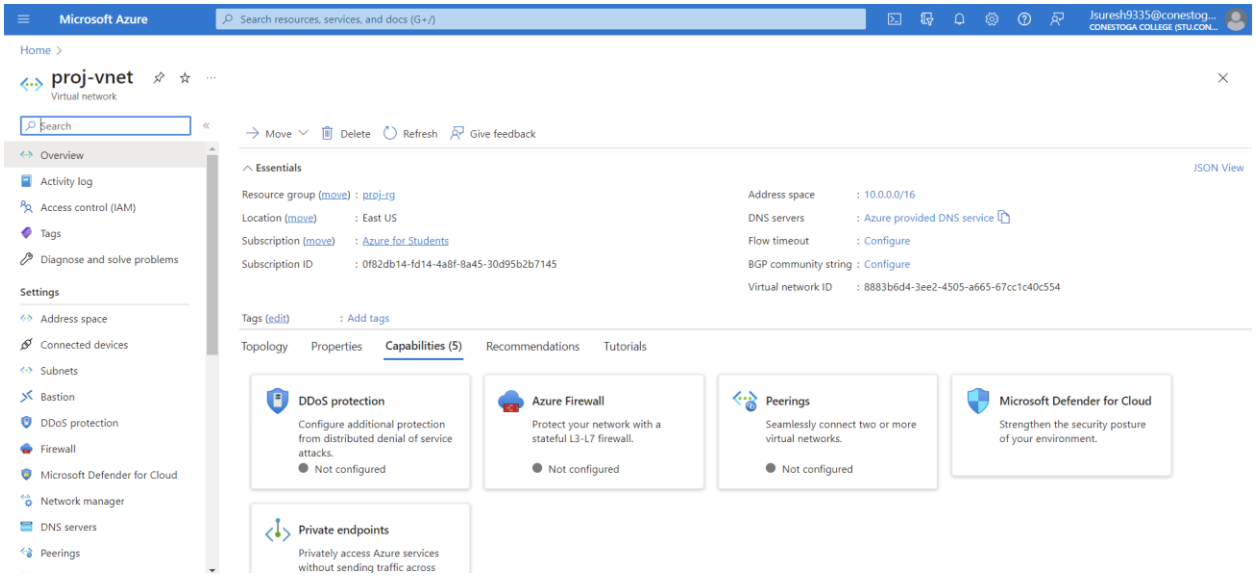

Figure 2: Virtual Network

3. We created two virtual machines “proj-vm-1” and “proj-vm-2” under public subnet and private subnet respectively.

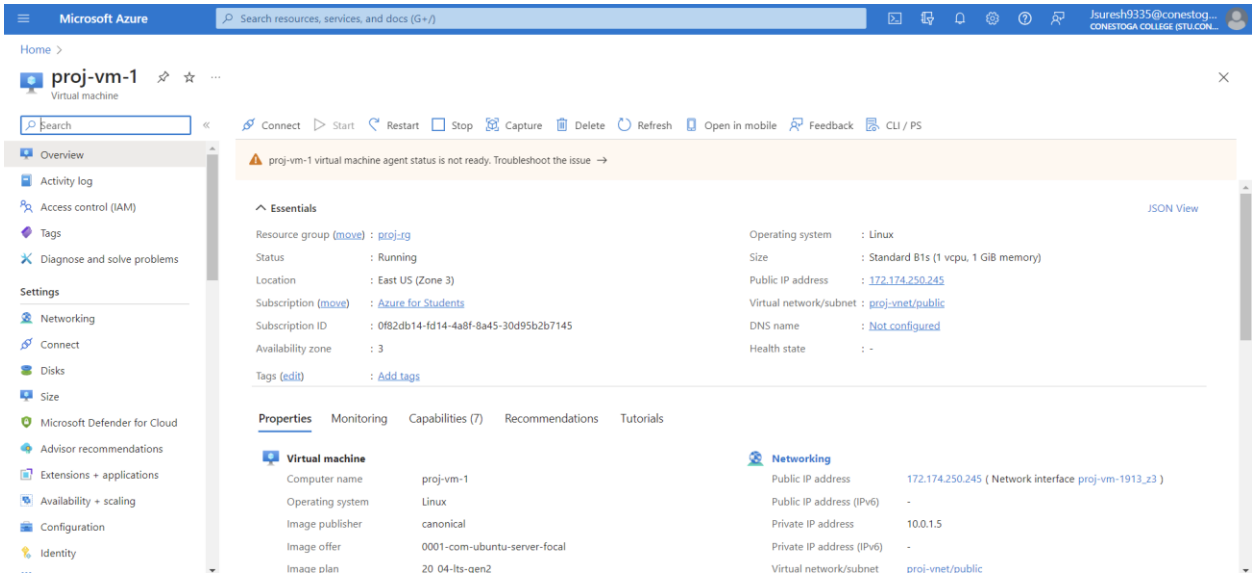

Figure 3: VM-1 with public subnet

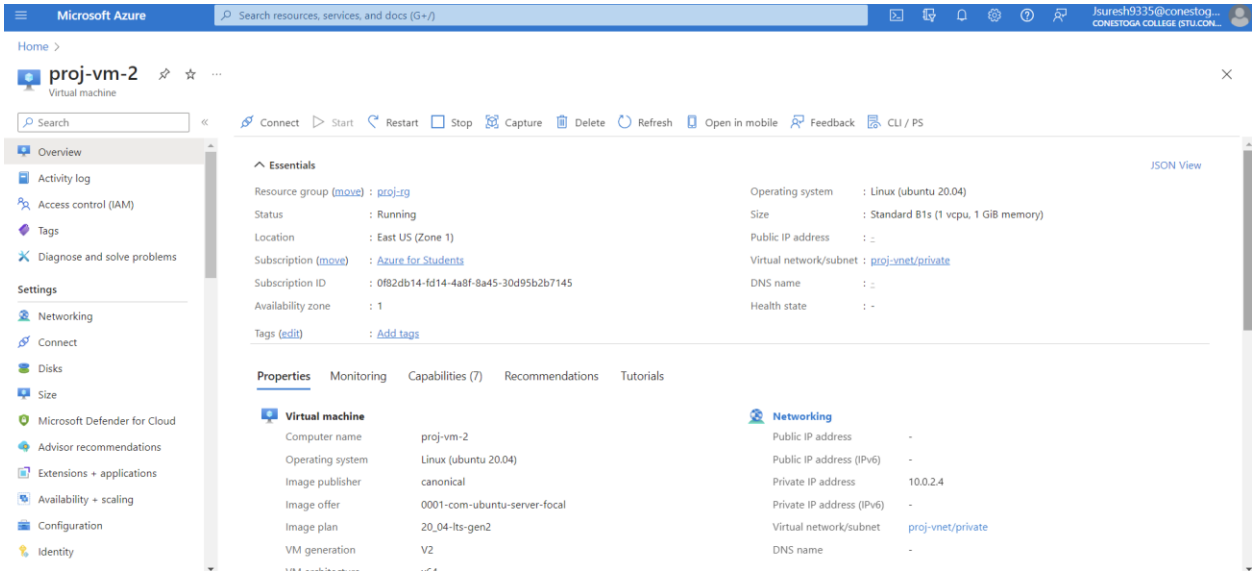

Figure 4: VM-2 with private subnet

4. There was a challenge that was faced after pulling a docker image and installing Odoo. Though it worked smoothly for some time, the website stopped abruptly. Hence, we deployed a Rocky Linux virtual machine on VMware's vSphere and installed docker followed by Odoo.

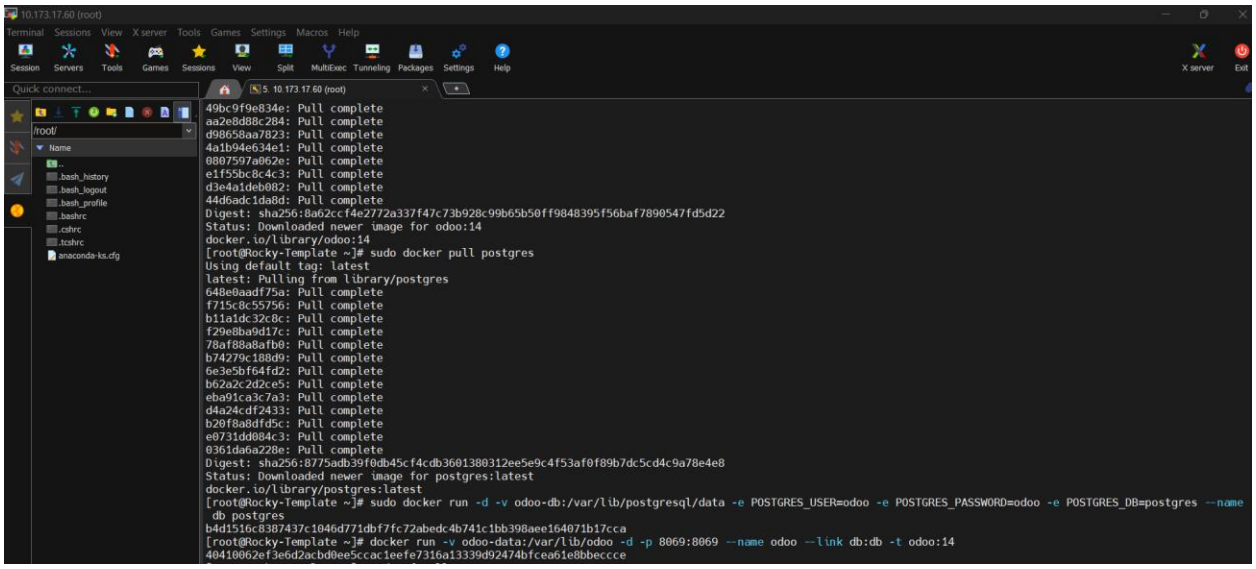

Figure 5: Odoo installation

5. A Postgres database server was installed in the proj-vm-2. The virtual machine will be accessed through Azure Bastion since it has a private subnet.

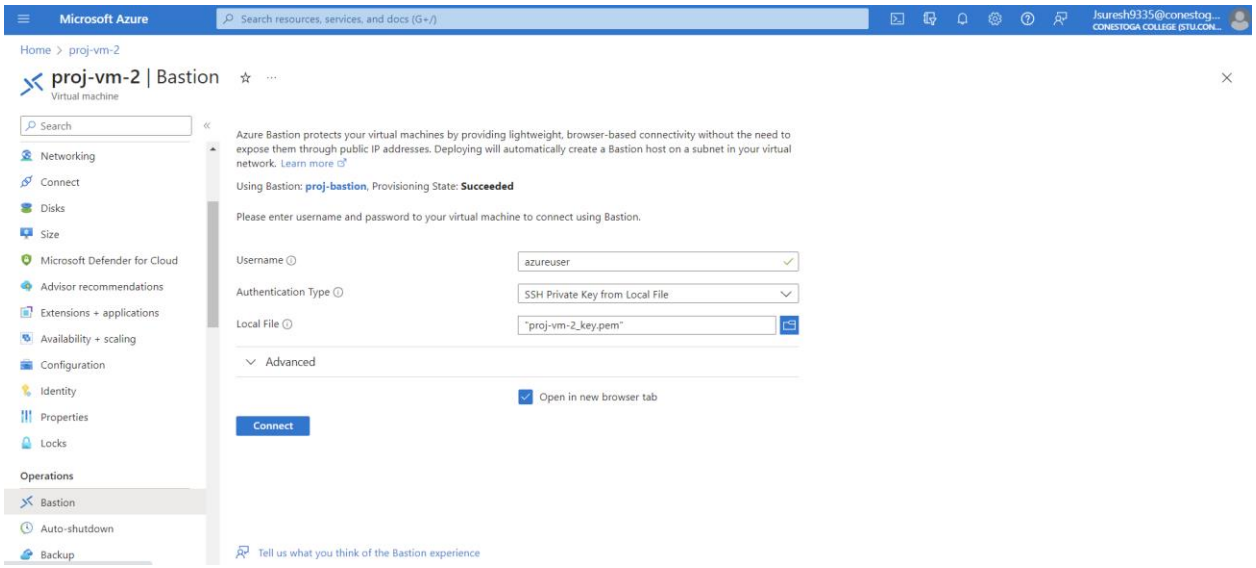

Figure 6: Azure Bastion

6. All the resources are created under East-US region. We can have multiple availability zones under the same region for handling the load when there is a huge traffic. If the entire region collapses, we can make use of West-US region, which has its availability zones.
7. For Monitoring the created virtual machines, we use Azure Monitoring. We can examine metrics such as Available memory bytes, disk read and write, and inbound and outbound flows. We have enabled Azure Monitoring for proj-vm-1.

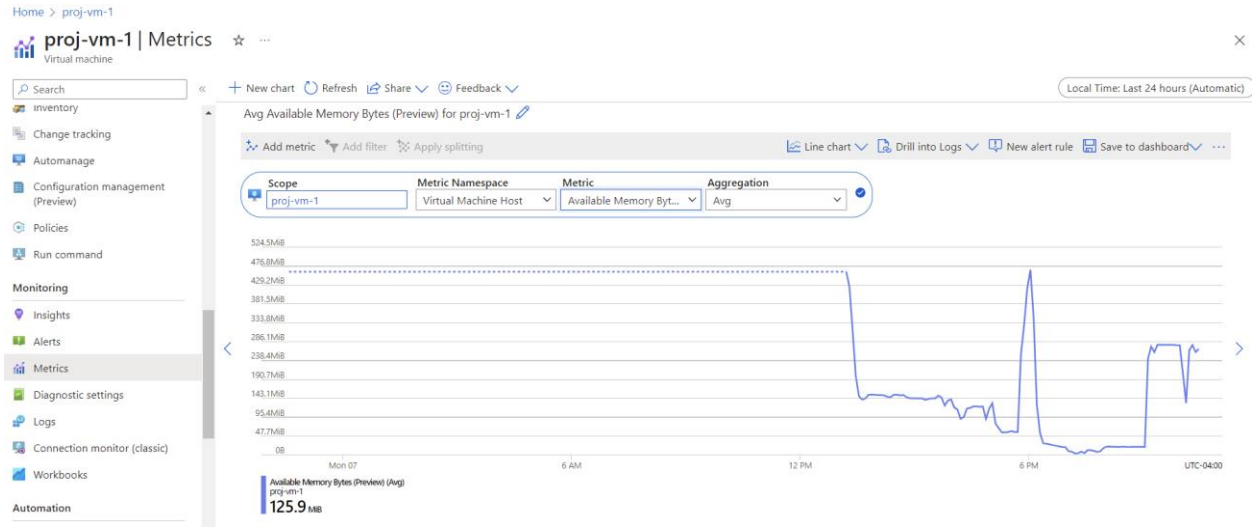

Figure 7: Available Memory Bytes

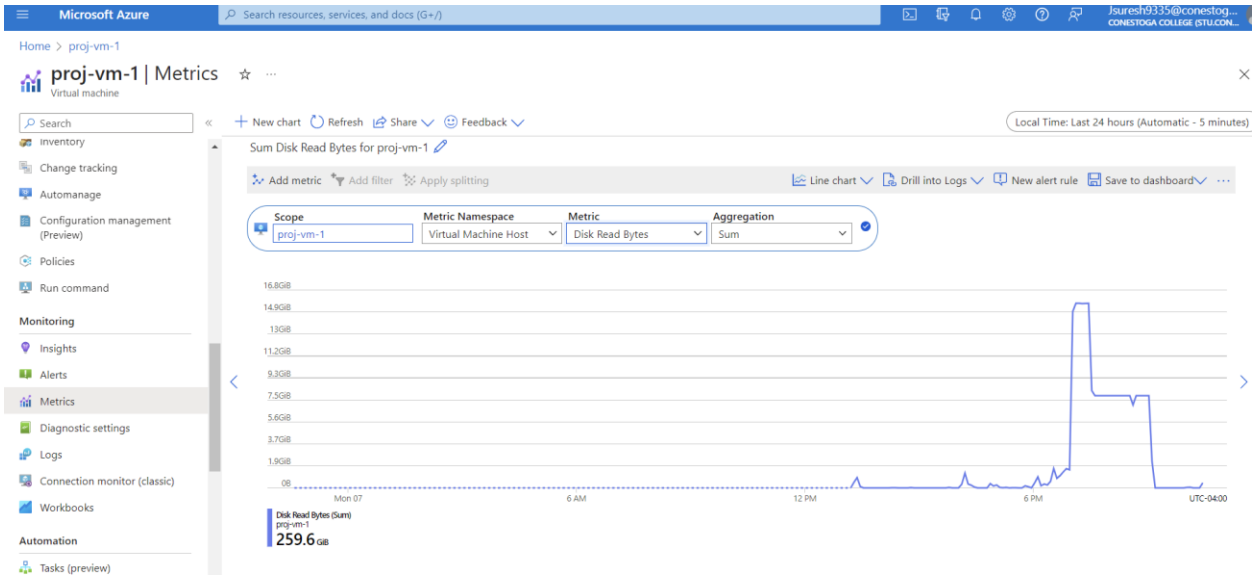

Figure 8: Disk Read Bytes

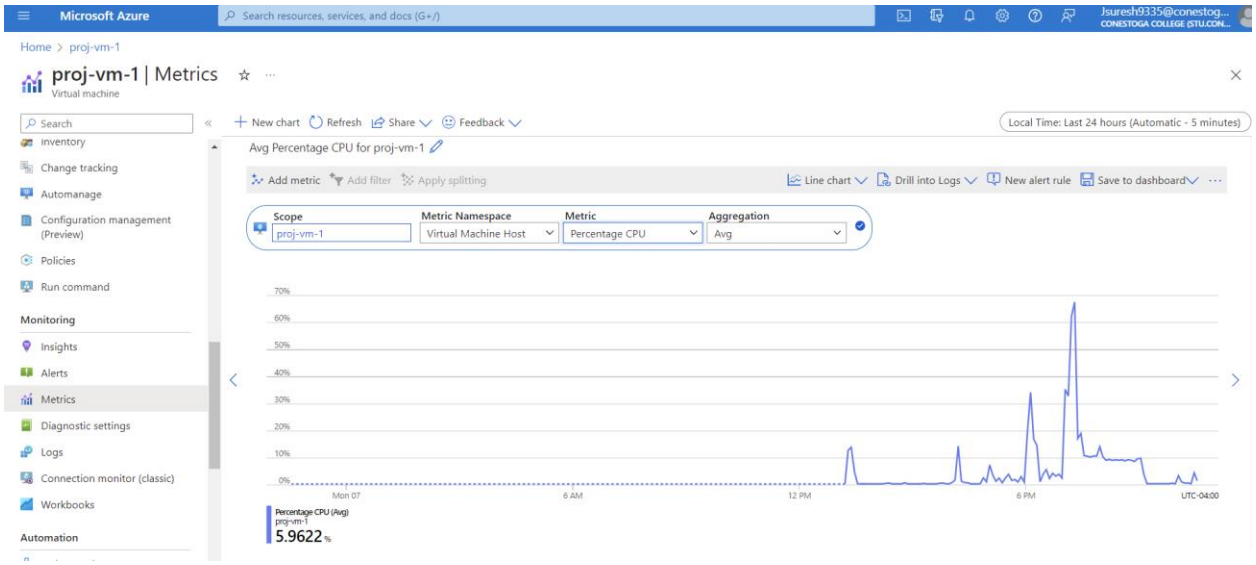

Figure 9: CPU Percentage

8. The website of Infinity Premium Sports company looks as per the below screenshots.

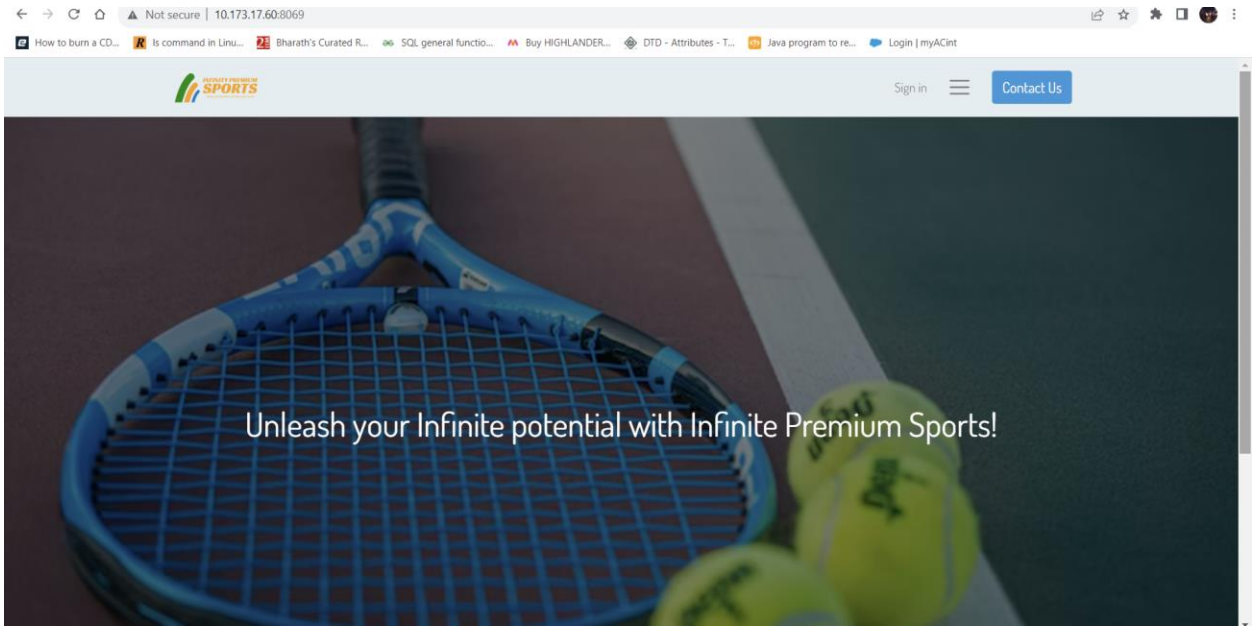

Figure 10: Home Page

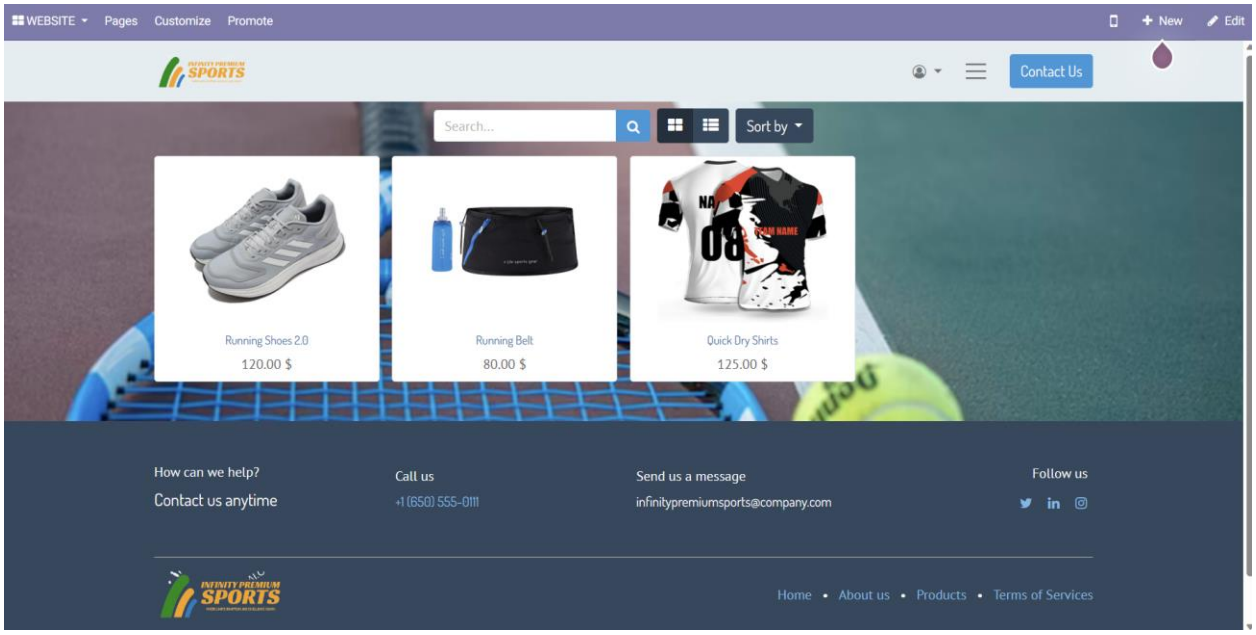

Figure 11: Products Section

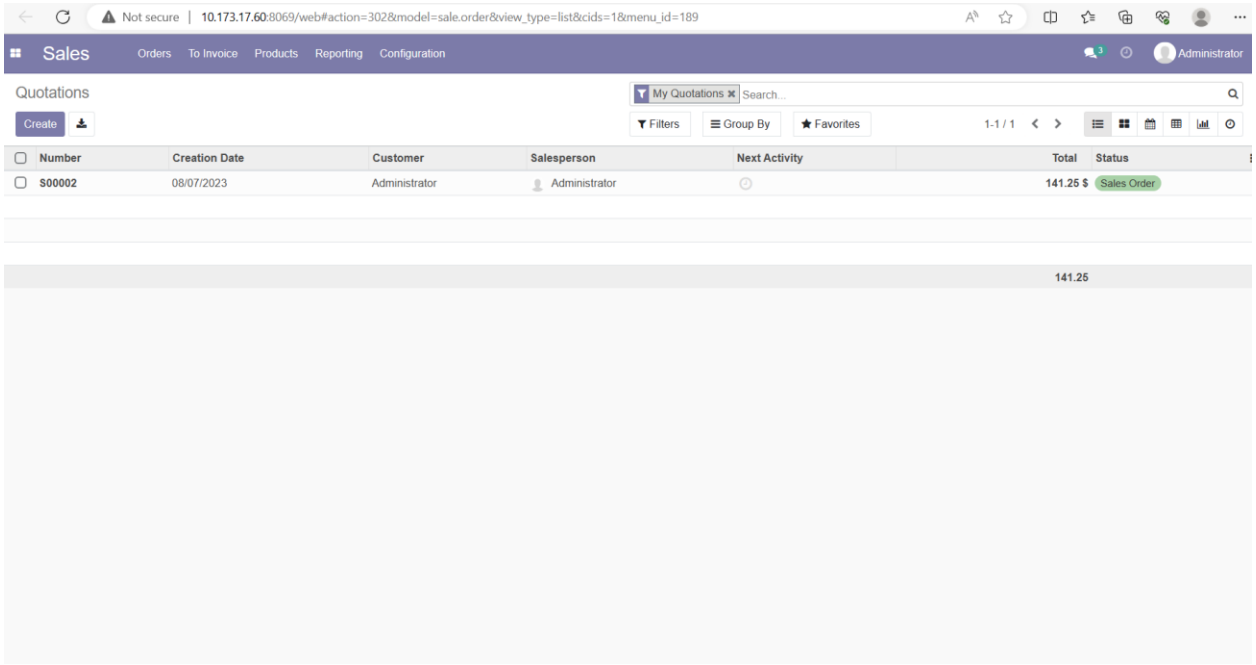

Figure 12: Sales Quotations

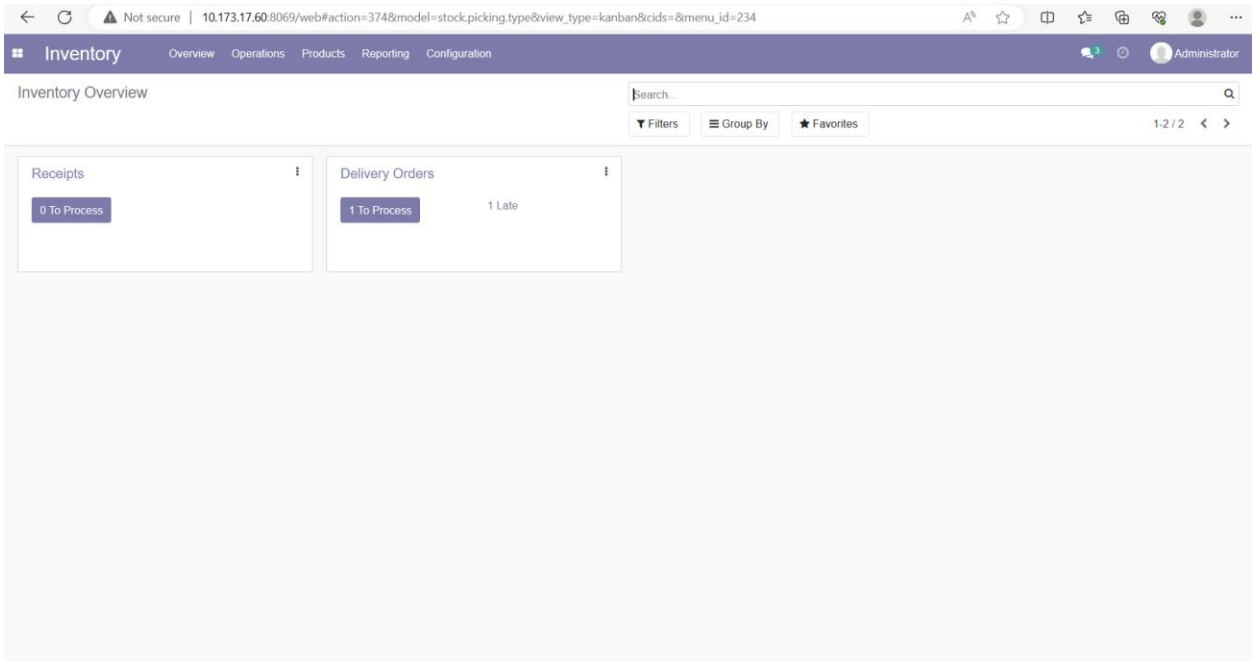

Figure 13: Inventory

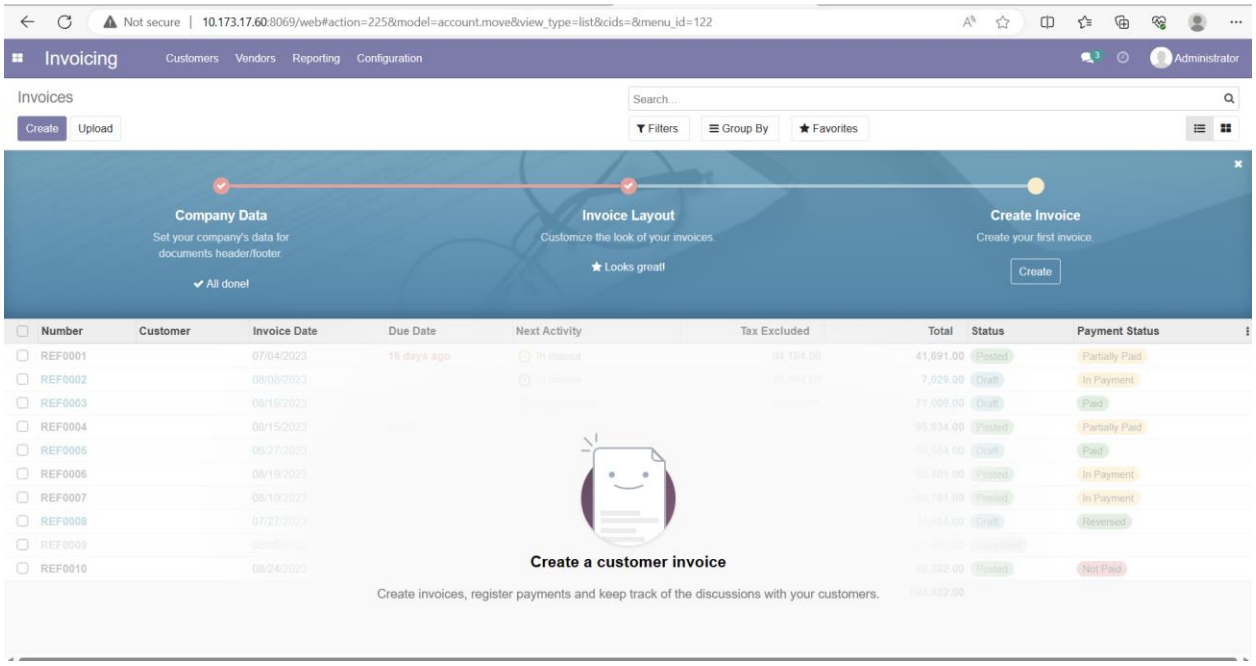

Figure 14: Invoices

Conclusion

Float Tech company recommends Azure as the cloud solution provider for Infinity Sports' needs.

After Migrating to the cloud, the company benefitted and improved its business by offering services that were above and beyond the expectations of its customers. It would also provide more opportunities for the company to expand its research and innovation.

References

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