Code & Title	DNCT604 Cloud Infrastructure and Administration
Assignment Title	2 – Portfolio
Assessment Type	Practical
Level	7
Term & Cohort	DANCT7121C
Tutor	Vaibhav Fanibhare

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Introduction

Part-A

Acknowledging Biculturalism

Task 1 - Principles of Tikanga, Te Ao Māori, and Mātauranga Māori.

Tikanga- Mori customary traditions or behaviours are referred to as Tikanga. The word Tikanga comes from the Maori word tika, which means "right" or "correct," therefore acting following Tikanga means acting in a culturally proper or appropriate manner. Most people want not to offend others, thus this list was compiled to raise understanding of Mori culture and to help people avoid uncertainty or unpleasant situations when they are unsure what to do. Tikanga Mori is "straight, direct, bound in with moral concepts implications of justice and fairness, including notions of just and right,"

Tikanga is now included in District Health Boards' best practice policies, ensuring that the services they deliver are responsive to Mori needs and interests. To appreciate Tikanga, however, a broader spiritual perspective is essential. Te Ao Mori, or Mori World, is where Tikanga comes from. Te Ao Mori is inextricably linked to cosmology and creation myths. The relationships, or whakapapa, between humans, the environment, and the spiritual realm are established by cosmology. A mechanism comparable to that of a social constitution supports the interaction between these parts.

Te ao Mori (Mori worldview) recognises the connectivity and interdependence of all living and non-living things. These principles are fundamentals of Te ao Maori.

Manaakitanga refers to how we treat one other as persons in whatever we do. The word manaaki comes from the words mana, which means authority or prestige, and aki, which means to promote or induce. As a result, manaaki is defined as the act of elevating and supporting individuals who are close to you. Manaaki is another trait of Mui, who, while raising his mana, also made sure that his people benefited, such as by hiding the capacity to produce fire in various plants. Eg. Taking part in pretend play including family roles, such as parent-child – pet.

Kaitiakitanga refers to how we are currently protecting our natural environment for future generations.

Whanaungatanga is a way of connecting for a common purpose and strength. Eg. We constantly attempt to donate to someone to assist them to meet a need. Many of the people that attend have mental health issues, and offering them the help they need is a vital part of our

marae's mission. They simply require someone to talk to. Another eg. you can be whanau in the space, and we need to admire how they treat their visitors.

Matauranga Mori translates to "Mori knowledge," and it is intimately associated with the pre-European contact period since it contains traditional conceptions of knowledge and understanding that Mori ancestors brought to Aotearoa/New Zealand. The Mori language's survival is a cultural and historical marker that connects us to this period and illustrates a continuity from pre-contact to the present. Matauranga's principles In its most basic form, Mori is about a Mori way of being and engaging in the world; it employs kawa (culture practises) and Tikanga (cultural principles) to critique, study, analyse, and understand the world. Mātauranga As the ancestors faced new settings and contexts including flora and animals, climate and geography, as well as the need to respond to new technology, languages, and civilizations they had not known or experienced before, Mori evolved in crucial and significant ways. Medicinal properties of fungi in NZ, Mori knowledge and usage of fungi as food and medicine, as well as a tattoo pigment and a fuel for starting fires

Task 2- Identify and analyse the three 3 domains.

1. **Data protection and data sovereignty-** Data sovereignty is a relatively new notion that refers to a range of measures used by different countries to manage data generated or passed through their national internet infrastructure. With the rise of cloud computing services and concerns about securing sensitive national data from foreign spying, data sovereignty has become a major problem around the world. Indigenous Data Sovereignty has also become a hot topic among indigenous peoples as a means of gaining sovereignty over their data resources. Indigenous Data Sovereignty considers data to be governed by the laws of the country from whence it is gathered. Mori Data Sovereignty recognises that Mori data should be governed by Moris and that Mori organisations should have access to Mori data to help them achieve their development goals. Mori data refers to information created by or about Mori and the settings with which we interact. Mori data encompasses, but is not limited to

   • Data from corporations and organisations;

   • Mori collective data used to characterise or compare Mori collectives;

   • Information on Te Ao Mori gleaned via study.

   Mori Data Sovereignty is based on Te Tiriti o Waitangi discourse and Mori research Ethics and cultural intellectual property are being used to inform current concerns. data usage

2. **Data as Taonga-** Since taonga differs according to the situation, instances that have historically been recognised or defined as taonga, such as airwaves and traditional fisheries, should be studied. For informants, the method by which data is derived has emerged as a key factor. Personal data is extremely sensitive and should be treated as a taonga. A tree was used to demonstrate how a single tree can provide firewood, a watercraft, and carvings. The way an object is used can influence how it is perceived, and "all data is potential taonga" when it comes to its utility, whether through technology or in terms of societal benefit. Levels of protection are linked to levels of sensitivity in data handling. One of the important themes that arose from participant interviews was the importance of sensitivity when dealing with data that contains personal or familial information. When it comes to data protection, "information acquired on individuals that identify the individuals, their whanau, or the circumstances that would enable them to be identified, absolutely needs to be protected.

3. **Data as Tikanga-** Tikanga is about how we use objects, such as plants, and how we prevent others from doing so. There are other levels to consider: how we use things locally for ourselves, as well as how companies might commercialise a plant on a much wider scale. A microorganism living on the kawakawa, for example, may have unique qualities that contribute to the plant's medicinal usefulness. We don't always have a word to differentiate that bacteria from the plant. Can the microorganism be a taonga, although it is always assumed the taonga qualities came from the leaf?

Task 3- Network design plan of Taonga.

Matauranga Mori is not protected under current intellectual property regulations. Various ways could be utilised or developed depending on the data's specialisation and the type of data.

Storage — establishing safe local storage for Mori-relevant information (iwi, hapu, etc.) that Mori can control.

Governance and Access – establishing Tikanga-based mechanisms for data access and use that are suitable.

kaitiaki - kaitiaki organisation to monitor vital data for Mori data of interest is referred to as kaitiaki.

Behavioural Change — advocating and encouraging individuals to use data and data-accessing products responsibly; developing labelling for items that can demonstrate that they have utilised ethically obtained or accessed data.

Legal protection - In circumstances where the law could protect data or matauranga, traditional legal mechanisms such as trade secrets, trademarks, copyright, and patents are used. Each one has its strategy, benefits, and risks. The simplest is a trade secret, in which you just keep the crucial knowledge behind lock and key. Others are more expensive. Patents particular,

are expensive and time-consuming to obtain. Prosecuting individuals who have violated your legal rights will be costly as well, thus both safeguarding and managing IP will necessitate cash. Furthermore, patent protection typically lasts for 20 years, after which time the knowledge becomes freely available to anybody.

Part-B

Phase -1 Configuring autoscaling feature on the cloud.

Task 1- Types of Scaling

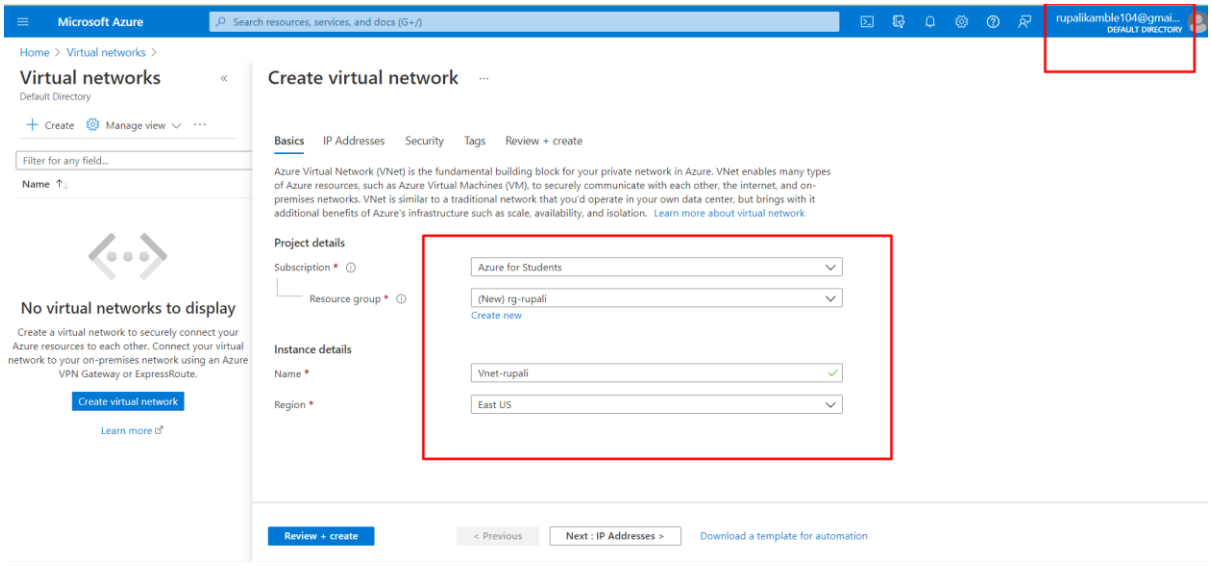
The process of dynamically assigning resources to fit performance requirements is known as auto-scaling. An application may require additional resources as the volume of work increases to maintain acceptable performance levels and meet service-level agreements (SLAs). When demand drops and the extra resources are no longer required, they might be reallocated to save money.

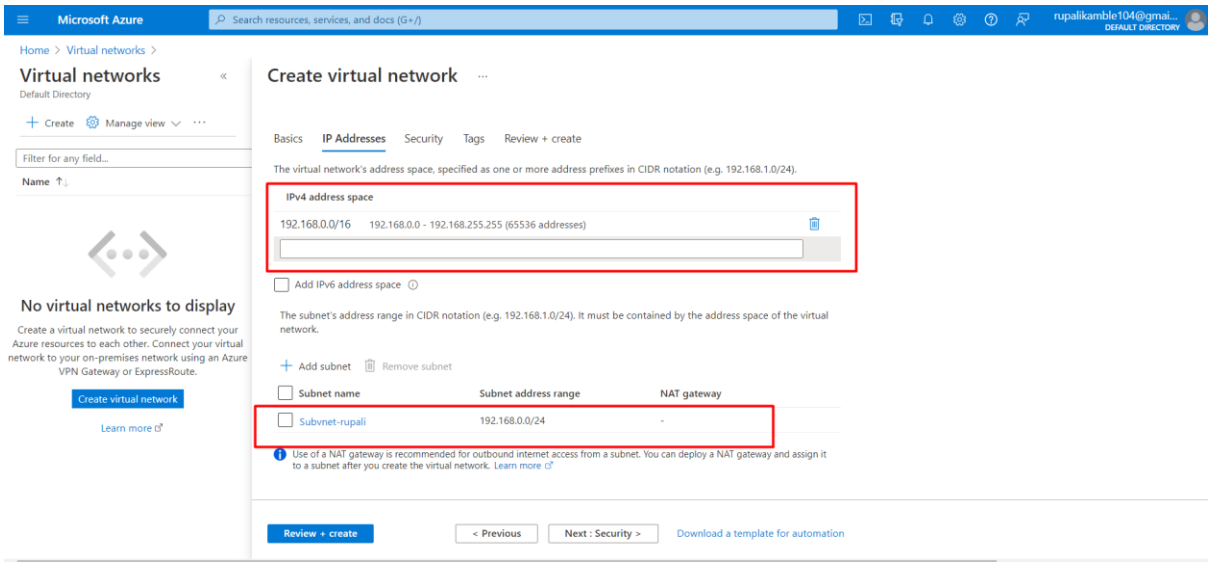
There are two primary techniques to grow an application:

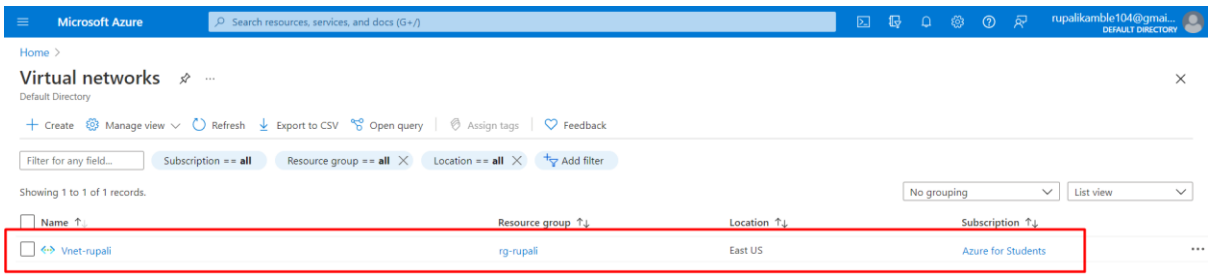
Vertical scaling, often known as scaling up and down, refers to modifying a resource's capacity. You could, for example, migrate an application to a larger virtual machine. Vertical scaling frequently necessitates rendering the system unavailable while it is redeployed. As a result, automating vertical scaling is less prevalent.

Horizontal scaling, also known as scaling out and in, refers to the addition or removal of resource instances. As fresh resources are deployed, the application continues to execute without interruption. The solution is deployed on these additional resources after the provisioning process is completed. If demand falls, the extra resources can be safely shut down and reallocated.

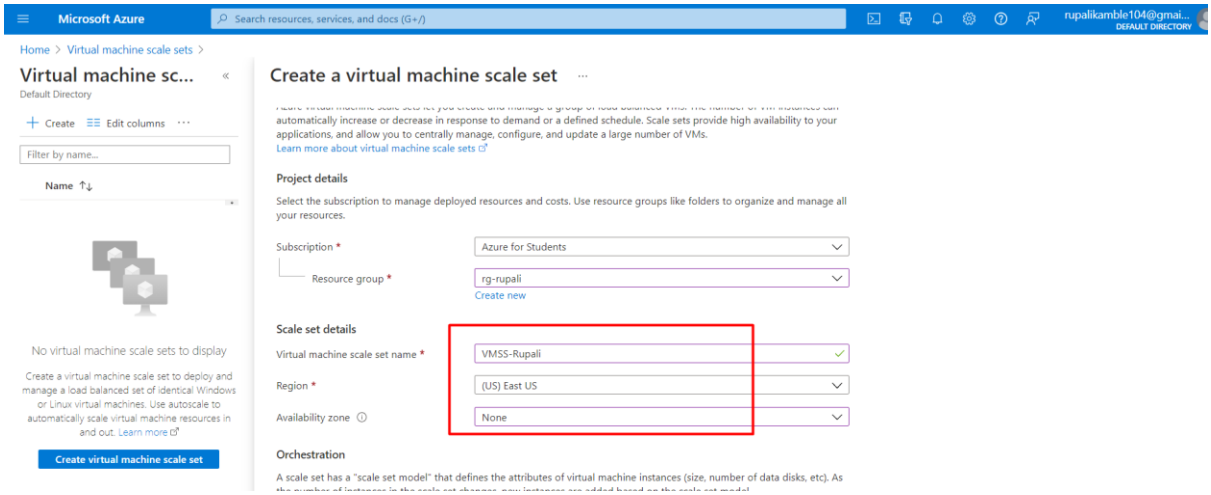
Task 2- Creating a Virtual Network

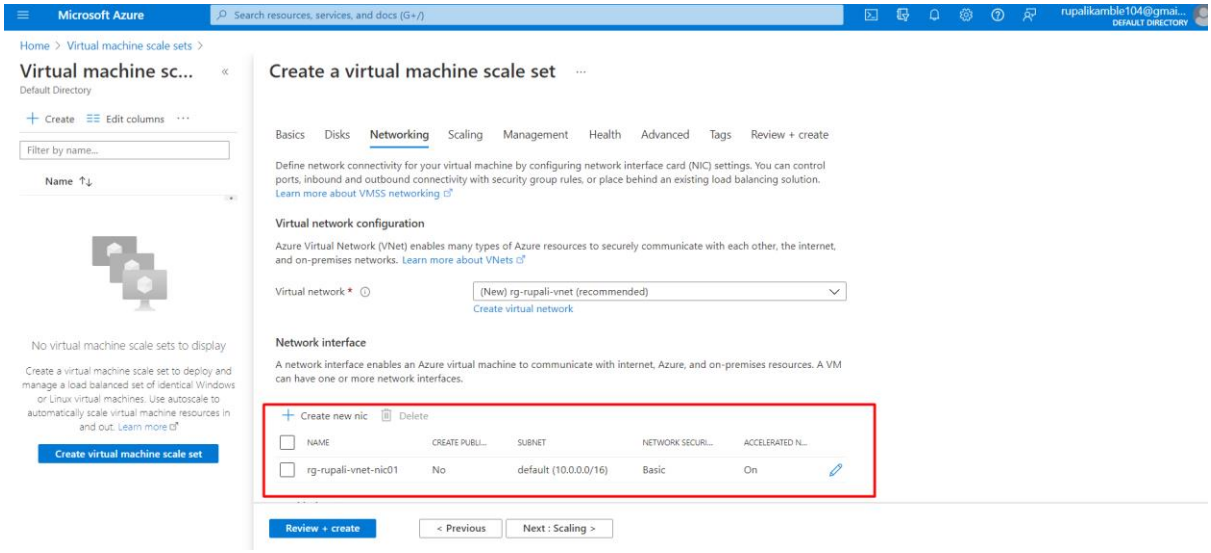




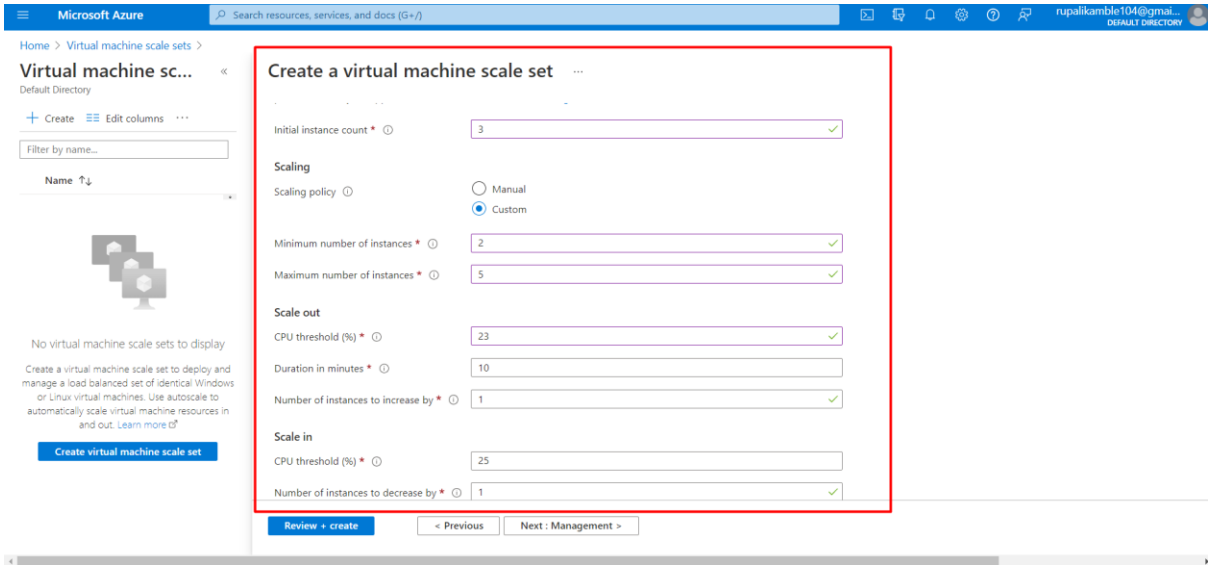


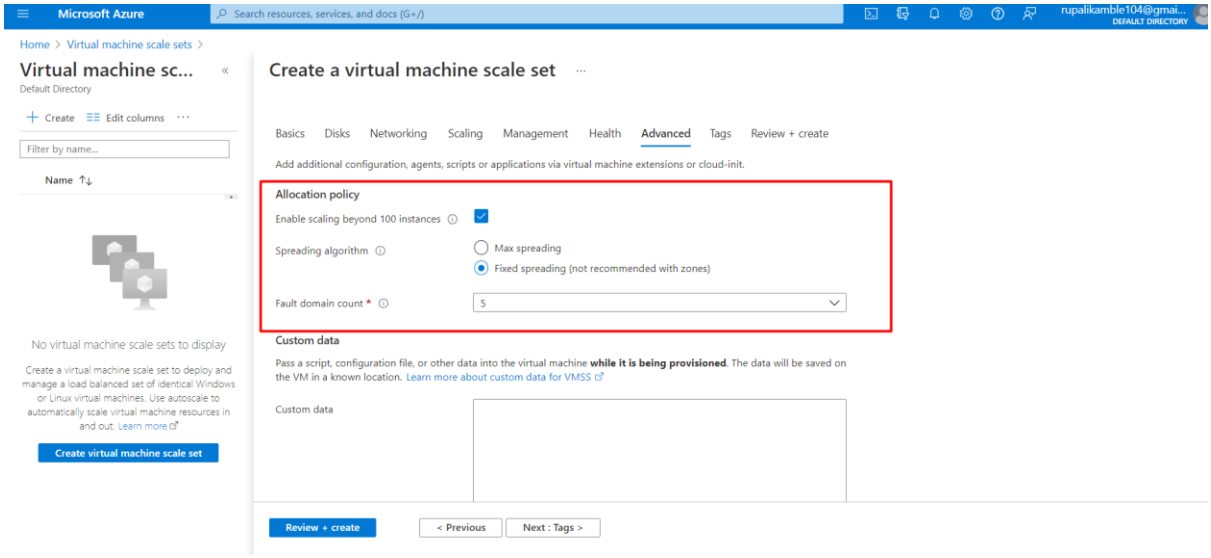
Task 3- Creating a Virtual Machine Scale Set



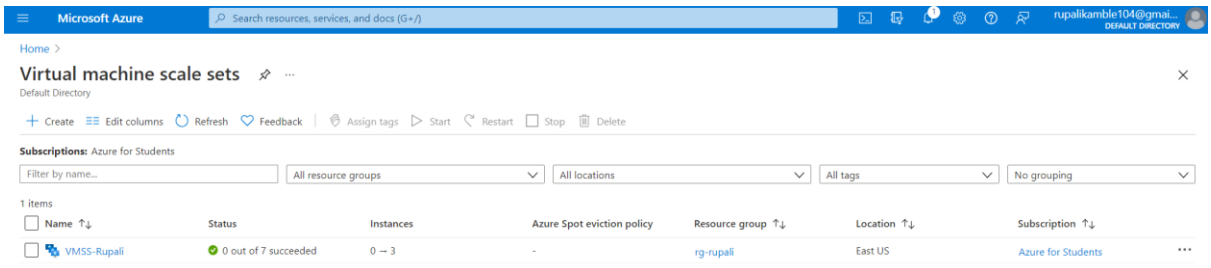


Task 4- Scaling details.

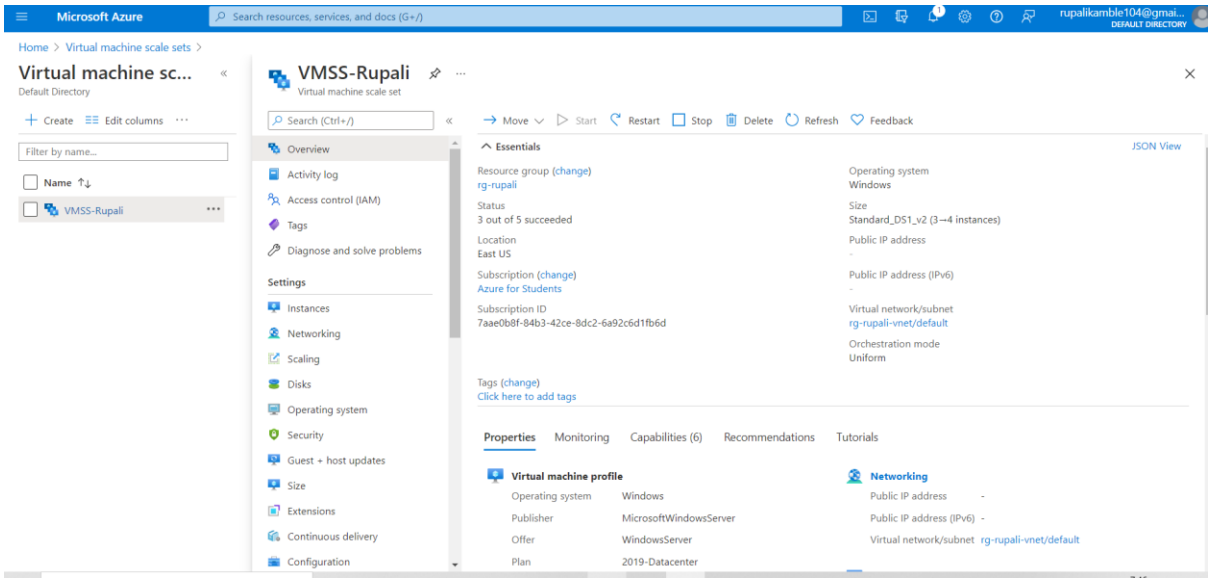




Fault domain till 5 is only available

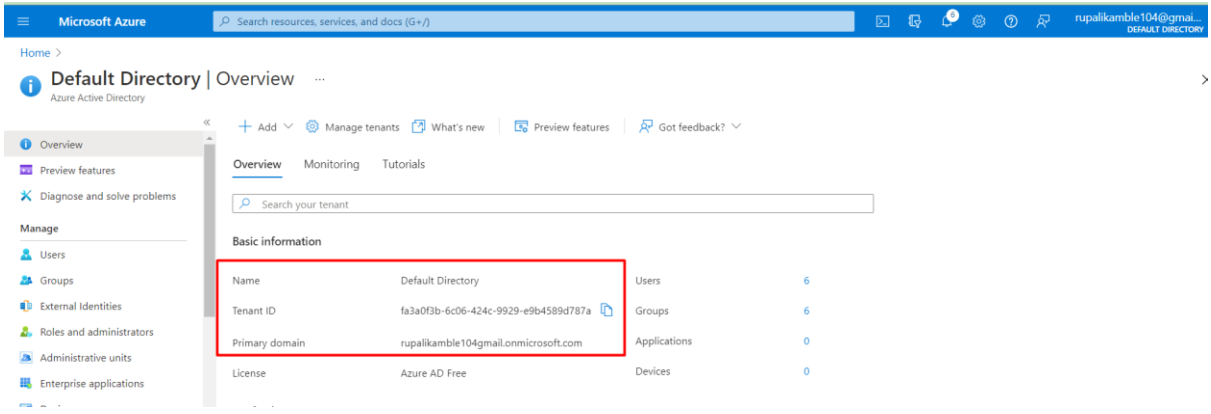


Task 5- VMSS Configuration.

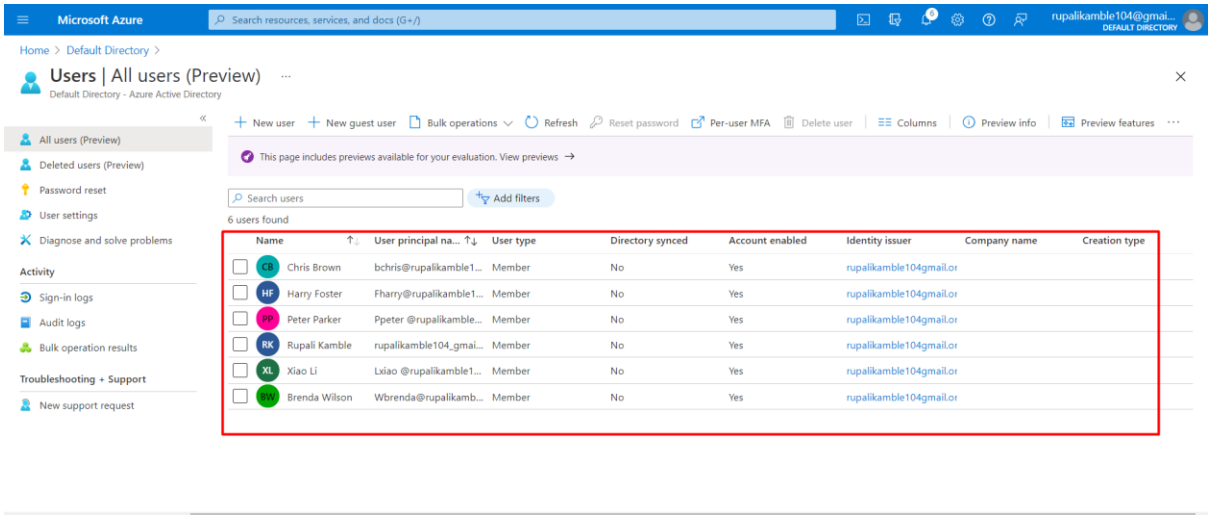


Phase -2 Managing Activate Directory on the Cl

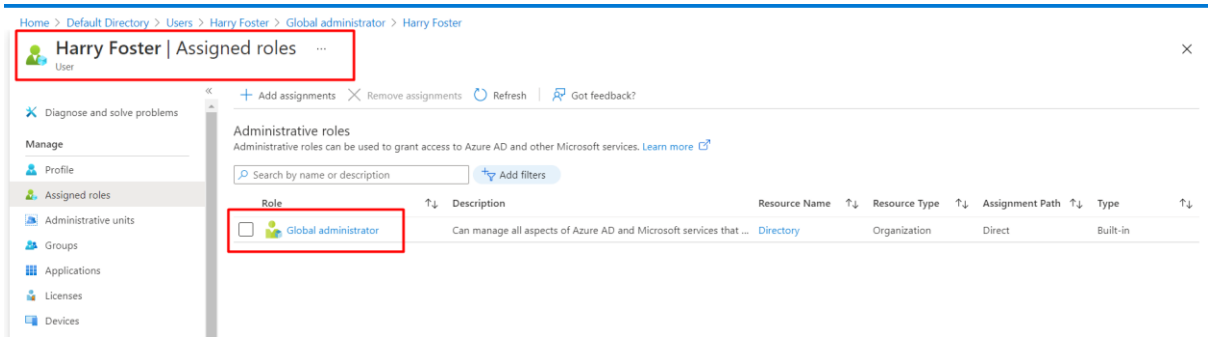
Task 1- Create a Company's Default Directory.



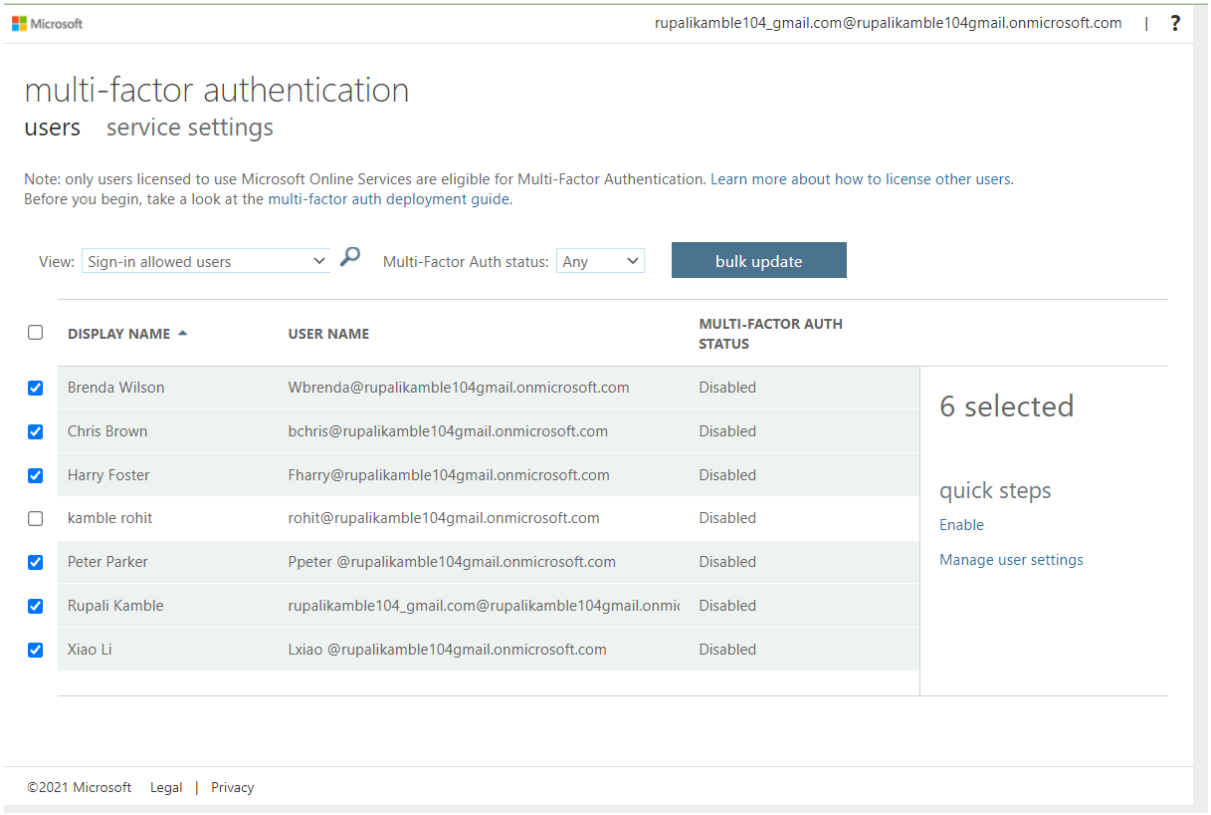
Task 2- Creating Users.

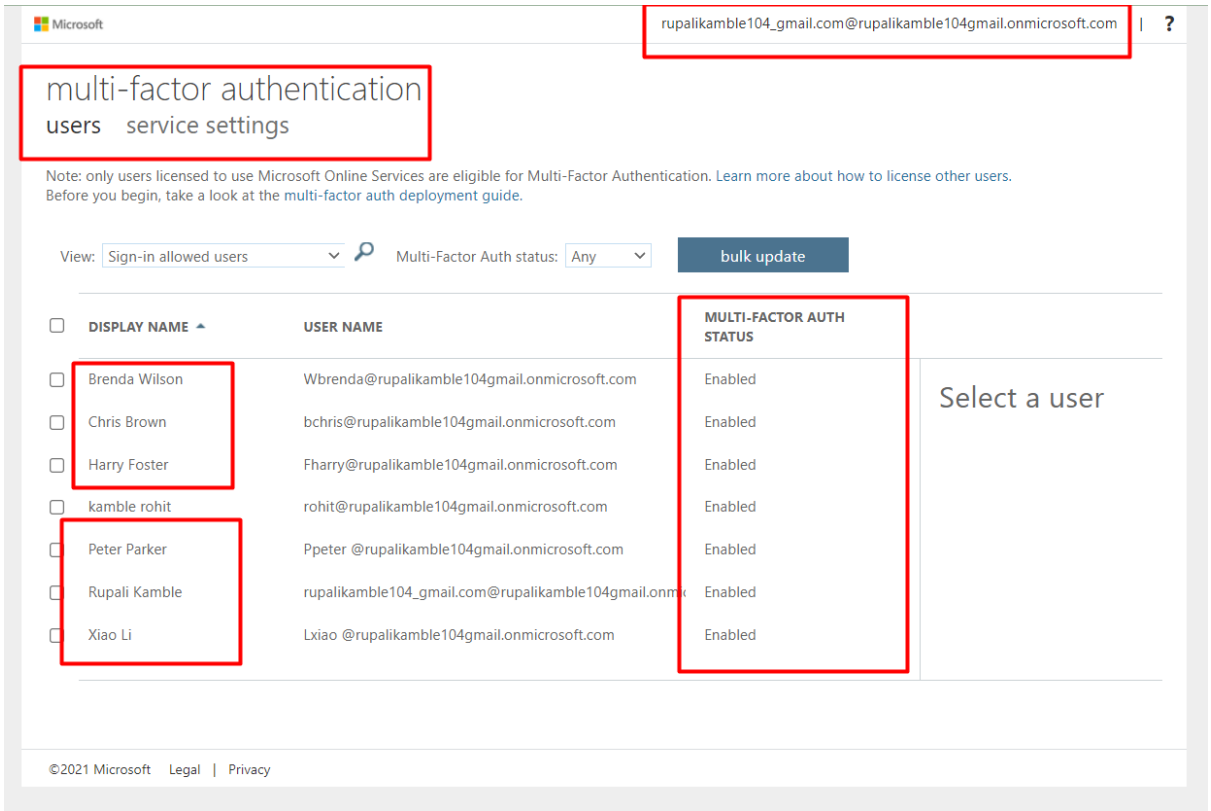


Task 3- Assigning Role



Task 4- Enable Multi-Factor Authentication.





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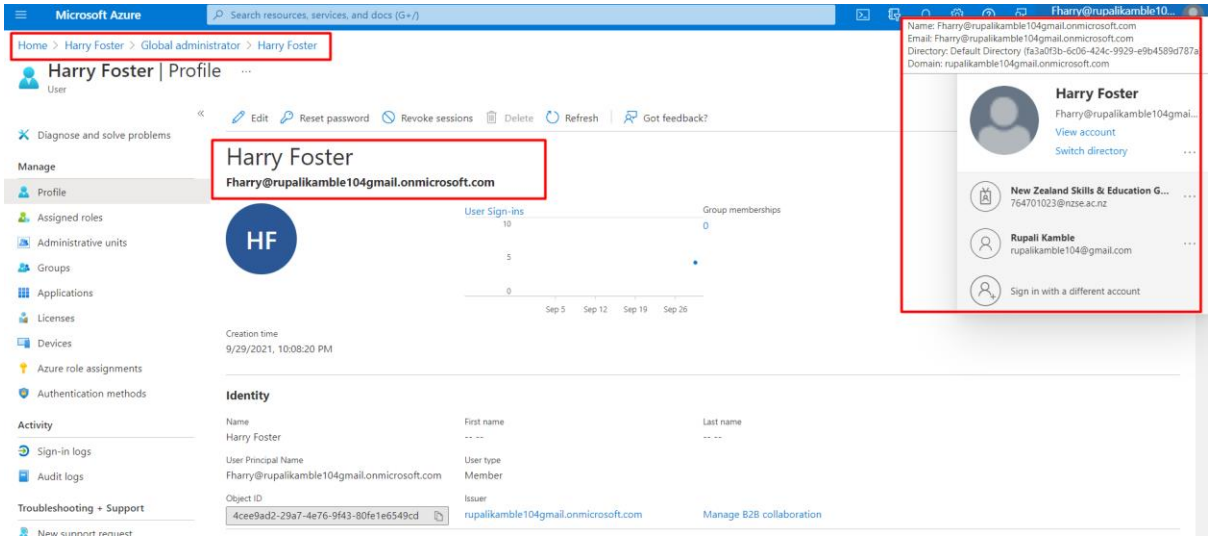
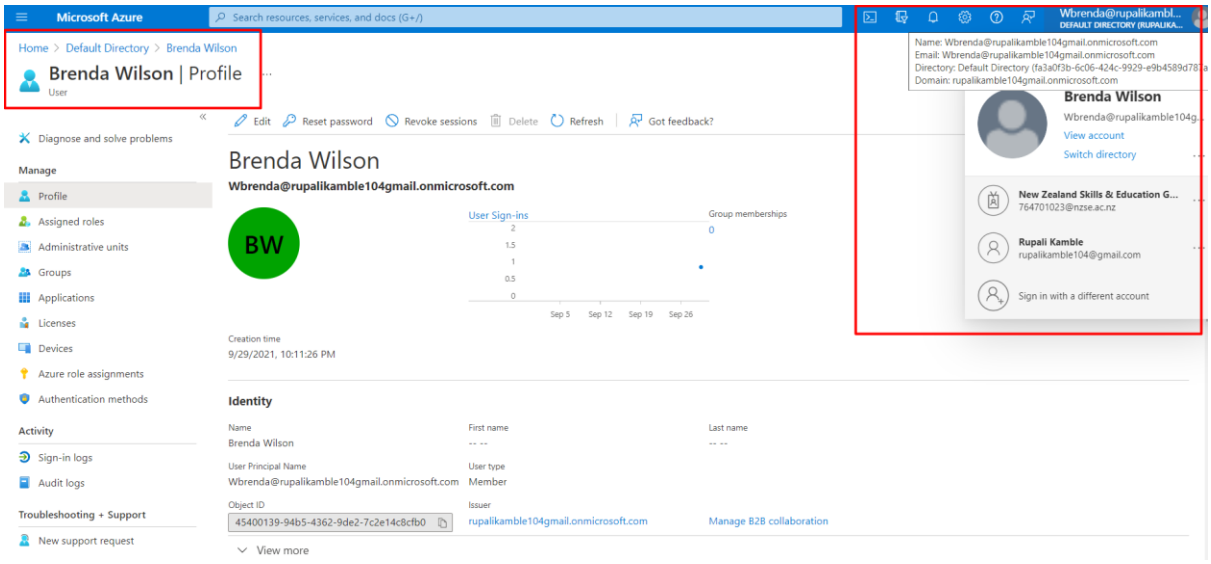
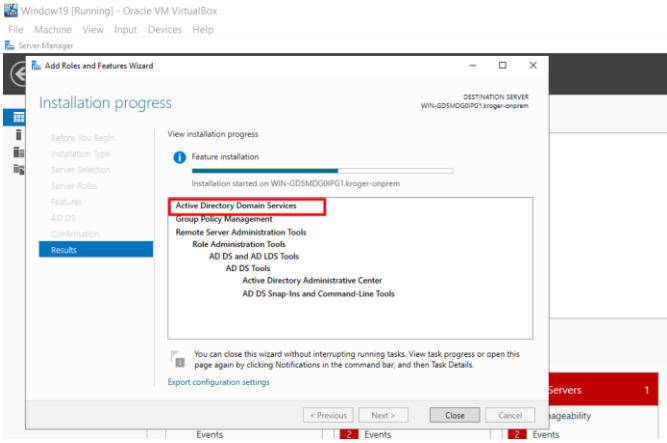
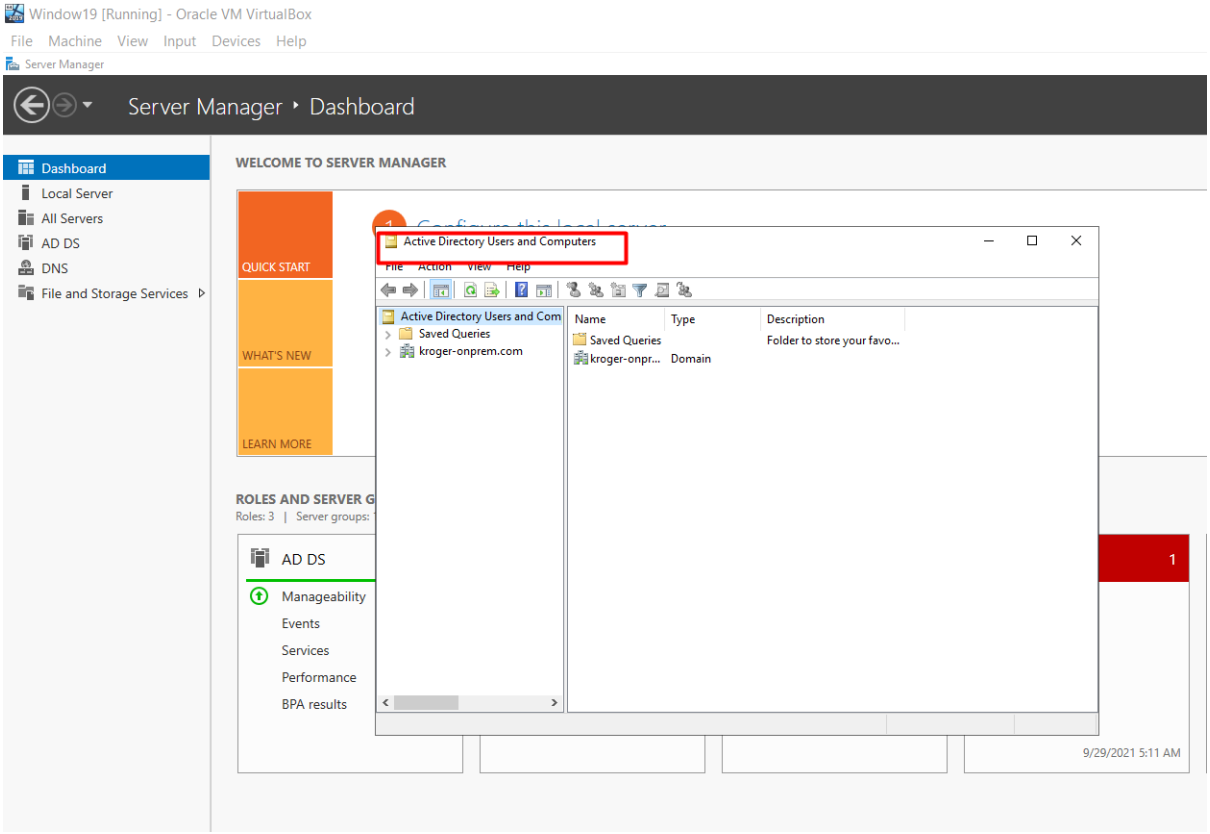




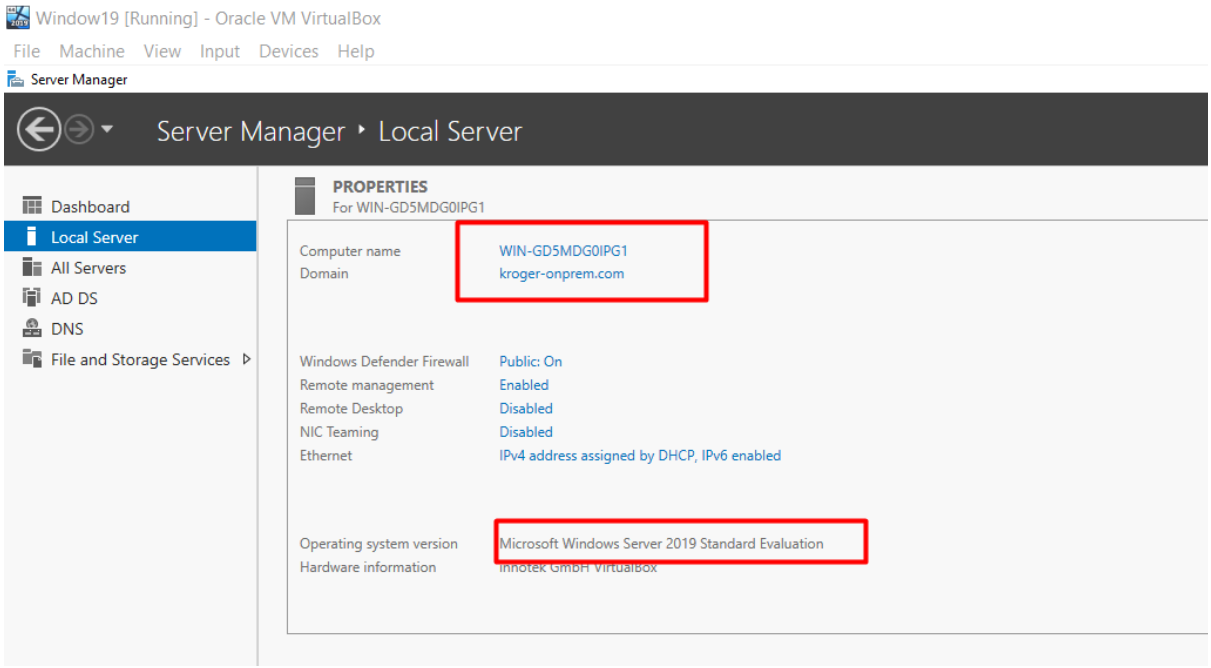
Phase- 3 Integrating on-prem directory to cloud active directory.

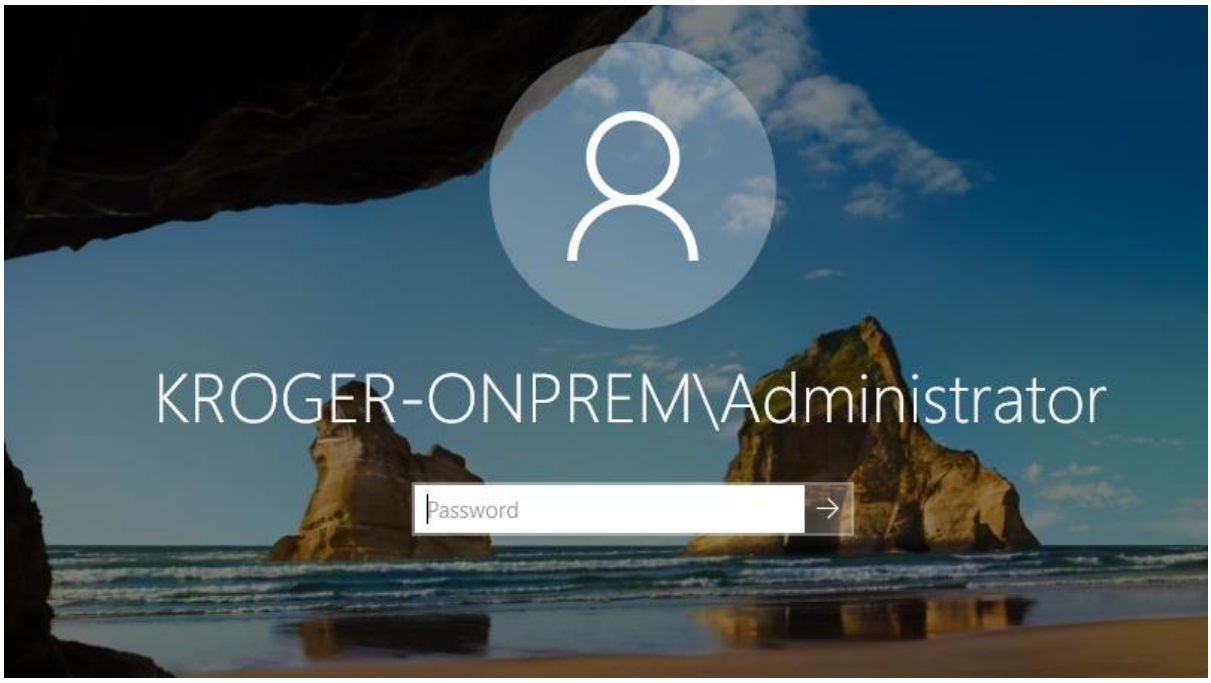
Task 1-Installing Windows Server with (ADDS) Role.



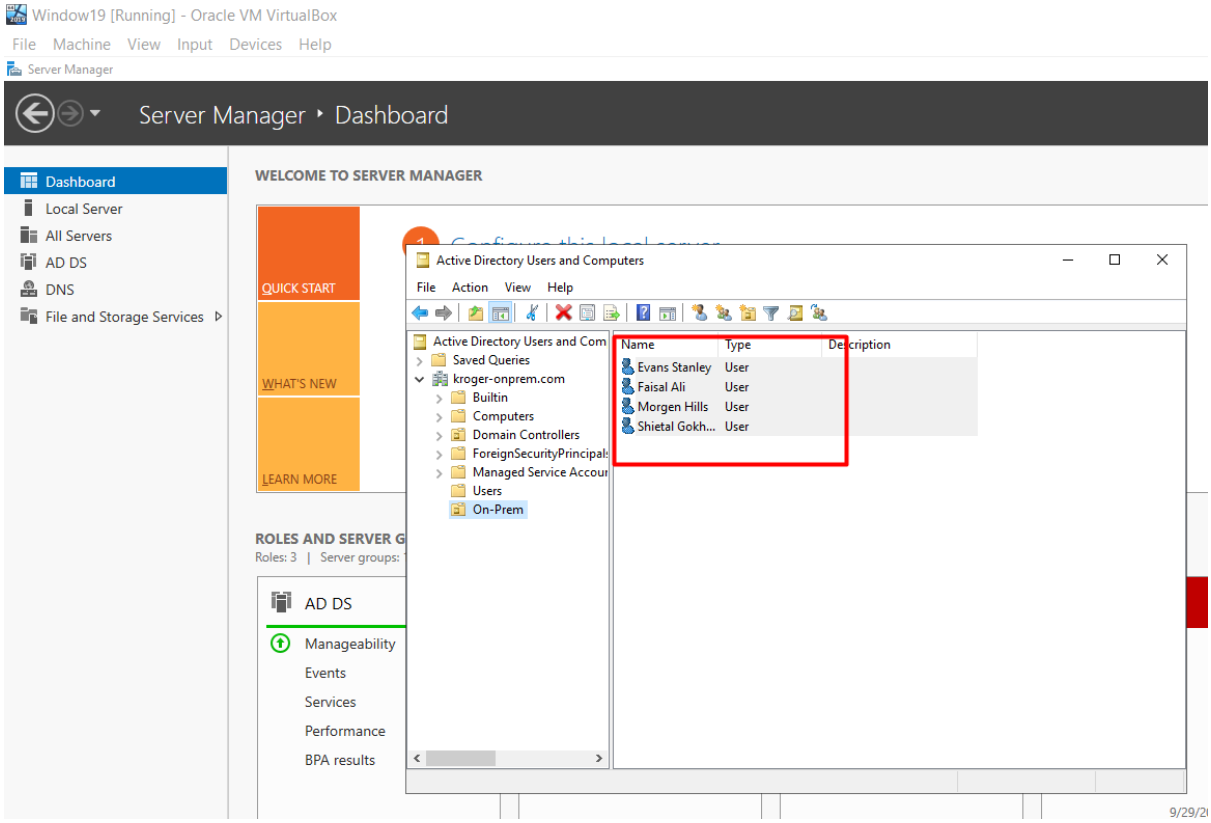


Task 2- Promoting Server with Domain Controller.

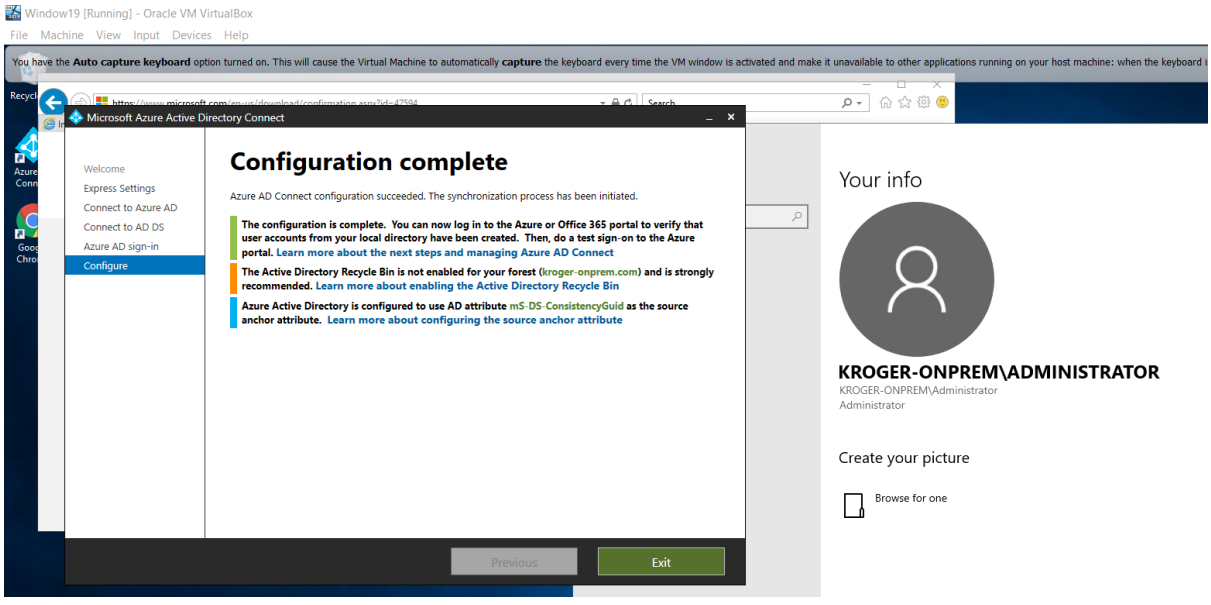


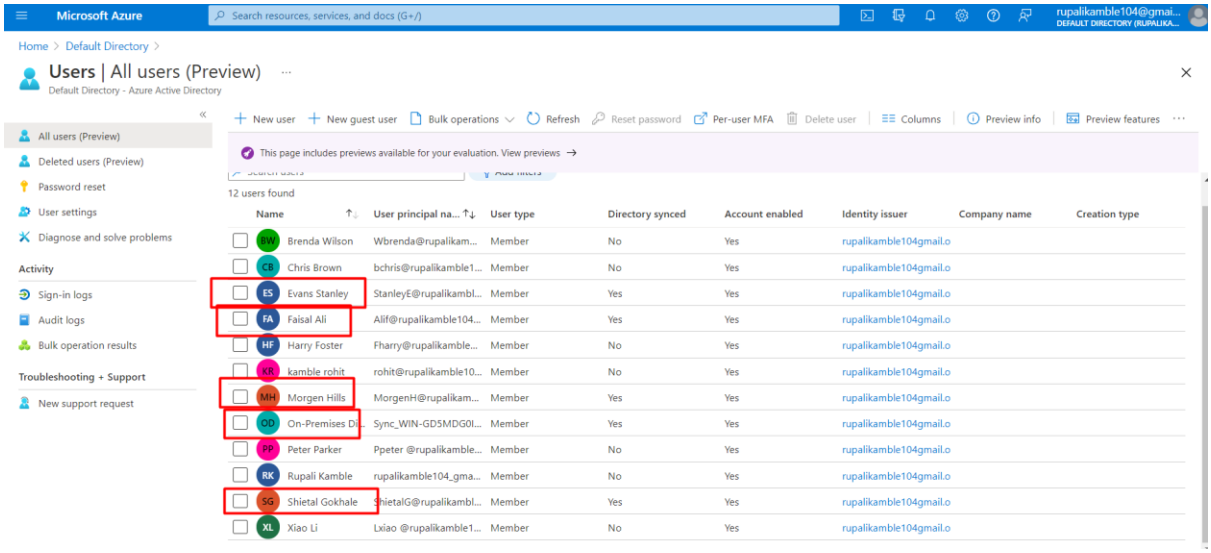


Task 3- Creating Domain Users under On-Premises.

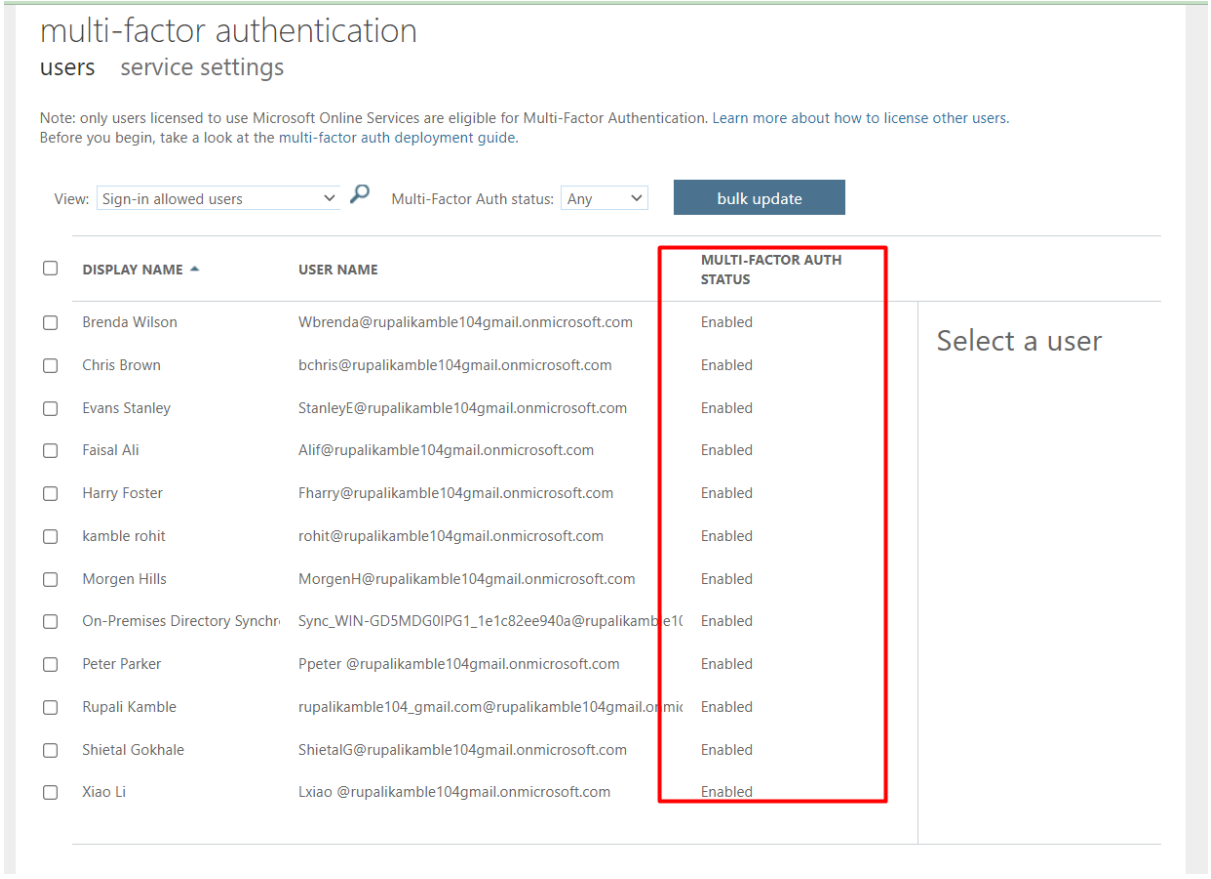


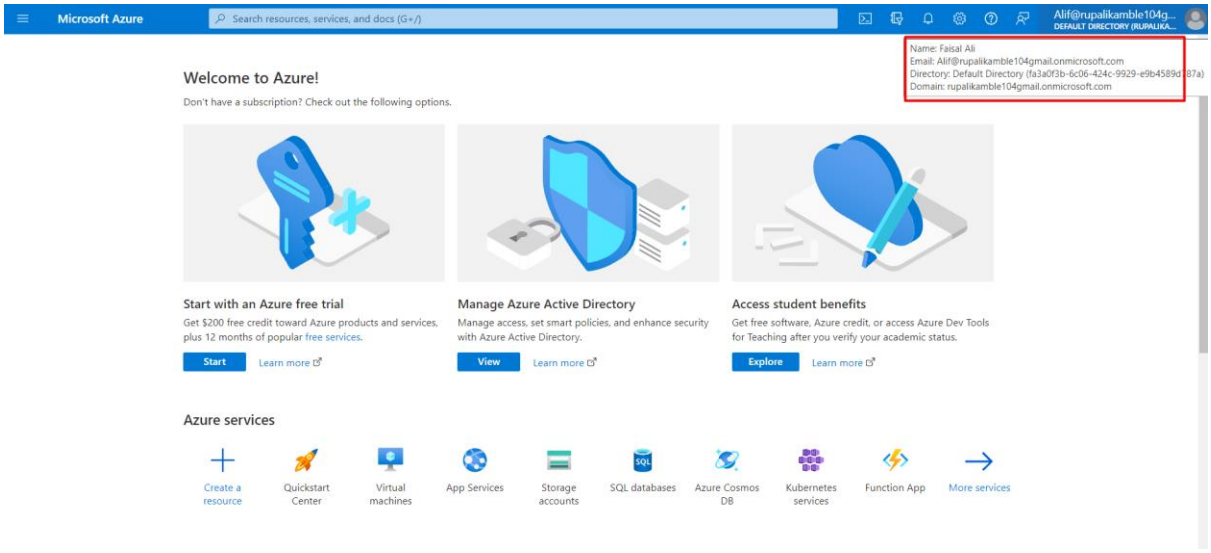
Task 4- Connecting the On-Premises Directory to the Cloud AD.





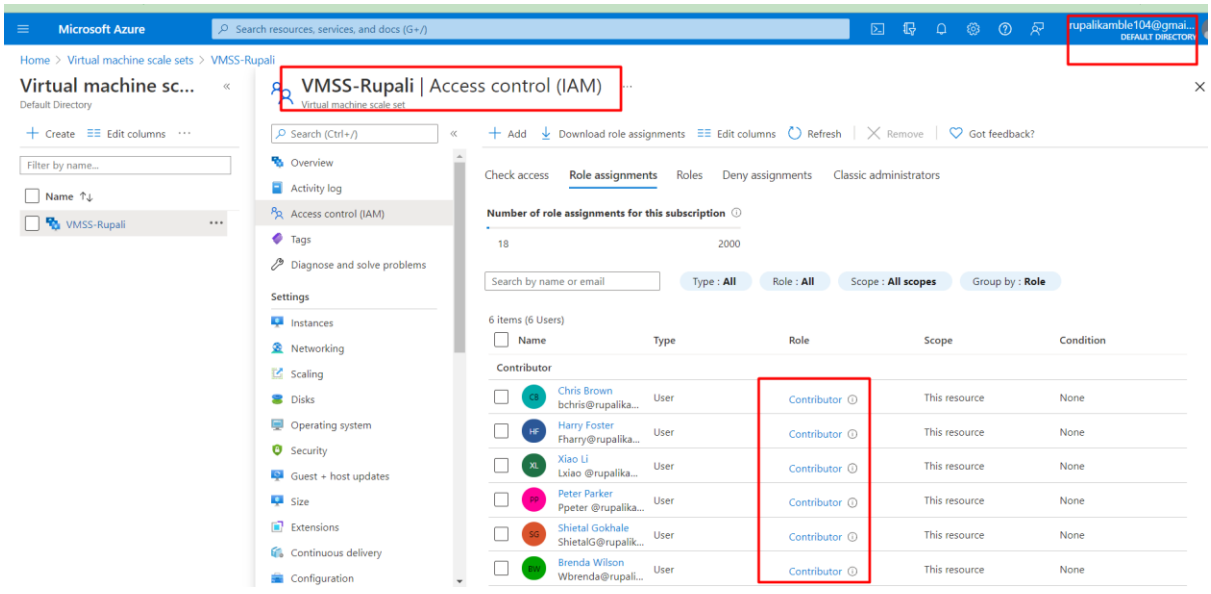
Task 5- Checking Integration on the cloud





Phase 4- Managing role-based access control.

Task 1- Assigning the access role to the users on VMs



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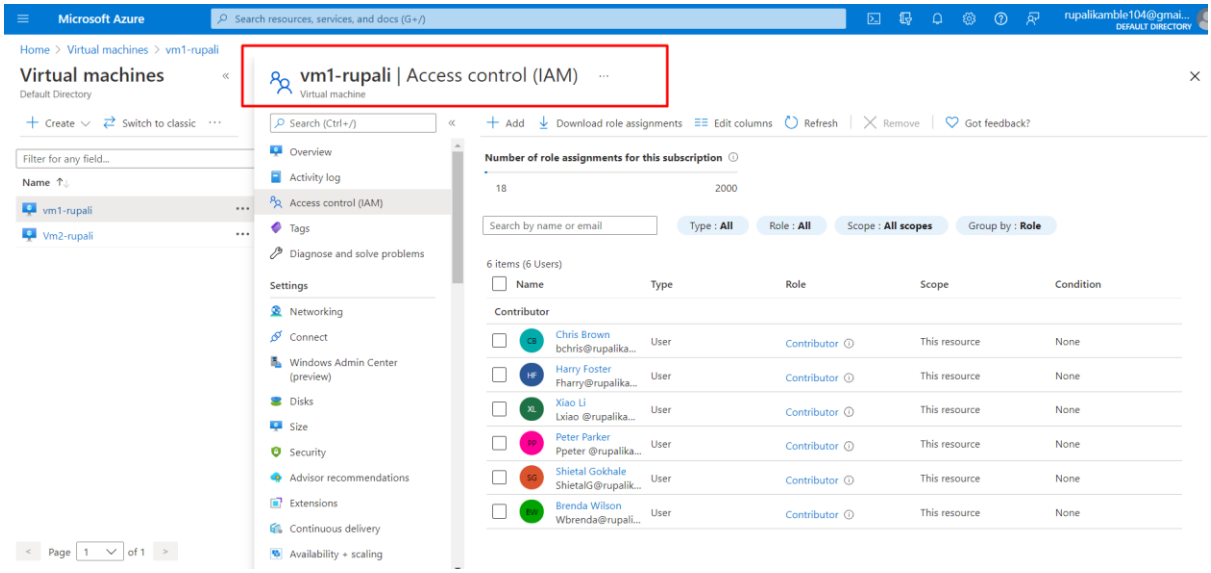
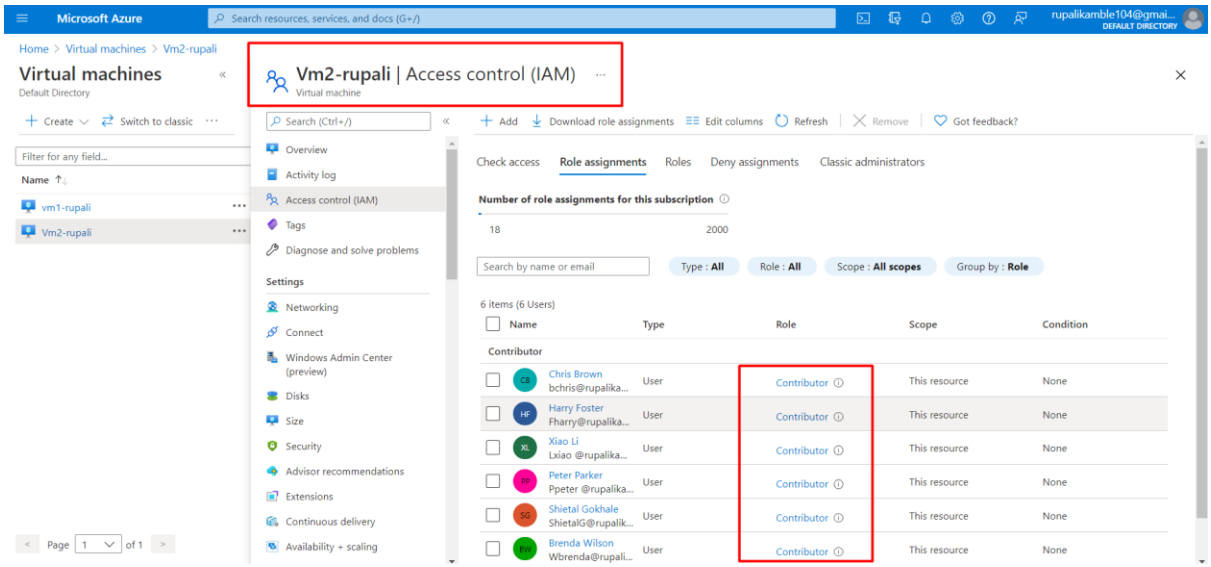
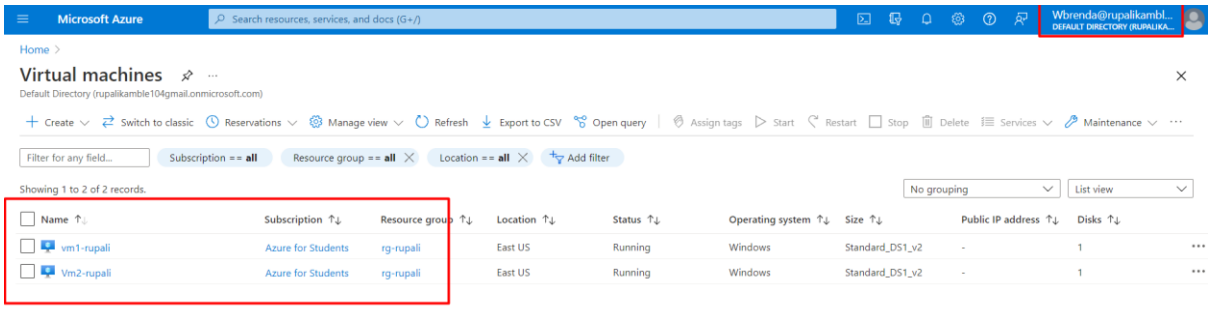
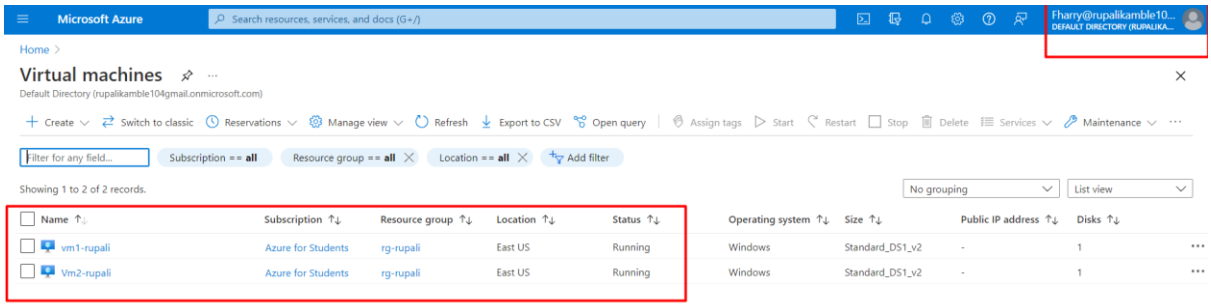
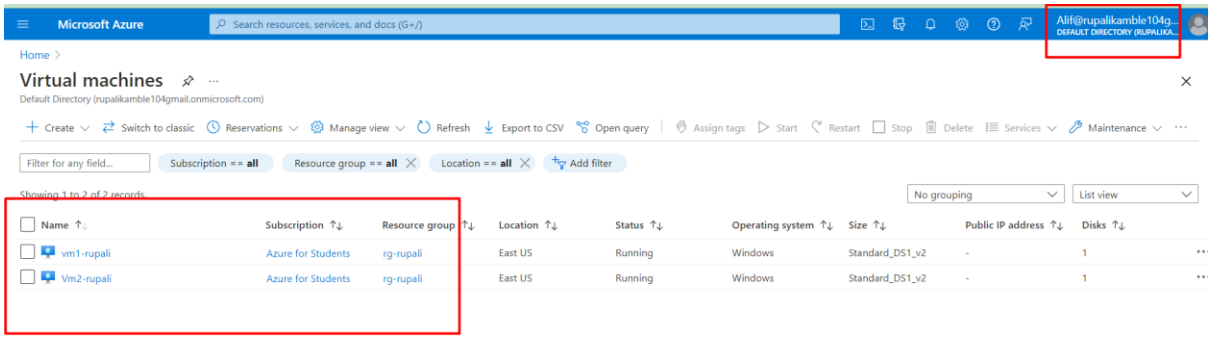




Task 2- Verifying user access on VMs.

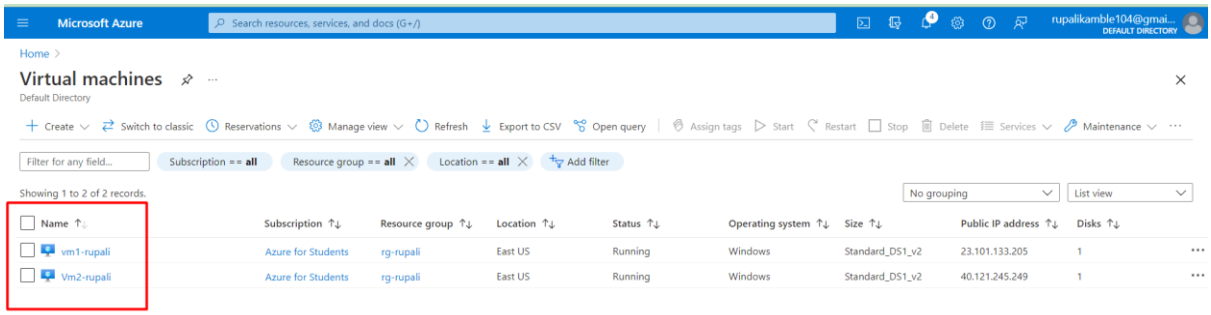




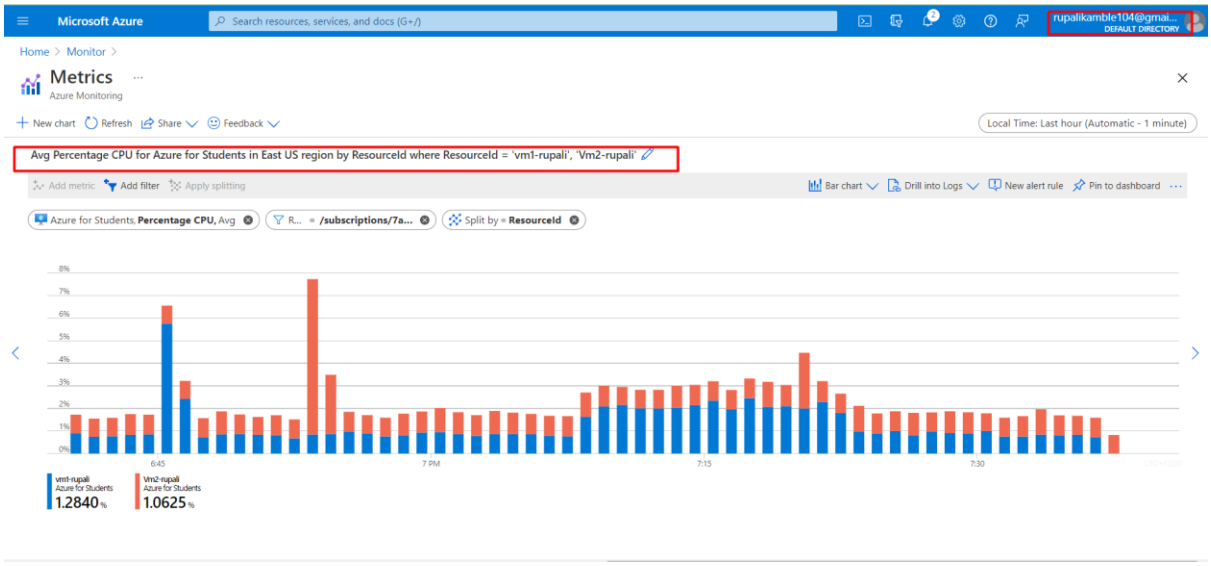


Phase 5- Monitoring Company's Resources.

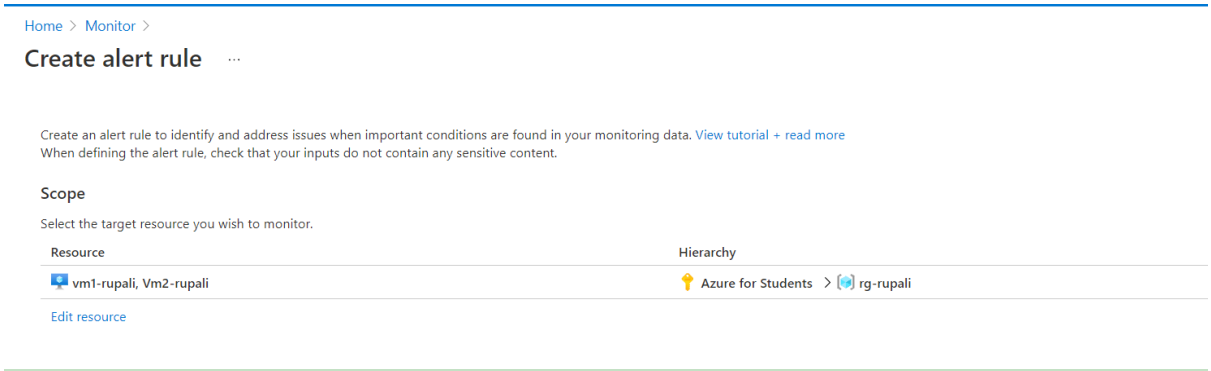
Task 1- Creation of VMs on Cloud.

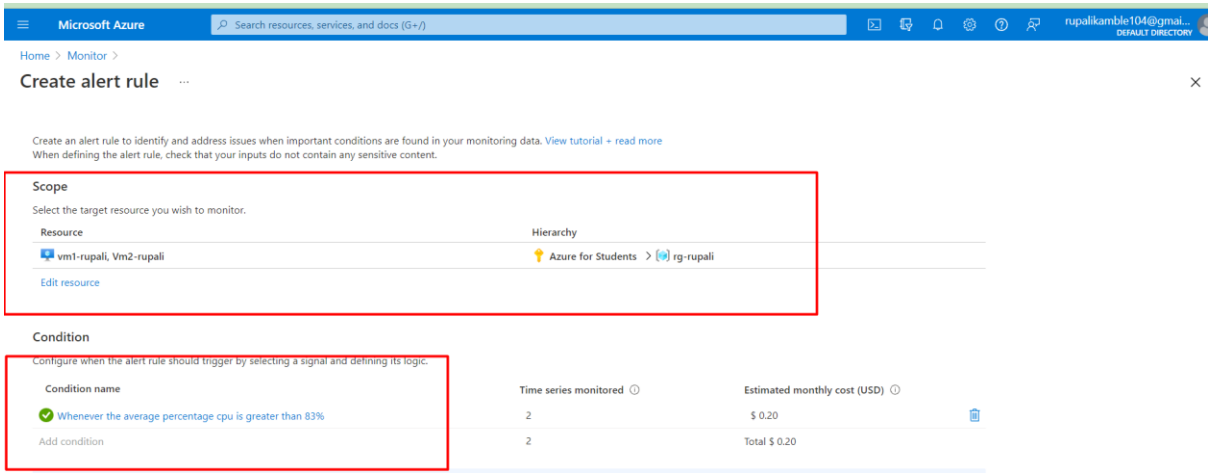


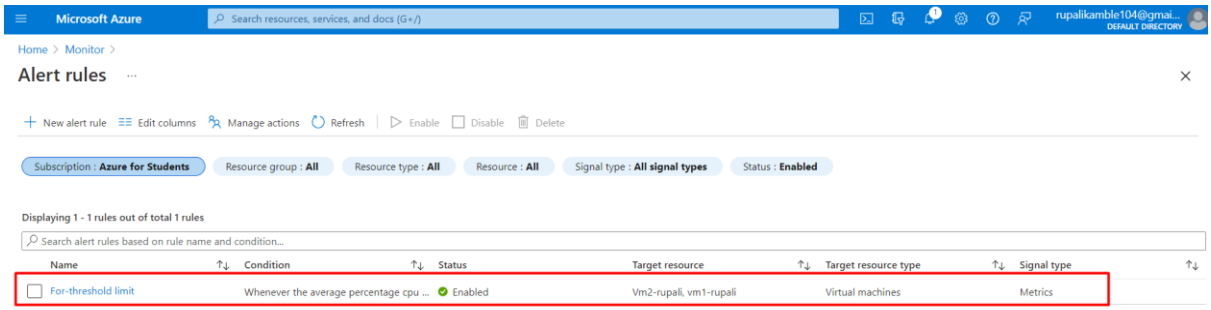
Task 2- Setting Scope for VMs on the Cloud.



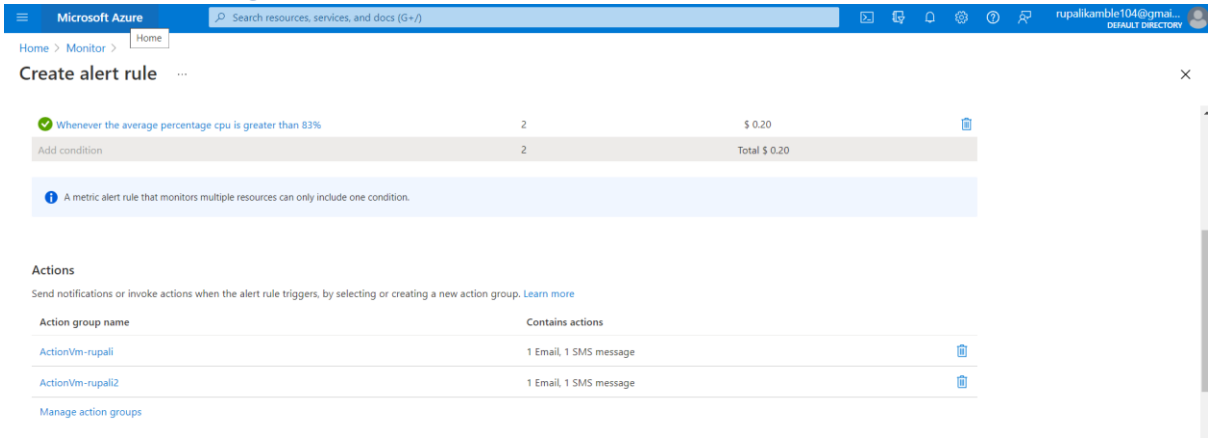
Task 3- Creating Alert Rule for VMs.





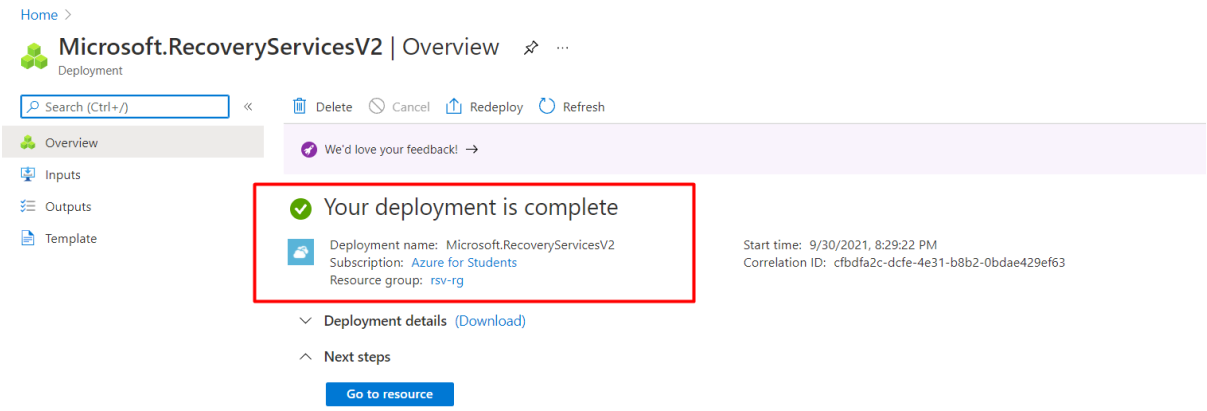


Task 4- Setting an Action for Notification.

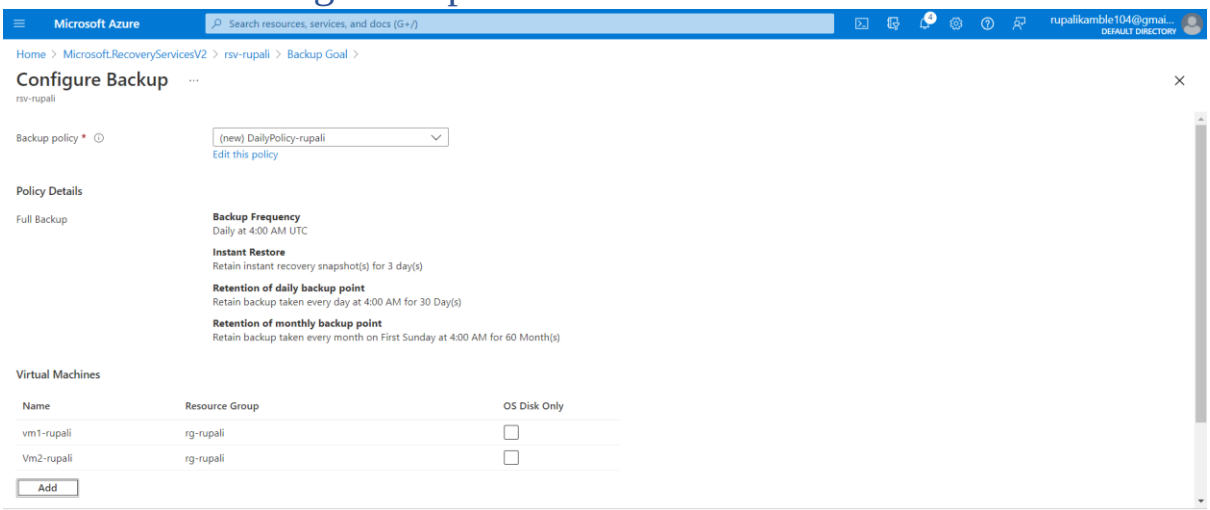


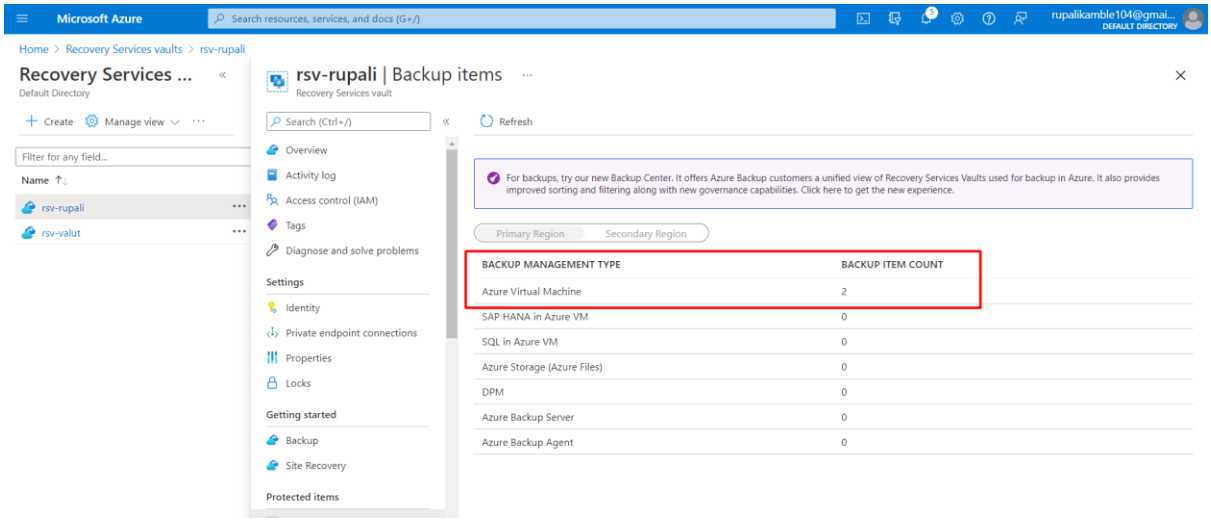
Phase 6- Backup & Site Recovery Services

Task 1- Creating a resource for backup and security services.

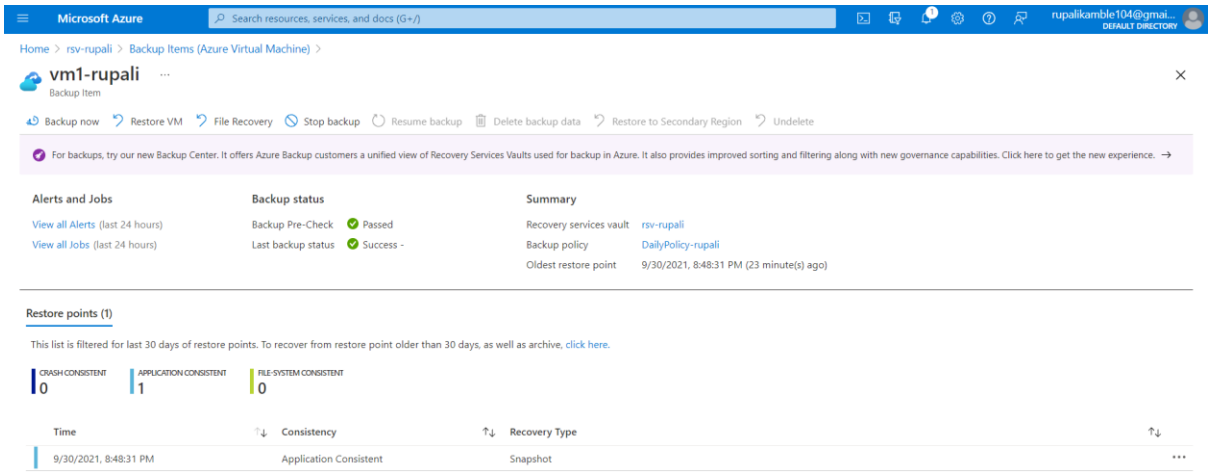


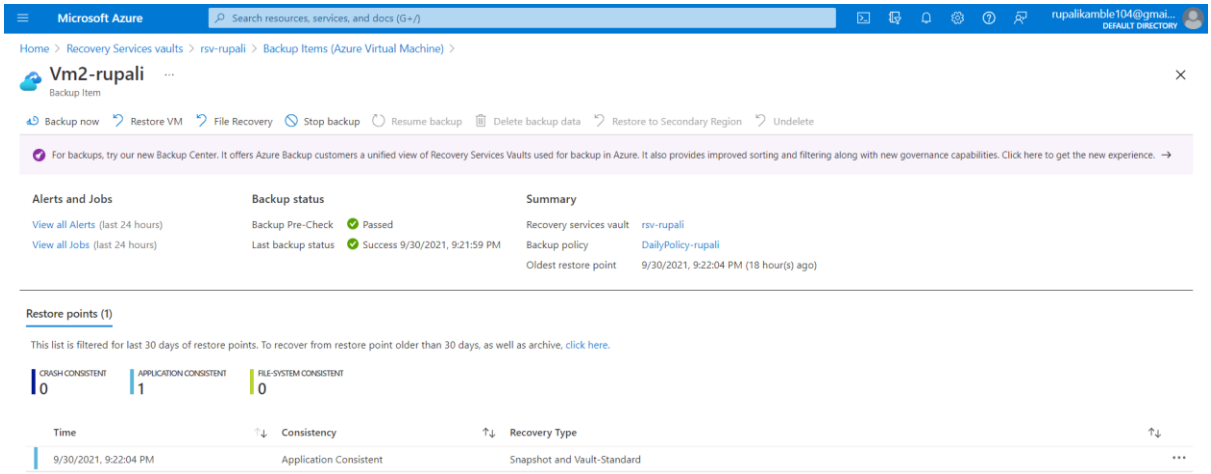
Task 2- Scheduling backup for all VMs on the cloud.





Task 3- Performing backup feature on VM.





Summary

The emergence of open data and the Big Data movement provide an intriguing conceptual challenge for Iwi/Mori collectives to preserve their data rights and interests. Iwi/Mori collectives are naturally drawn to Mori Data Sovereignty since it asks for more control over Mori data sets. It is, nevertheless, critical to establish Mori data approaches in a Mori worldview and to employ Mori concepts and Tikanga as the conceptual foundation for data use activities.

Cloud computing has revolutionised the IT industry and business, requiring major financial inputs to develop and provide goods and services. How to do Configuration of services to meet changing client expectations, synchronisation of numerous on-premises users to the cloud, management of active directory, and creation of a profile to monitor all cloud resources

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