



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

DNCT604_A2_Portfolio_764701023_8

Microsoft Azure

Search resources, services, and docs (G+)

Home > Virtual networks >

Virtual networks

Default Directory

+ Create Manage view

Filter for any field...

Name ↑

No virtual networks to display

Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.

Create virtual network

Learn more

Create virtual network

Basics IP Addresses Security Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation. [Learn more about virtual network](#)

Project details

Subscription * Azure for Students

Resource group * (New) rg-rupali

Create new

Instance details

Name * Vnet-rupali

Region * East US

Review + create

< Previous

Next: IP Addresses >

Download a template for automation

Microsoft Azure

Search resources, services, and docs (G+)

Home > Virtual networks >

Virtual networks

Default Directory

+ Create Manage view

Filter for any field...

Name ↑

No virtual networks to display

Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.

Create virtual network

Learn more

Create virtual network

Basics IP Addresses Security Tags Review + create

The virtual network's address space, specified as one or more address prefixes in CIDR notation (e.g. 192.168.1.0/24).

IPv4 address space

192.168.0.0/16 192.168.0.0 - 192.168.255.255 (65536 addresses)

Add IPv6 address space

The subnet's address range in CIDR notation (e.g. 192.168.1.0/24). It must be contained by the address space of the virtual network.

+ Add subnet Remove subnet

Subnet name Subnet address range NAT gateway

Subnet-rupali 192.168.0.0/24

Use of a NAT gateway is recommended for outbound internet access from a subnet. You can deploy a NAT gateway and assign it to a subnet after you create the virtual network. [Learn more](#)

Review + create

< Previous

Next: Security >

Download a template for automation

Microsoft Azure

Search resources, services, and docs (G+)

Home >

Virtual networks

Default Directory

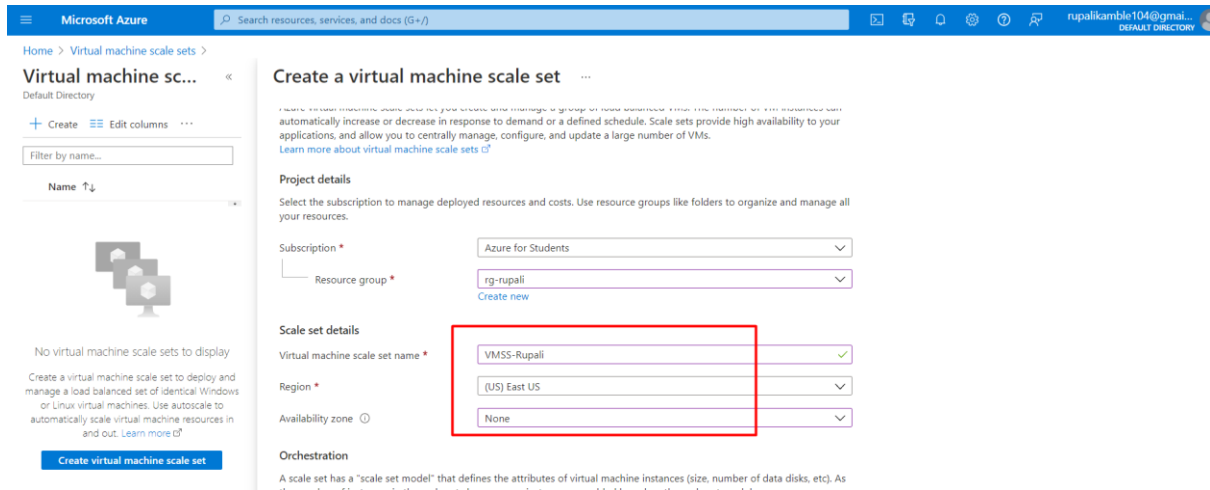
+ Create Manage view Refresh Export to CSV Open query Assign tags Feedback

Filter for any field... Subscription == all Resource group == all Location == all Add filter

Showing 1 to 1 of 1 records.

Name	Resource group	Location	Subscription
Vnet-rupali	rg-rupali	East US	Azure for Students

Task 3- Creating a Virtual Machine Scale Set



Microsoft Azure

Home > Virtual machine scale sets > Virtual machine scale sets

Default Directory

+ Create Edit columns

Filter by name...

Name ↑↓

No virtual machine scale sets to display

Create a virtual machine scale set to deploy and manage a load balanced set of identical Windows or Linux virtual machines. Use autoscale to automatically scale virtual machine resources in and out. [Learn more](#)

Create virtual machine scale set

Create a virtual machine scale set

Scale sets are used to create and manage a group of identical virtual machines that can automatically increase or decrease in response to demand or a defined schedule. Scale sets provide high availability to your applications, and allow you to centrally manage, configure, and update a large number of VMs. [Learn more about virtual machine scale sets](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure for Students

Resource group * rg-rupali [Create new](#)

Scale set details

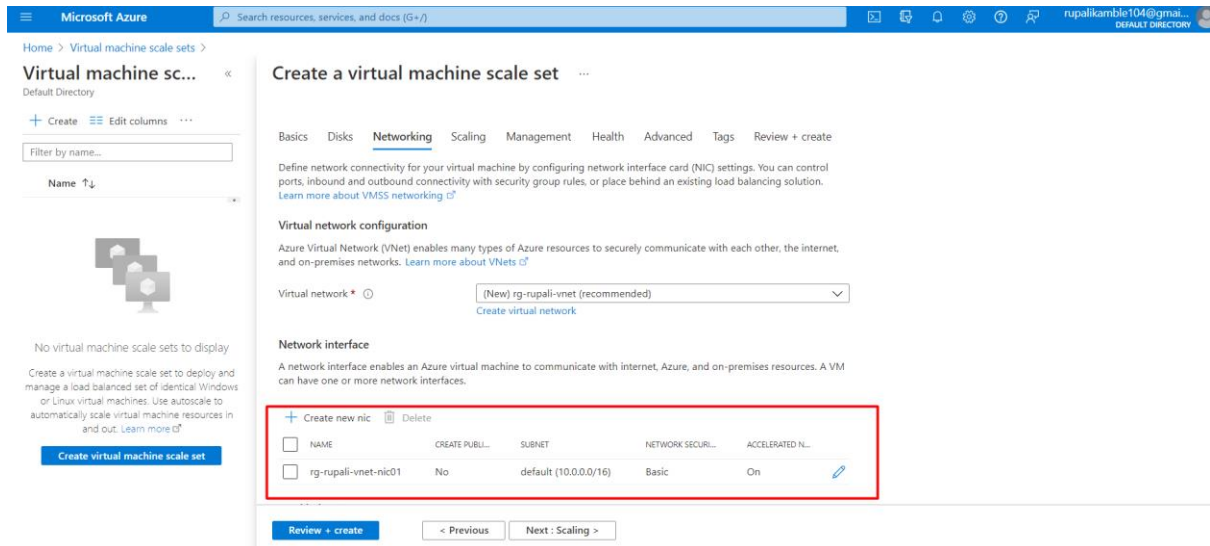
Virtual machine scale set name * VMSS-Rupali

Region * (US) East US

Availability zone ⓘ None

Orchestration

A scale set has a "scale set model" that defines the attributes of virtual machine instances (size, number of data disks, etc). As the number of instances in the scale set changes, new instances are added based on the scale set model.



Microsoft Azure

Home > Virtual machine scale sets > Virtual machine scale sets

Default Directory

+ Create Edit columns

Filter by name...

Name ↑↓

No virtual machine scale sets to display

Create a virtual machine scale set to deploy and manage a load balanced set of identical Windows or Linux virtual machines. Use autoscale to automatically scale virtual machine resources in and out. [Learn more](#)

Create virtual machine scale set

Create a virtual machine scale set

Basics Disks **Networking** Scaling Management Health Advanced Tags Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more about VMSS networking](#)

Virtual network configuration

Azure Virtual Network (VNet) enables many types of Azure resources to securely communicate with each other, the internet, and on-premises networks. [Learn more about VNets](#)

Virtual network * ⓘ (New) rg-rupali-vnet (recommended) [Create virtual network](#)

Network interface

A network interface enables an Azure virtual machine to communicate with internet, Azure, and on-premises resources. A VM can have one or more network interfaces.

NAME	CREATE PUBL...	SUBNET	NETWORK SECU...	ACCELERATED N...
rg-rupali-vnet-nic01	No	default (10.0.0.0/16)	Basic	On

Review + create < Previous Next : Scaling >

Task 4- Scaling details.

Microsoft Azure

Home > Virtual machine scale sets > Virtual machine scale sets

Default Directory

+ Create Edit columns

Filter by name...

Name ↑↓

No virtual machine scale sets to display

Create a virtual machine scale set to deploy and manage a load balanced set of identical Windows or Linux virtual machines. Use autoscale to automatically scale virtual machine resources in and out. [Learn more](#)

Create virtual machine scale set

Create a virtual machine scale set

Initial instance count * 3

Scaling

Scaling policy ☐ Manual ☒ Custom

Minimum number of instances * 2

Maximum number of instances * 5

Scale out

CPU threshold (%) * 23

Duration in minutes * 10

Number of instances to increase by * 1

Scale in

CPU threshold (%) * 25

Number of instances to decrease by * 1

Review + create < Previous Next: Management >

Microsoft Azure

Home > Virtual machine scale sets > Virtual machine scale sets

Default Directory

+ Create Edit columns

Filter by name...

Name ↑↓

No virtual machine scale sets to display

Create a virtual machine scale set to deploy and manage a load balanced set of identical Windows or Linux virtual machines. Use autoscale to automatically scale virtual machine resources in and out. [Learn more](#)

Create virtual machine scale set

Create a virtual machine scale set

Basics Disks Networking Scaling Management Health Advanced Tags Review + create

Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

Allocation policy

Enable scaling beyond 100 instances ☒

Spreading algorithm ☐ Max spreading ☒ Fixed spreading (not recommended with zones)

Fault domain count * 5

Custom data

Pass a script, configuration file, or other data into the virtual machine **while it is being provisioned**. The data will be saved on the VM in a known location. [Learn more about custom data for VMSS](#)

Custom data

Review + create < Previous Next: Tags >

Fault domain till 5 is only available

Microsoft Azure

Home > Virtual machine scale sets

Default Directory

+ Create Edit columns Refresh Feedback Assign tags Start Restart Stop Delete

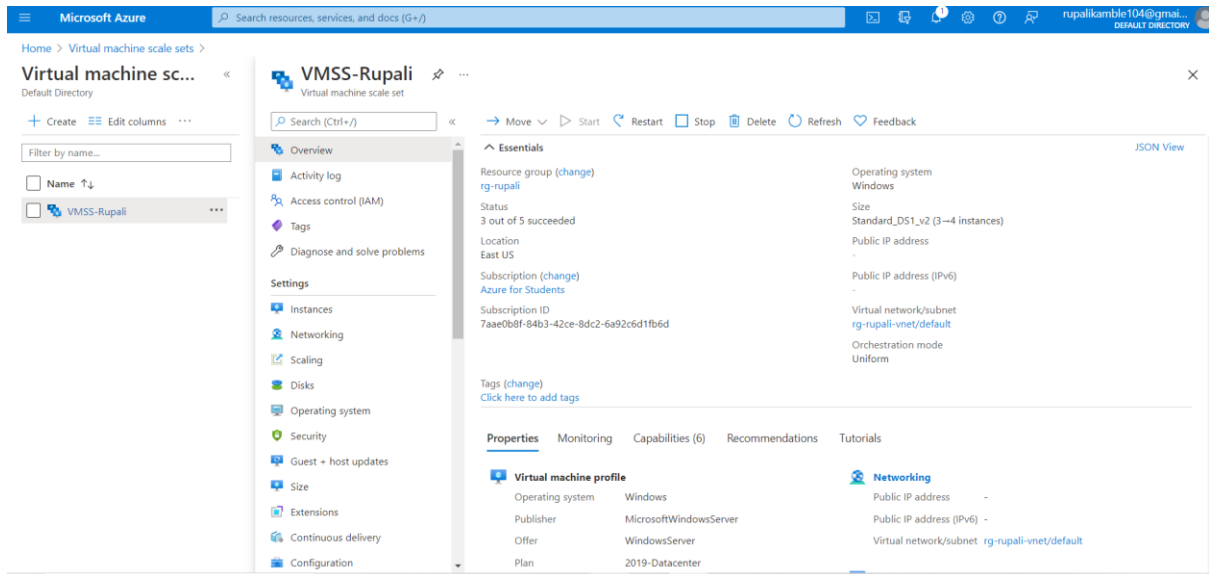
Subscriptions: Azure for Students

Filter by name... All resource groups All locations All tags No grouping

1 items

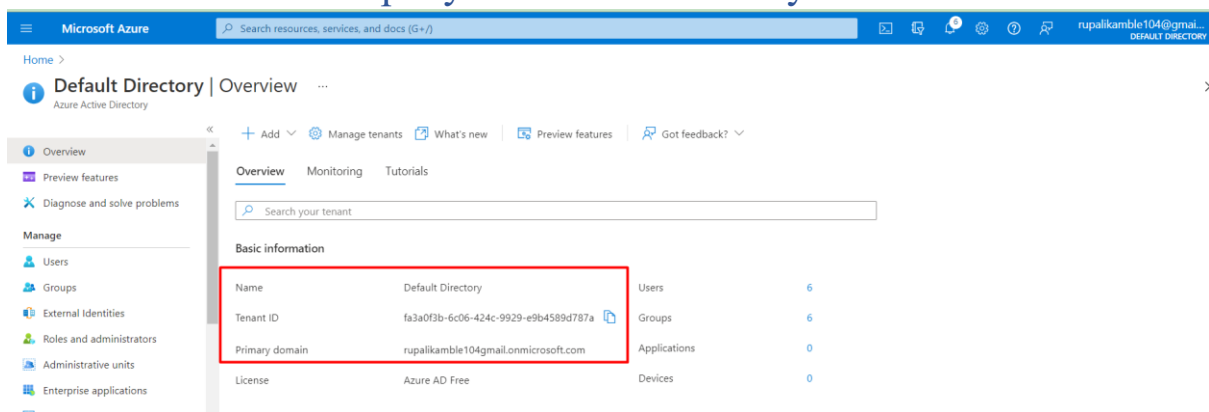
Name ↑↓	Status	Instances	Azure Spot eviction policy	Resource group ↑↓	Location ↑↓	Subscription ↑↓
VMSS-Rupali	0 out of 7 succeeded	0 - 3	-	rg-rupali	East US	Azure for Students

Task 5- VMSS Configuration.



Phase -2 Managing Activate Directory on the CI

Task 1- Create a Company's Default Directory.



Task 2- Creating Users.

Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory > Users | All users (Preview)

Default Directory - Azure Active Directory

+ New user + New guest user Bulk operations Refresh Reset password Per-user MFA Delete user Columns Preview info Preview features

This page includes previews available for your evaluation. View previews →

Search users Add filters

6 users found

	Name	User principal na...	User type	Directory synced	Account enabled	Identity issuer	Company name	Creation type
<input type="checkbox"/>	Chris Brown	bchris@rupalikambl...	Member	No	Yes	rupalikambl104gmail.or		
<input type="checkbox"/>	Harry Foster	Fharry@rupalikambl...	Member	No	Yes	rupalikambl104gmail.or		
<input type="checkbox"/>	Peter Parker	Ppeter@rupalikambl...	Member	No	Yes	rupalikambl104gmail.or		
<input type="checkbox"/>	Rupali Kamble	rupalikambl104_gmai...	Member	No	Yes	rupalikambl104gmail.or		
<input type="checkbox"/>	Xiao Li	Lxiao@rupalikambl...	Member	No	Yes	rupalikambl104gmail.or		
<input type="checkbox"/>	Brenda Wilson	Wbrenda@rupalikamb...	Member	No	Yes	rupalikambl104gmail.or		

Task 3- Assigning Role

Home > Default Directory > Users > Harry Foster > Global administrator > Harry Foster

Harry Foster | Assigned roles

Diagnose and solve problems

Manage

- Profile
- Assigned roles
- Administrative units
- Groups
- Applications
- Licenses
- Devices

+ Add assignments Remove assignments Refresh Got feedback?


Administrative roles

Administrative roles can be used to grant access to Azure AD and other Microsoft services. [Learn more](#)

Search by name or description Add filters

Role	Description	Resource Name	Resource Type	Assignment Path	Type
<input type="checkbox"/> Global administrator	Can manage all aspects of Azure AD and Microsoft services that ...	Directory	Organization	Direct	Built-in

Task 4- Enable Multi-Factor Authentication.

 rupalikamble104_gmail.com@rupalikamble104gmail.onmicrosoft.com | ?

multi-factor authentication

users service settings

Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authentication. [Learn more about how to license other users.](#)
Before you begin, take a look at the [multi-factor auth deployment guide](#).

View: Sign-in allowed users 🔍 Multi-Factor Auth status: Any bulk update

<input type="checkbox"/>	DISPLAY NAME ▲	USER NAME	MULTI-FACTOR AUTH STATUS
<input checked="" type="checkbox"/>	Brenda Wilson	Wbrenda@rupalikamble104gmail.onmicrosoft.com	Disabled
<input checked="" type="checkbox"/>	Chris Brown	bchris@rupalikamble104gmail.onmicrosoft.com	Disabled
<input checked="" type="checkbox"/>	Harry Foster	Fharry@rupalikamble104gmail.onmicrosoft.com	Disabled
<input type="checkbox"/>	kamble rohit	rohit@rupalikamble104gmail.onmicrosoft.com	Disabled
<input checked="" type="checkbox"/>	Peter Parker	Ppeter @rupalikamble104gmail.onmicrosoft.com	Disabled
<input checked="" type="checkbox"/>	Rupali Kamble	rupalikamble104_gmail.com@rupalikamble104gmail.onmicr	Disabled
<input checked="" type="checkbox"/>	Xiao Li	Lxiao @rupalikamble104gmail.onmicrosoft.com	Disabled


6 selected

[quick steps](#)

[Enable](#)

[Manage user settings](#)

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 rupalikamble104_gmail.com@rupalikamble104gmail.onmicrosoft.com | ?

multi-factor authentication

users service settings

Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authentication. [Learn more about how to license other users.](#)
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View: Sign-in allowed users 🔍 Multi-Factor Auth status: Any bulk update

<input type="checkbox"/>	DISPLAY NAME ▲	USER NAME	MULTI-FACTOR AUTH STATUS
<input type="checkbox"/>	Brenda Wilson	Wbrenda@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Chris Brown	bchris@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Harry Foster	Fharry@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	kamble rohit	rohit@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Peter Parker	Ppeter @rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Rupali Kamble	rupalikamble104_gmail.com@rupalikamble104gmail.onmic	Enabled
<input type="checkbox"/>	Xiao Li	Lxiao @rupalikamble104gmail.onmicrosoft.com	Enabled

Select a user

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Microsoft Azure | Search resources, services, and docs (G+)

Home > Harry Foster > Global administrator > Harry Foster

Harry Foster | Profile

User

Diagnose and solve problems

Manage

- Profile
- Assigned roles
- Administrative units
- Groups
- Applications
- Licenses
- Devices
- Azure role assignments
- Authentication methods

Activity

- Sign-in logs
- Audit logs

Troubleshooting + Support

- New support request

Harry Foster
Fharry@rupalikamble104gmail.onmicrosoft.com

HF

User Sign-ins

Group memberships

Creation time
9/29/2021, 10:08:20 PM

Identity

Name	First name	Last name
Harry Foster	---	---
User Principal Name	User type	
Fharry@rupalikamble104gmail.onmicrosoft.com	Member	
Object ID	Issuer	
4cee9ad2-29a7-4e76-9f43-80fe1e6549cd	rupalikamble104gmail.onmicrosoft.com	Manage B2B collaboration

Name: Fharry@rupalikamble104gmail.onmicrosoft.com
Email: Fharry@rupalikamble104gmail.onmicrosoft.com
Directory: Default Directory (fa3a0f3b-6c06-424c-9929-e9b4589d787a)
Domain: rupalikamble104gmail.onmicrosoft.com

Harry Foster
Fharry@rupalikamble104gmail...
[View account](#)
[Switch directory](#)

New Zealand Skills & Education G...
764701023@nzse.ac.nz

Rupali Kamble
rupalikamble104@gmail.com

Sign in with a different account

Microsoft Azure | Search resources, services, and docs (G+)

Home > Default Directory > Brenda Wilson

Brenda Wilson | Profile

User

Diagnose and solve problems

Manage

- Profile
- Assigned roles
- Administrative units
- Groups
- Applications
- Licenses
- Devices
- Azure role assignments
- Authentication methods

Activity

- Sign-in logs
- Audit logs

Troubleshooting + Support

- New support request

Brenda Wilson
Wbrenda@rupalikamble104gmail.onmicrosoft.com

BW

User Sign-ins

Group memberships

Creation time
9/29/2021, 10:11:26 PM

Identity

Name	First name	Last name
Brenda Wilson	---	---
User Principal Name	User type	
Wbrenda@rupalikamble104gmail.onmicrosoft.com	Member	
Object ID	Issuer	
45400139-94b5-4362-9de2-7c2e14c8cfb0	rupalikamble104gmail.onmicrosoft.com	Manage B2B collaboration

Name: Wbrenda@rupalikamble104gmail.onmicrosoft.com
Email: Wbrenda@rupalikamble104gmail.onmicrosoft.com
Directory: Default Directory (fa3a0f3b-6c06-424c-9929-e9b4589d787a)
Domain: rupalikamble104gmail.onmicrosoft.com

Brenda Wilson
Wbrenda@rupalikamble104g...
[View account](#)
[Switch directory](#)

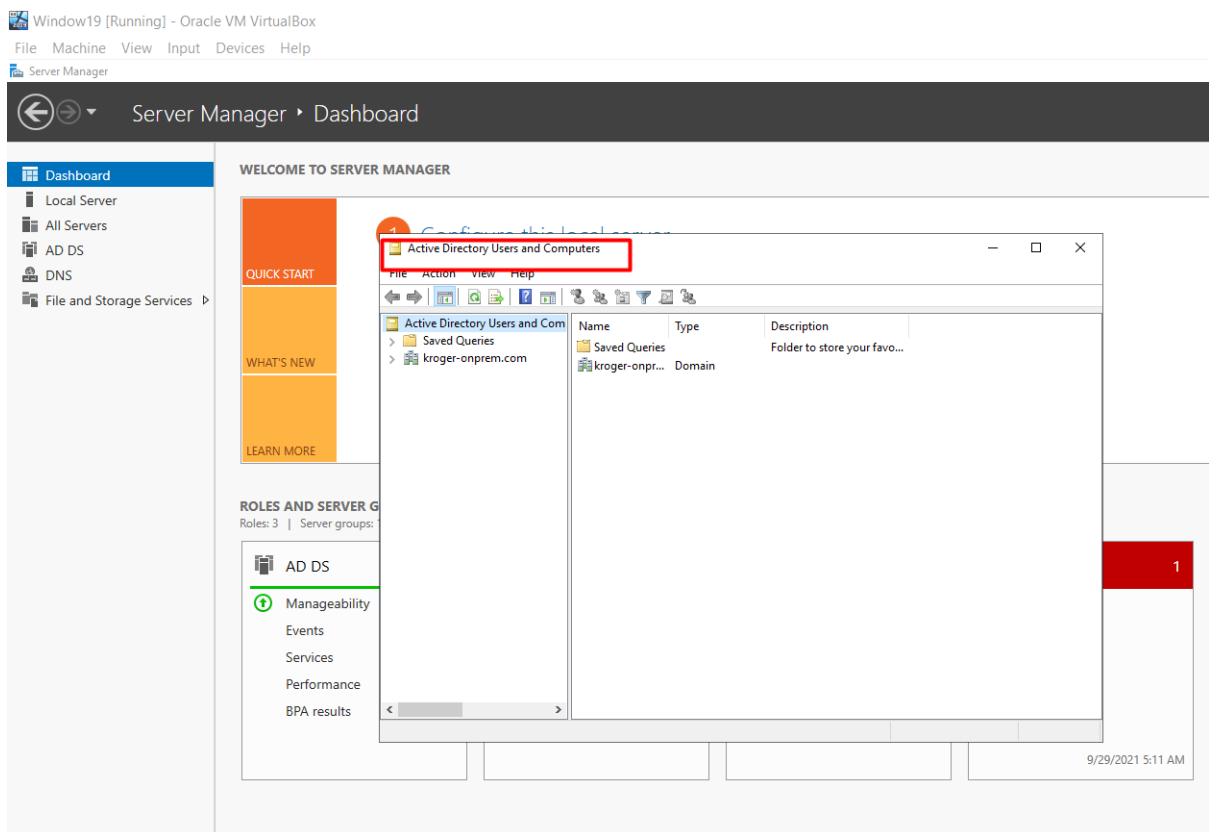
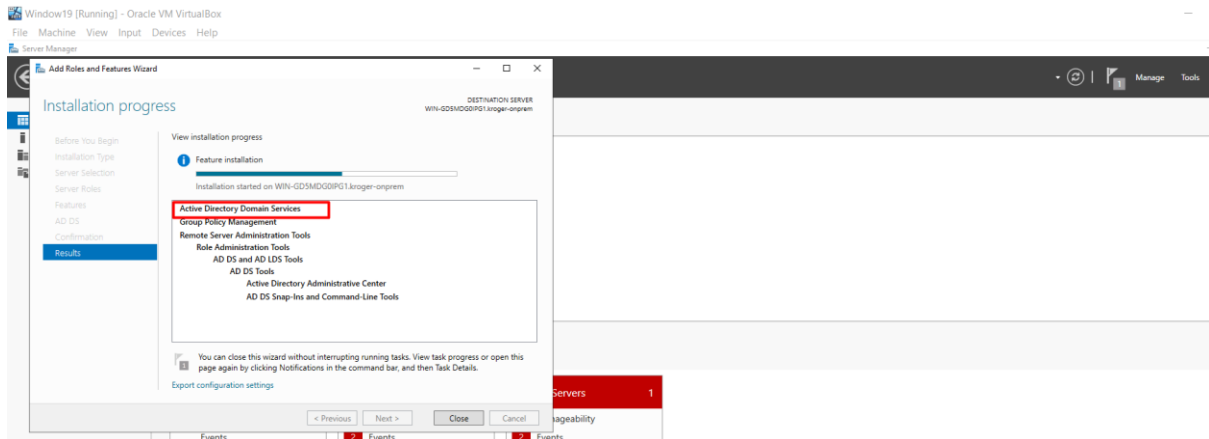
New Zealand Skills & Education G...
764701023@nzse.ac.nz

Rupali Kamble
rupalikamble104@gmail.com

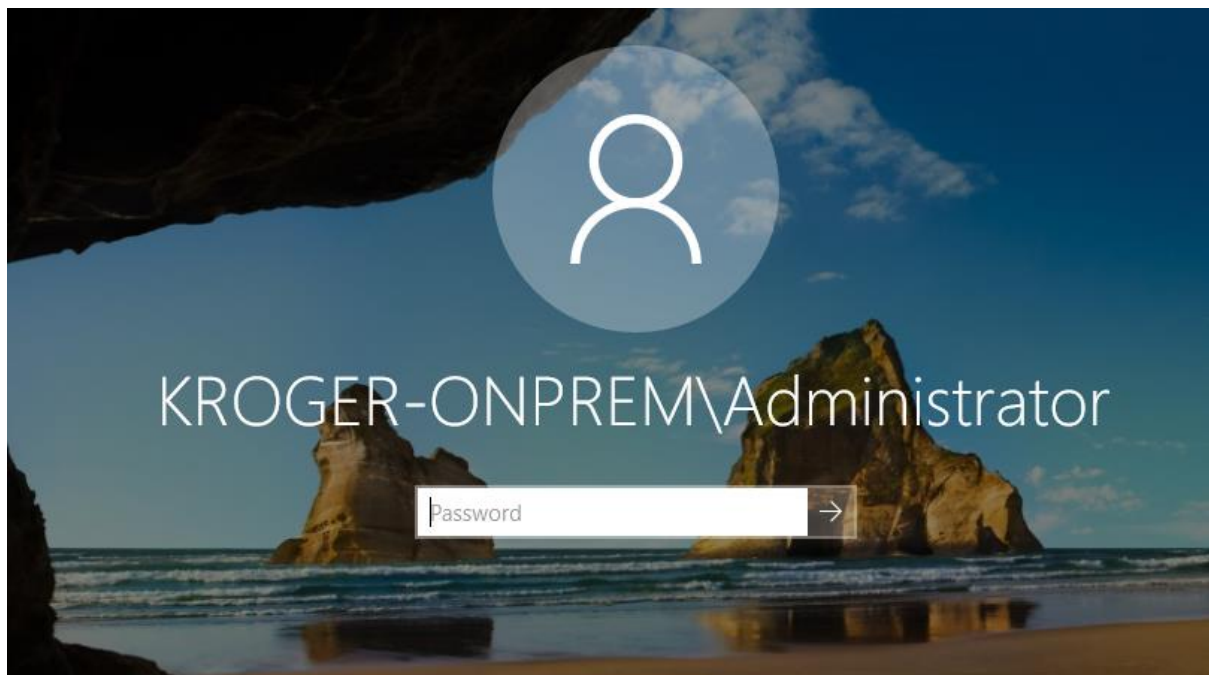
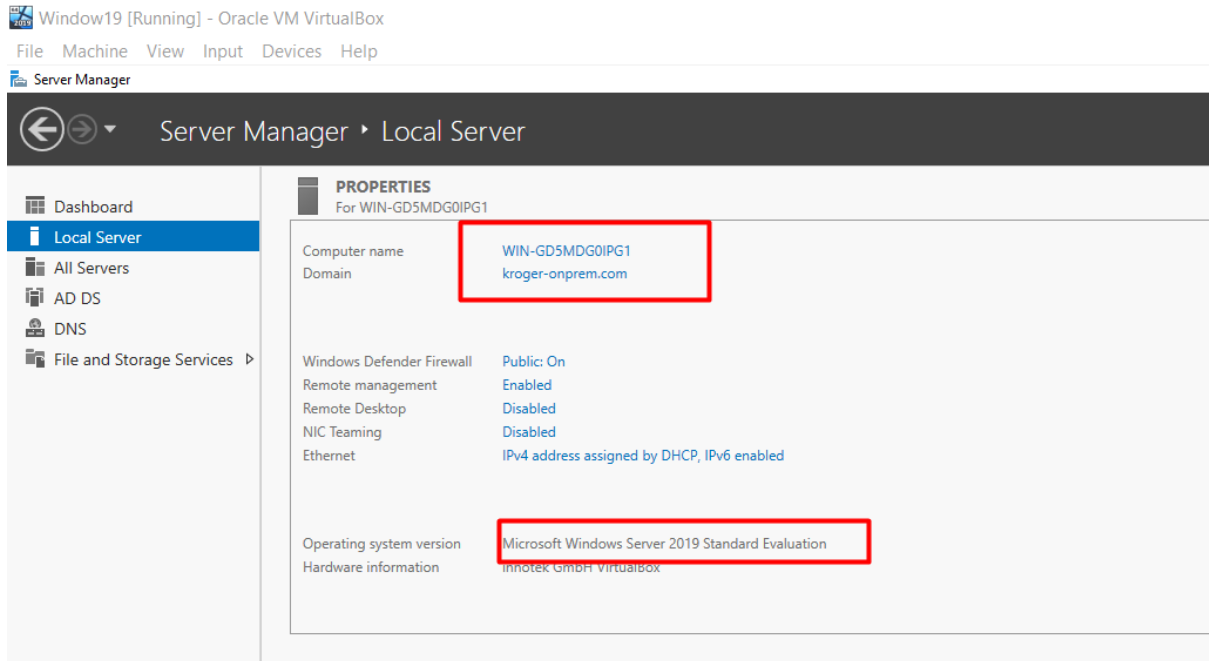
Sign in with a different account

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

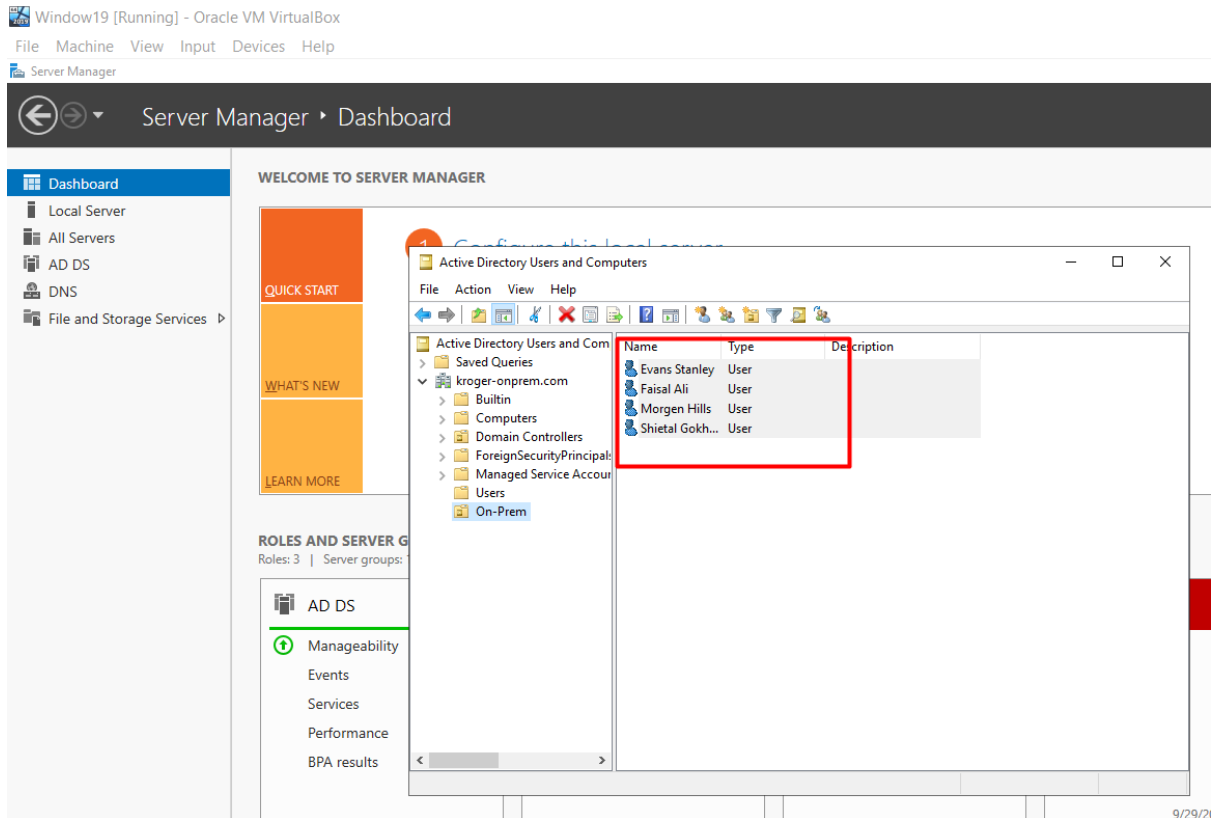
Task 1-Installing Windows Server with (ADDS) Role.



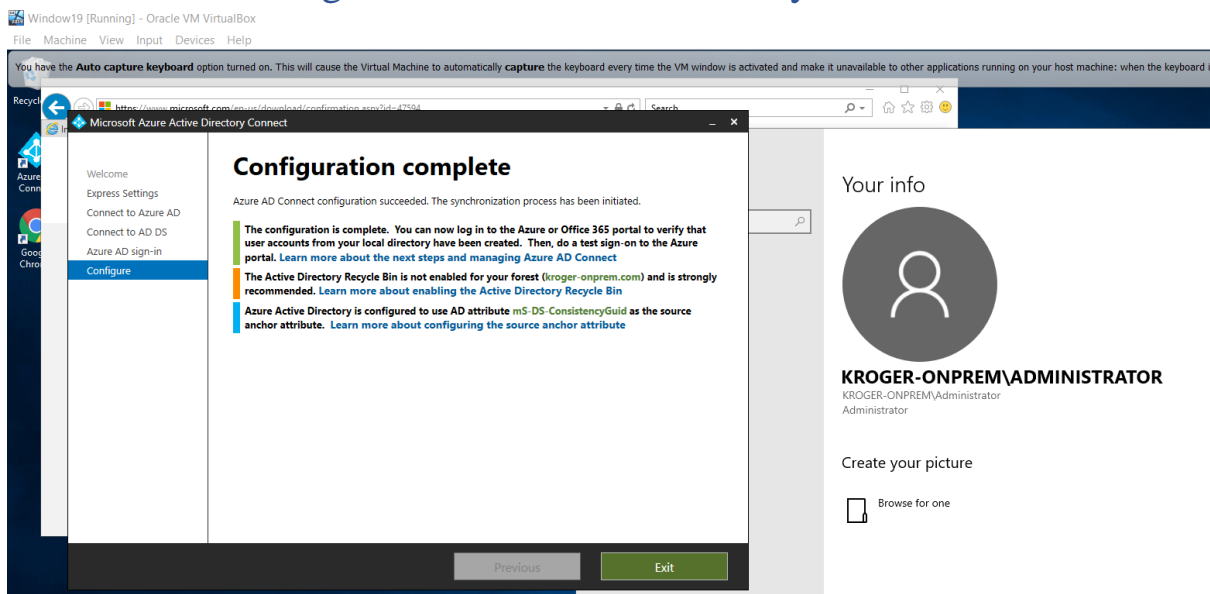
Task 2- Promoting Server with Domain Controller.



Task 3- Creating Domain Users under On-Premises.



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



Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory >

Users | All users (Preview) ...

Default Directory - Azure Active Directory

+ New user + New guest user Bulk operations Refresh Reset password Per-user MFA Delete user Columns Preview info Preview features

This page includes previews available for your evaluation. View previews →

12 users found

	Name	User principal name	User type	Directory synced	Account enabled	Identity issuer	Company name	Creation type
<input type="checkbox"/>	Brenda Wilson	Wbrenda@rupalikam...	Member	No	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Chris Brown	bchris@rupalikamble1...	Member	No	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Evans Stanley	StanleyE@rupalikambL...	Member	Yes	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Faisal Ali	Alif@rupalikamble104...	Member	Yes	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Harry Foster	Fharry@rupalikamble...	Member	No	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	kamble rohit	rohit@rupalikamble10...	Member	No	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Morgen Hills	MorgenH@rupalikambL...	Member	Yes	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	On-Premises D...	Sync_WIN-GD5MDG0L...	Member	Yes	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Peter Parker	Ppeter@rupalikamble...	Member	No	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Rupali Kamble	rupalikamble104_gma...	Member	No	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Shietal Gokhale	ShietalG@rupalikambL...	Member	Yes	Yes	rupalikamble104gmail.o		
<input type="checkbox"/>	Xiao Li	Lxiao@rupalikamble1...	Member	No	Yes	rupalikamble104gmail.o		

Task 5- Checking Integration on the cloud

multi-factor authentication

users service settings

Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authentication. Learn more about how to license other users. Before you begin, take a look at the multi-factor auth deployment guide.

View: Sign-in allowed users

Multi-Factor Auth status: Any

bulk update

<input type="checkbox"/>	DISPLAY NAME	USER NAME	MULTI-FACTOR AUTH STATUS
<input type="checkbox"/>	Brenda Wilson	Wbrenda@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Chris Brown	bchris@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Evans Stanley	StanleyE@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Faisal Ali	Alif@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Harry Foster	Fharry@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	kamble rohit	rohit@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Morgen Hills	MorgenH@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	On-Premises Directory Synchr	Sync_WIN-GD5MDG0IPG1_1e1c82ee940a@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Peter Parker	Ppeter@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Rupali Kamble	rupalikamble104_gmail.com@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Shietal Gokhale	ShietalG@rupalikamble104gmail.onmicrosoft.com	Enabled
<input type="checkbox"/>	Xiao Li	Lxiao@rupalikamble104gmail.onmicrosoft.com	Enabled

Select a user

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

The screenshot shows the Azure portal interface for managing a Virtual Machine Scale Set (VMSS) named 'VMSS-Rupali'. The 'Access control (IAM)' page is selected, showing a list of role assignments for the subscription. The 'Contributor' role is highlighted for several users, including Chris Brown, Harry Foster, Xiao Li, Peter Parker, Shietal Gokhale, and Brenda Wilson. The 'Contributor' role is also highlighted in the table.

Name	Type	Role	Scope	Condition
Chris Brown bchris@rupalika...	User	Contributor	This resource	None
Harry Foster Fharry@rupalika...	User	Contributor	This resource	None
Xiao Li Lxiao @rupalika...	User	Contributor	This resource	None
Peter Parker Ppeter @rupalika...	User	Contributor	This resource	None
Shietal Gokhale ShietalG@rupalika...	User	Contributor	This resource	None
Brenda Wilson Wbrenda@rupalika...	User	Contributor	This resource	None

DNCT604_A2_Portfolio_764701023_20

Microsoft Azure | Search resources, services, and docs (G+/J)

Home > Virtual machines > vm1-rupali

Virtual machines

Default Directory

+ Create | Switch to classic

Filter for any field...

Name ↑

- vm1-rupali
- Vm2-rupali

Search (Ctrl+/)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

- Networking
- Connect
- Windows Admin Center (preview)
- Disks
- Size
- Security
- Advisor recommendations
- Extensions
- Continuous delivery
- Availability + scaling

Number of role assignments for this subscription

18 | 2000

Search by name or email

Type: All | Role: All | Scope: All scopes | Group by: Role

6 items (6 Users)

<input type="checkbox"/>	Name	Type	Role	Scope	Condition
Contributor					
<input type="checkbox"/>	Chris Brown bchris@rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Harry Foster Fharry@rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Xiao Li Lxiao @rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Peter Parker Ppeter @rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Shietal Gokhale ShietalG@rupalik...	User	Contributor	This resource	None
<input type="checkbox"/>	Brenda Wilson Wbrenda@rupali...	User	Contributor	This resource	None

Page 1 of 1

Microsoft Azure | Search resources, services, and docs (G+/J)

Home > Virtual machines > Vm2-rupali

Virtual machines

Default Directory

+ Create | Switch to classic

Filter for any field...

Name ↑

- vm1-rupali
- Vm2-rupali

Search (Ctrl+/)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

- Networking
- Connect
- Windows Admin Center (preview)
- Disks
- Size
- Security
- Advisor recommendations
- Extensions
- Continuous delivery
- Availability + scaling

Check access | **Role assignments** | Roles | Deny assignments | Classic administrators

Number of role assignments for this subscription

18 | 2000

Search by name or email

Type: All | Role: All | Scope: All scopes | Group by: Role

6 items (6 Users)

<input type="checkbox"/>	Name	Type	Role	Scope	Condition
Contributor					
<input type="checkbox"/>	Chris Brown bchris@rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Harry Foster Fharry@rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Xiao Li Lxiao @rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Peter Parker Ppeter @rupalika...	User	Contributor	This resource	None
<input type="checkbox"/>	Shietal Gokhale ShietalG@rupalik...	User	Contributor	This resource	None
<input type="checkbox"/>	Brenda Wilson Wbrenda@rupali...	User	Contributor	This resource	None

Page 1 of 1

Task 2- Verifying user access on VMs.

Microsoft Azure

Search resources, services, and docs (G+J)

Home >

Virtual machines

Default Directory (rupalikamble104@gmail.onmicrosoft.com)

+ Create Switch to classic Reservations Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Services Maintenance

Filter for any field... Subscription == all Resource group == all Location == all Add filter

Showing 1 to 2 of 2 records.

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address	Disks
vm1-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	-	1
vm2-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	-	1

Microsoft Azure

Search resources, services, and docs (G+J)

Home >

Virtual machines

Default Directory (rupalikamble104@gmail.onmicrosoft.com)

+ Create Switch to classic Reservations Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Services Maintenance

Filter for any field... Subscription == all Resource group == all Location == all Add filter

Showing 1 to 2 of 2 records.

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address	Disks
vm1-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	-	1
vm2-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	-	1

Microsoft Azure

Search resources, services, and docs (G+J)

Home >

Virtual machines

Default Directory (rupalikamble104@gmail.onmicrosoft.com)

+ Create Switch to classic Reservations Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Services Maintenance

Filter for any field... Subscription == all Resource group == all Location == all Add filter

Showing 1 to 2 of 2 records.

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address	Disks
vm1-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	-	1
vm2-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	-	1

Phase 5- Monitoring Company's Resources.

Task 1- Creation of VMs on Cloud.

Microsoft Azure

Search resources, services, and docs (G+/I)

Home > Virtual machines

Default Directory

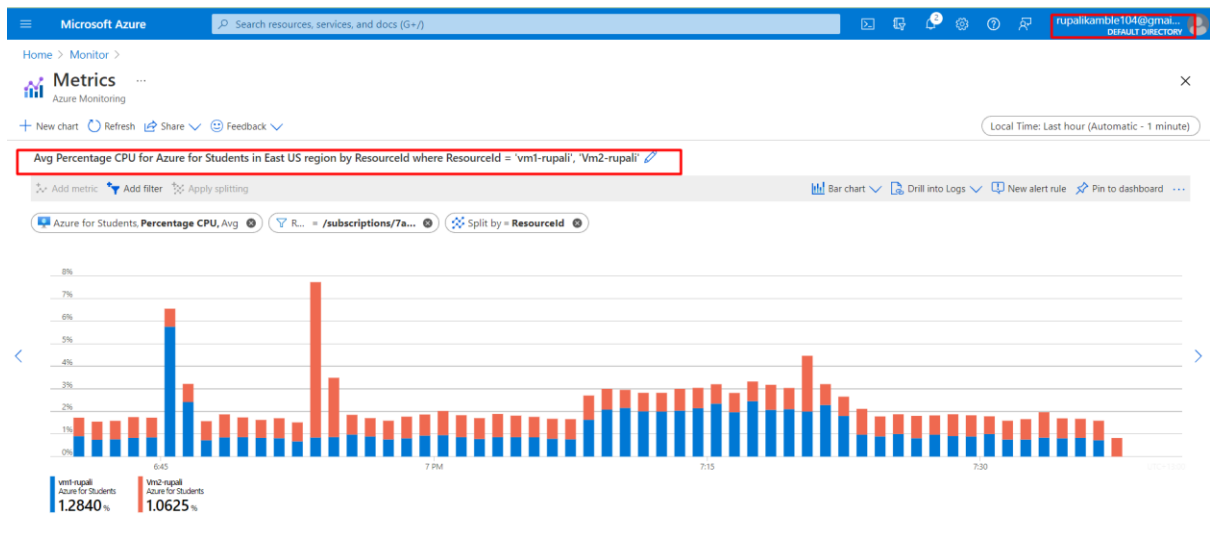
+ Create Switch to classic Reservations Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Services Maintenance

Filter for any field... Subscription == all Resource group == all Location == all Add filter

Showing 1 to 2 of 2 records.

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address	Disks
vm1-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	23.101.133.205	1
vm2-rupali	Azure for Students	rg-rupali	East US	Running	Windows	Standard_DS1_v2	40.121.245.249	1

Task 2- Setting Scope for VMs on the Cloud.



Task 3- Creating Alert Rule for VMs.

[Home](#) > [Monitor](#) >

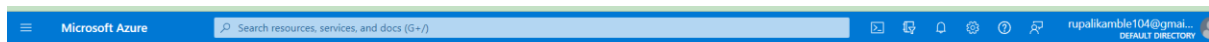
Create alert rule ...

Create an alert rule to identify and address issues when important conditions are found in your monitoring data. [View tutorial + read more](#)
When defining the alert rule, check that your inputs do not contain any sensitive content.

Scope

Select the target resource you wish to monitor.

Resource	Hierarchy
vm1-rupali, Vm2-rupali	Azure for Students > rg-rupali
Edit resource	



Create alert rule ...

Create an alert rule to identify and address issues when important conditions are found in your monitoring data. [View tutorial + read more](#)
When defining the alert rule, check that your inputs do not contain any sensitive content.

Scope

Select the target resource you wish to monitor.

Resource	Hierarchy
vm1-rupali, Vm2-rupali	Azure for Students > rg-rupali
Edit resource	

Condition

Configure when the alert rule should trigger by selecting a signal and defining its logic.

Condition name	Time series monitored	Estimated monthly cost (USD)
Whenever the average percentage cpu is greater than 83%	2	\$ 0.20
Add condition	2	Total \$ 0.20



Alert rules ...

[+](#) New alert rule [≡](#) Edit columns [🔍](#) Manage actions [🔄](#) Refresh | [▶](#) Enable [☐](#) Disable [🗑️](#) Delete

Subscription : **Azure for Students** Resource group : **All** Resource type : **All** Resource : **All** Signal type : **All signal types** Status : **Enabled**

Displaying 1 - 1 rules out of total 1 rules

Name	Condition	Status	Target resource	Target resource type	Signal type
<input type="checkbox"/> For-threshold limit	Whenever the average percentage cpu ...	Enabled	Vm2-rupali, vm1-rupali	Virtual machines	Metrics

Task 4- Setting an Action for Notification.

Microsoft Azure Search resources, services, and docs (G+/I)

Home > Monitor > Home

Create alert rule

✓ Whenever the average percentage cpu is greater than 83% 2 \$ 0.20

Add condition 2 Total \$ 0.20

ⓘ A metric alert rule that monitors multiple resources can only include one condition.

Actions

Send notifications or invoke actions when the alert rule triggers, by selecting or creating a new action group. [Learn more](#)

Action group name	Contains actions
ActionVm-rupali	1 Email, 1 SMS message
ActionVm-rupali2	1 Email, 1 SMS message

[Manage action groups](#)

Phase 6- Backup & Site Recovery Services

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

Home > Microsoft.RecoveryServicesV2 | Overview ✕ ...

Deployment

Search (Ctrl+/) << Delete Cancel Redeploy Refresh

Overview

Inputs

Outputs

Template

We'd love your feedback! →

✓ Your deployment is complete

Deployment name: Microsoft.RecoveryServicesV2
Subscription: [Azure for Students](#)
Resource group: [rsv-rg](#)

Start time: 9/30/2021, 8:29:22 PM
Correlation ID: cfbdfa2c-dcfe-4e31-b8b2-0bdae429ef63

Deployment details [\(Download\)](#)

Next steps

[Go to resource](#)

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

Microsoft Azure Search resources, services, and docs (G+/)

Home > Microsoft.RecoveryServicesV2 > rsv-rupali > Backup Goal >

Configure Backup ...

rsv-rupali

Backup policy * (new) DailyPolicy-rupali Edit this policy

Policy Details

Full Backup

Backup Frequency
Daily at 4:00 AM UTC

Instant Restore
Retain instant recovery snapshot(s) for 3 day(s)

Retention of daily backup point
Retain backup taken every day at 4:00 AM for 30 Day(s)

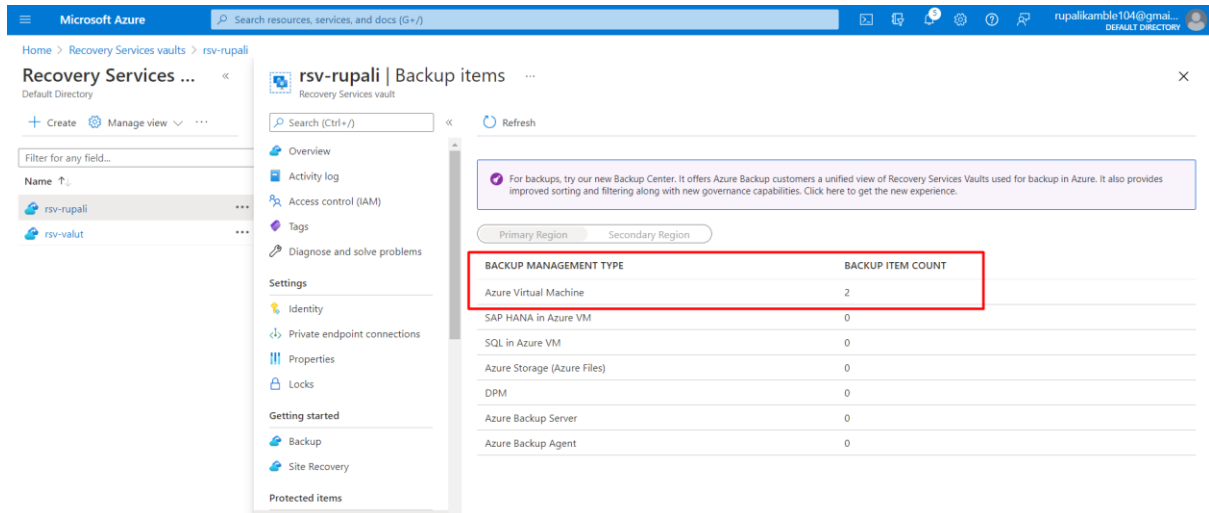
Retention of monthly backup point
Retain backup taken every month on First Sunday at 4:00 AM for 60 Month(s)

Virtual Machines

Name	Resource Group	OS Disk Only
vm1-rupali	rg-rupali	<input type="checkbox"/>
Vm2-rupali	rg-rupali	<input type="checkbox"/>

[Add](#)

DNCT604_A2_Portfolio_764701023_26



Microsoft Azure

Home > Recovery Services vaults > rsv-rupali

Recovery Services ...

Default Directory

+ Create Manage view ...

Filter for any field...

Name ↑

rsv-rupali ...

rsv-valut ...

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Identity

Private endpoint connections

Properties

Locks

Getting started

Backup

Site Recovery

Protected items

rsv-rupali | Backup items

Search (Ctrl+J)

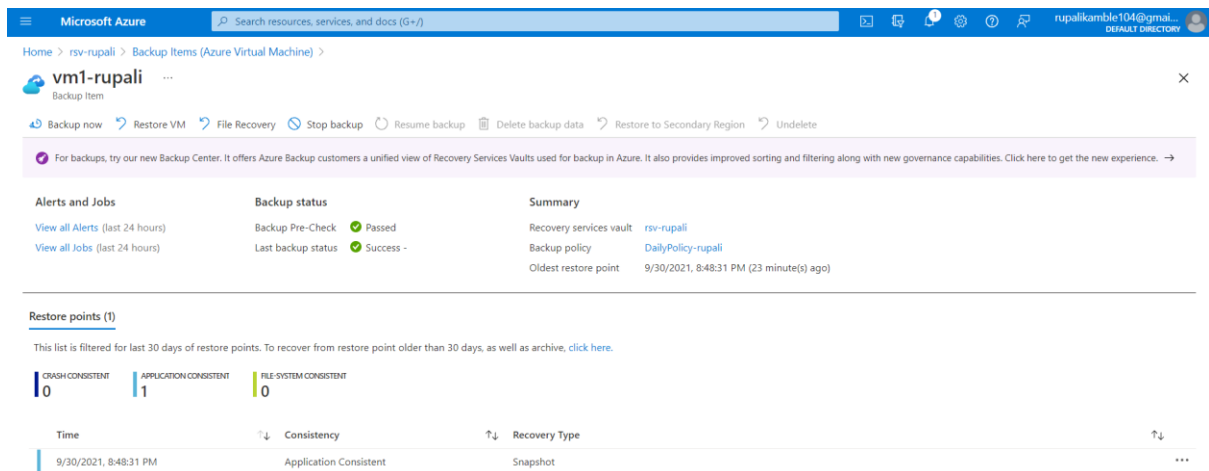
Refresh

For backups, try our new Backup Center. It offers Azure Backup customers a unified view of Recovery Services Vaults used for backup in Azure. It also provides improved sorting and filtering along with new governance capabilities. Click here to get the new experience.

Primary Region Secondary Region

BACKUP MANAGEMENT TYPE	BACKUP ITEM COUNT
Azure Virtual Machine	2
SAP HANA in Azure VM	0
SQL in Azure VM	0
Azure Storage (Azure Files)	0
DPM	0
Azure Backup Server	0
Azure Backup Agent	0

Task 3- Performing backup feature on VM.



Microsoft Azure

Home > rsv-rupali > Backup Items (Azure Virtual Machine)

vm1-rupali

Backup Item

Backup now Restore VM File Recovery Stop backup Resume backup Delete backup data Restore to Secondary Region Undelete

For backups, try our new Backup Center. It offers Azure Backup customers a unified view of Recovery Services Vaults used for backup in Azure. It also provides improved sorting and filtering along with new governance capabilities. Click here to get the new experience. →

Alerts and Jobs

View all Alerts (last 24 hours)

View all Jobs (last 24 hours)

Backup status

Backup Pre-Check Passed

Last backup status Success -

Summary

Recovery services vault rsv-rupali

Backup policy DailyPolicy-rupali

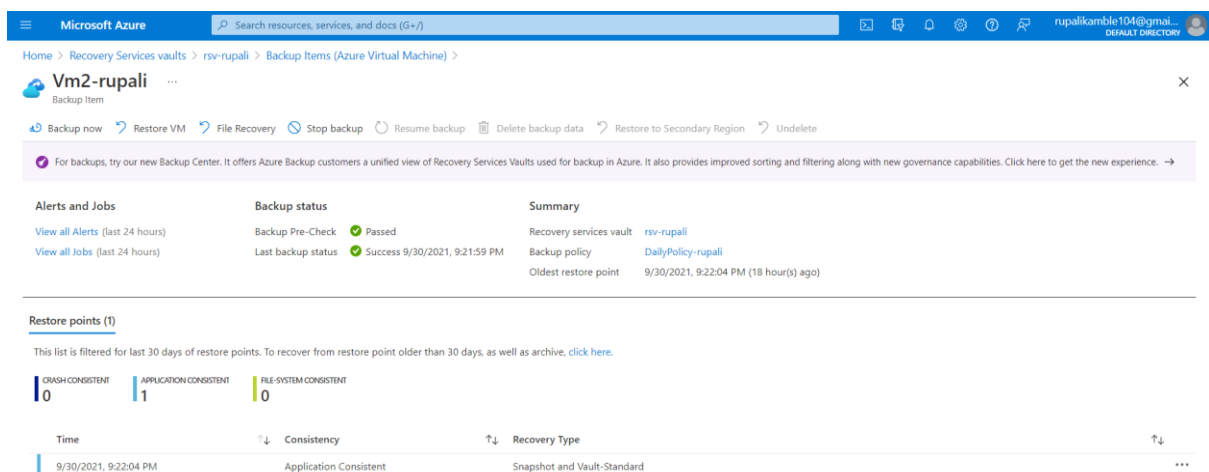
Oldest restore point 9/30/2021, 8:48:31 PM (23 minute(s) ago)

Restore points (1)

This list is filtered for last 30 days of restore points. To recover from restore point older than 30 days, as well as archive, click here.

CRASH CONSISTENT 0 APPLICATION CONSISTENT 1 FILE-SYSTEM CONSISTENT 0

Time	Consistency	Recovery Type
9/30/2021, 8:48:31 PM	Application Consistent	Snapshot



Microsoft Azure

Home > Recovery Services vaults > rsv-rupali > Backup Items (Azure Virtual Machine)

Vm2-rupali

Backup Item

Backup now Restore VM File Recovery Stop backup Resume backup Delete backup data Restore to Secondary Region Undelete

For backups, try our new Backup Center. It offers Azure Backup customers a unified view of Recovery Services Vaults used for backup in Azure. It also provides improved sorting and filtering along with new governance capabilities. Click here to get the new experience. →

Alerts and Jobs

View all Alerts (last 24 hours)

View all Jobs (last 24 hours)

Backup status

Backup Pre-Check Passed

Last backup status Success 9/30/2021, 9:21:59 PM

Summary

Recovery services vault rsv-rupali

Backup policy DailyPolicy-rupali

Oldest restore point 9/30/2021, 9:22:04 PM (18 hour(s) ago)

Restore points (1)

This list is filtered for last 30 days of restore points. To recover from restore point older than 30 days, as well as archive, click here.

CRASH CONSISTENT 0 APPLICATION CONSISTENT 1 FILE-SYSTEM CONSISTENT 0

Time	Consistency	Recovery Type
9/30/2021, 9:22:04 PM	Application Consistent	Snapshot and Vault-Standard

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

References

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TE AURERE, & KAITAIA. (2019). *Māori Data Futures Hui*. Wellington 6011, NZ: Science for Technological Innovation NSC, Data ILG, and Te Hiku Media.

Tikanga Maori Values. (2019). Retrieved from Rangathi Tu Rangatira: <https://www.r2r.org.nz/maori-health/tikanga-maori-values.html>

