



VM-based Setup on Azure

Virsec Security Platform 2.5

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About this Document

This document provides information about Docker and Docker Compose Installation on Azure VM. Two EC2 machines are required for VSP – one for VSP CMS and one for VSP AE (Remote AE only)

The pre-requisites for VSP installation:

1. EC2 machine with:
 - a. Docker
 - b. Docker Compose
 - c. Network Security Group with the below ports opened for communication:

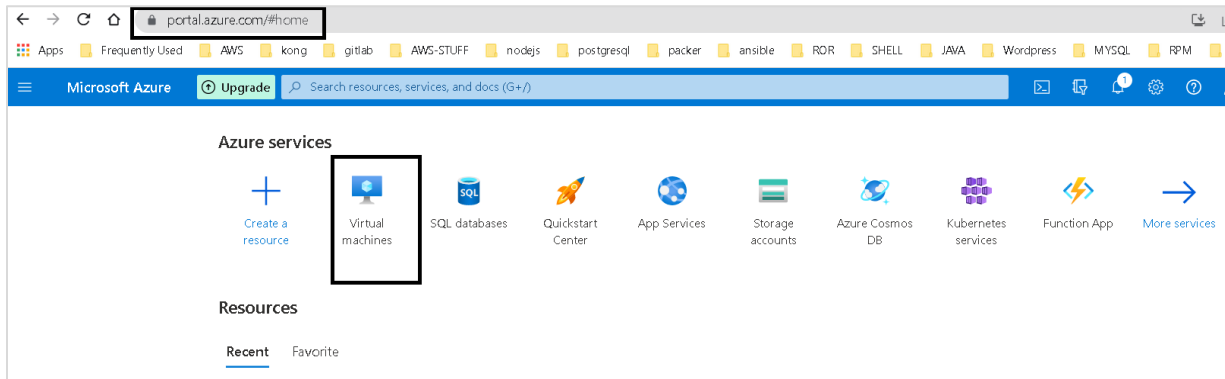
Client	Server	Client Port	Server Port	Protocol
VSP Probe (Deployed on customer workload)	CMS	Any	22, 443, 9092 (Secure Kafka <i>not</i> enabled) OR 9093 (Secure Kafka enabled)	TCP
VSP Probe (Deployed on customer workload)	Remote vRule (Optional)	Any	55555	TCP

Table 1 – Communication Matrix

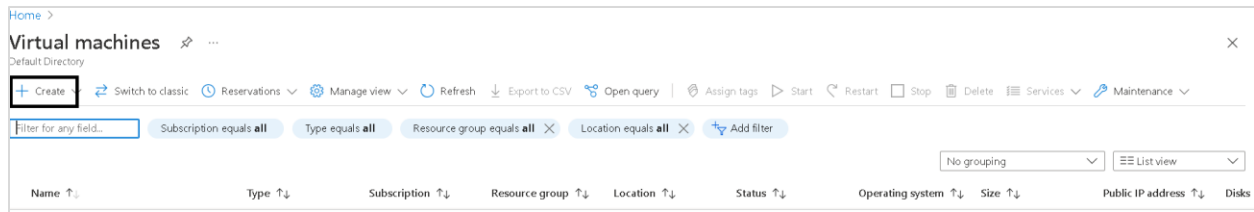
This document provides steps for the Azure environment setup

1. Azure Machine Creation

1. Access the Azure Virtual machines console and click **Virtual machines**



2. Navigate to **Virtual machines > Create > Azure virtual machine**



3. Provide the required information:

- a. **Subscription:** Free Trial/pay-as-you-go
- b. **Resource group:** If there is no existing resource group, create a new one
- c. **Virtual machine name:** Custom name for the VM
- d. **Region:** Provide the Custom region
- e. **Availability Zone:** Select the appropriate Availability Zone
- f. **Security Type:** Standard
- g. **Image:** RHEL 8.2 – Gen2
- h. **Size:** Select the below option according to the CMS Deployment Type:
 - i. Large: **standard_D16s_v3 (vcpu -16 Memory-64GiB)**
 - ii. Small: **standard_D8s_v3 (vcpu -8 Memory-32GiB)**

Project details

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

Subscription *

Resource group *

Create a virtual machine

Subscription *

Resource group *

Instance details

Virtual machine name *

Region *

Availability options

Availability zone *

Security type

Image *

Run with Azure Spot discount

Size *

i. **Authenticate Type:** Select **Password**. Provide the **username** and **password**

Create a virtual machine ...

Administrator account

Authentication type SSH public key
 Password

Username * ✓

Password * ✓

Confirm password * ✓

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * None
 Allow selected ports

Select inbound ports *

Warning: This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

j. **Enable SSH protocol to access the VM.** Click **Next: Disks**

Select inbound ports *

Warning: This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Licensing

If you have eligible Red Hat Enterprise Linux subscriptions that are enabled for Red Hat Cloud Access, you can use Azure Hybrid Benefit to attach your Red Hat subscriptions to this VM and save money on compute costs. [Learn more](#)

Your Azure subscription is currently not a part of Red Hat Cloud Access. In order to enable AHB for this VM, you must add this Azure subscription to Cloud Access. [Learn more](#)

k. Configure **OS Disk type** and **Encryption type**. Click **Create and attach a new disk**

Create a virtual machine

Disk options

OS disk type *

Delete with VM

Enable encryption at host

Encryption at host is not registered for the selected subscription. [Learn more about enabling this feature](#)

Encryption type *

Enable Ultra Disk compatibility

Data disks for appcert-dockercompose

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM

[Create and attach a new disk](#) [Attach an existing disk](#)

l. Configure **Name**, **Source Type** and **Size**. Click **OK**

Create a new disk

Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. [Learn more](#)

Name *

Source type *

Size * [Change size](#)

Encryption type *

Enable shared disk Yes No

Delete disk with VM

OK

m. After Configuring disk, click **Next: Networking**

Create a virtual machine

Enable encryption at host

i Encryption at host is not registered for the selected subscription. [Learn more about enabling this feature](#)

Encryption type * (Default) Encryption at-rest with a platform-managed key

Enable Ultra Disk compatibility

Data disks for appcert-dockercompose

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM
0	appcert-dockercompos...	128	Premium SSD LRS	Read-only	<input checked="" type="checkbox"/>

[Create and attach a new disk](#) [Attach an existing disk](#)

Advanced

[Review + create](#) [< Previous](#) **Next : Networking >**

n. Select the default values and click **Management**

o. Click **Tags** and provide the tags for identification. Click **Review + Create**

Create a virtual machine

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

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)

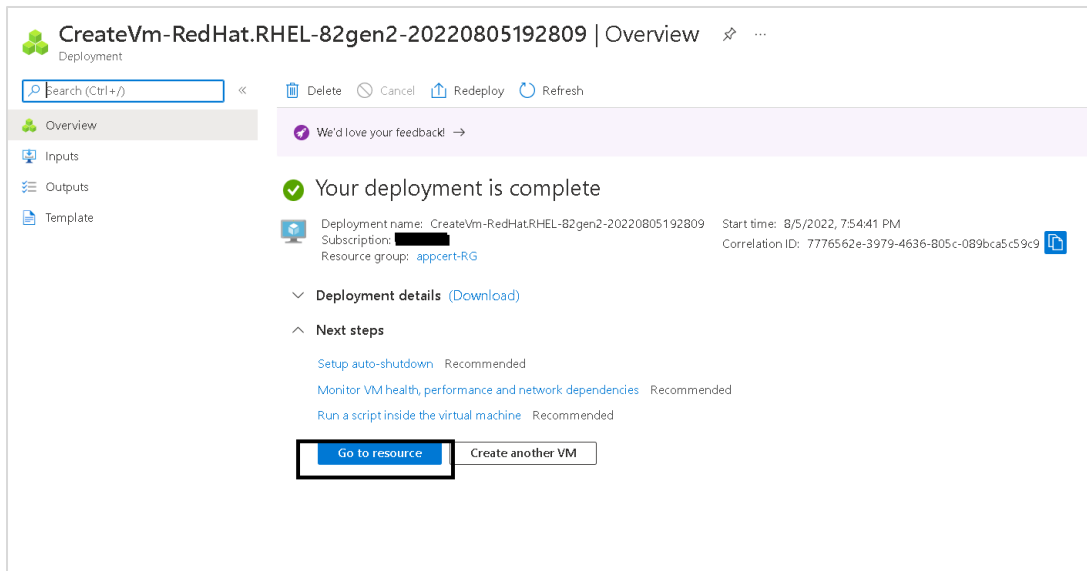
Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name	Value	Resource
Name	appcert-docker-compose	12 selected
		12 selected

[Review + create](#) [< Previous](#) **Next : Review + create >**

4. After validation, click **Create** to provision the VM

- After a successful VM creation, click **Go to resource**



- Copy the Public IP address and login to the machine using MobaXterm/CLI

2. Installation

- Log in to the two newly created machines using SSH and install Docker and Docker Compose using the commands below:
 - `sudo su`
 - Register the machine with the Red Hat subscription to download dependencies
 - `subscription-manager register --username username --password password --auto-attach`
 - `yum update`
 - `subscription-manager repos --enable=rhel-7-server-rpms --enable=rhel-7-server-extras-rpms --enable=rhel-7-server-optional-rpms`
 - `sudo yum install -y https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm`
 - `sudo yum install -y yum-utils device-mapper-persistent-data lvm2`
 - `sudo yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo`
 - `sudo yum install docker-ce`
 - `sudo systemctl enable --now docker.service`
 - `sudo curl -L "https://github.com/docker/compose/releases/download/1.23.2/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose`

- k. `sudo chmod +x /usr/local/bin/docker-compose`
- l. `mv /usr/local/bin/docker-compose /usr/bin/`
2. Verify the docker and docker compose versions using the commands:
 - a. `docker version #verify docker version`
 - b. `docker-compose version #verify docker compose version`

**NOTE:**

To enable custom ports for network security, click **Networking** and add inbound port rule so that VM allows inbound traffic for specified ports.

-- END OF DOCUMENT --