Create VM from image customer guidance.

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Version	:	**1.0**
Status	:	**Final**
Source	:	**Eviden Landing Zones for Azure**
Document date	:	**4 September 2023**
Number of pages	:	**16**

Contents

List of changes

Version	Date	Description	Author(s)
1.0	22-08-2023	Initial Eviden version	K.J. de Jager

1. Introduction

This manual explains the Shared Image Gallery functionality which is part of the VM OS Management Service.

2. Shared Image Gallery concepts

Shared Image Gallery is a service that helps to build structure and organization around custom images. Shared Image Galleries provide:

- Global replication of images.
- Versioning and grouping of images for easier management.
- Highly available images with Zone Redundant Storage (ZRS) accounts in regions that support Availability Zones. ZRS offers better resilience against zonal failures.
- Premium storage support (Premium_LRS).
- Sharing across subscriptions, and even between Active Directory (AD) tenants, using Azure RBAC.
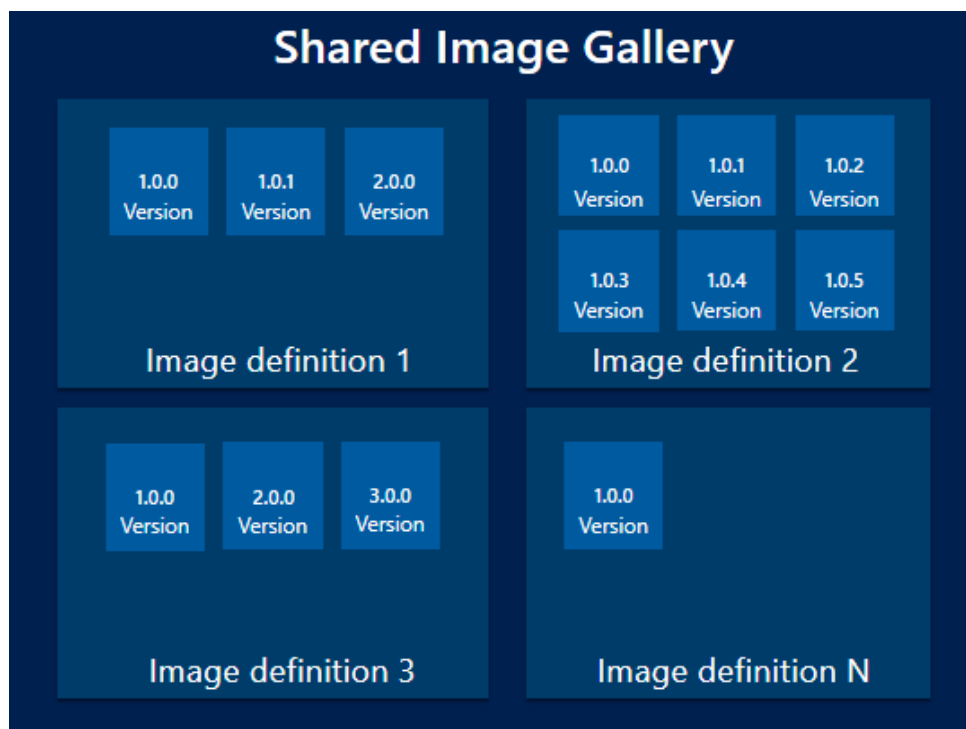- Scaling your deployments with image replicas in each region.

Diagram 2.1 Schematic overview Shared Image Gallery.

2.1 Image definitions

Image definitions are a logical grouping for versions of an image. The image definition holds information about why the image was created, what OS it is for, and other information about using the image. An image definition is like a plan for all of the details around creating a specific image. You don't deploy a VM from an image definition, but from the image versions created from the definition.

2.2 Image versions

An image version is what you use to create a VM. There can be multiple versions of an image as needed. When using an image version to create a VM, the image version is used to create new disks for the VM.

2.3 Overview custom image in the Shared Image Gallery

The high-level overview of all parts needed to create (and start) a VM from a Shared Image Gallery is provided in diagram 2.2.
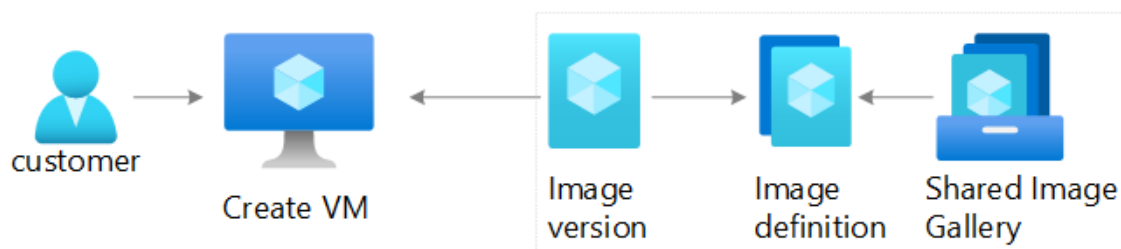

Diagram 2.2 high-level overview.

3. How to create a VM

Creating a VM, which utilizes a custom image from the Shared Image Gallery, can be done in multiple ways.

The following table sums up the different ways to create a VM and provides the URLs where the step-by-step manuals can be found.

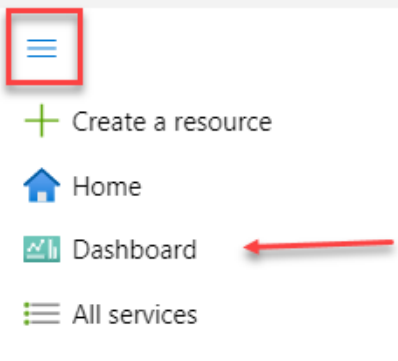| Nr	Method/technology	URL
1.	VM creation using Azure CLI	https://docs.microsoft.com/en-us/azure/virtual-machines/vm-generalized-image-version-cli#create-the-vm
2.	VM creation using Powershell	https://docs.microsoft.com/en-us/azure/virtual-machines/vm-generalized-image-version-powershell
3.	VM creation using ARM templates	Example ARM templates; https://github.com/Azure/azure-quickstart-templates/tree/master/101-vm-from-sig
4.	VM creation using the Portal	This document, in the next sub paragraphs.

Table 3.1 overview ways to create VMs.

3.1 Using code

When using code (nr 1. – 3. as described in table 3.1) to create a VM, the Resource ID of the image version in the Shared Image Gallery is necessary.

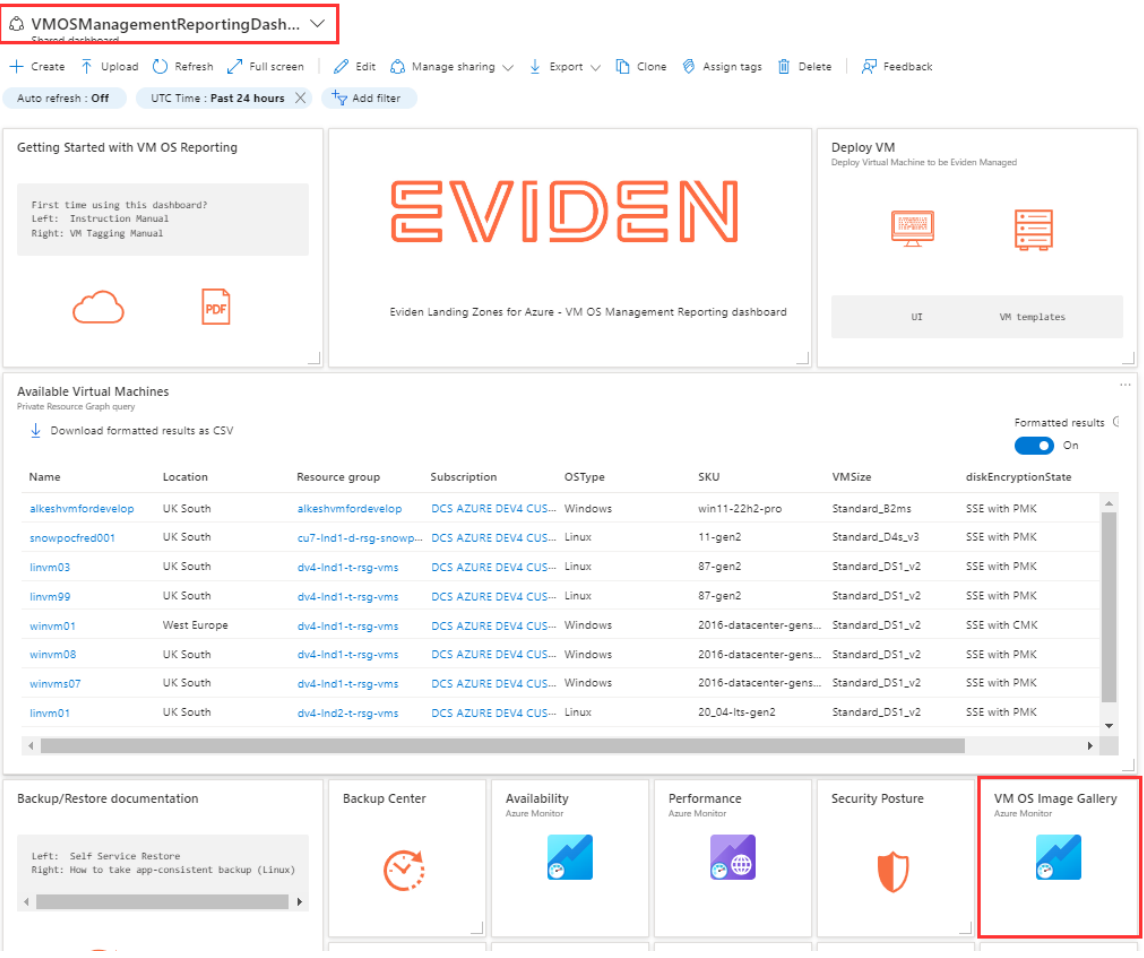The Resource ID of an image version can be found on the VMOSManagementReporting dashboard.

The steps to acquire the Resource ID are as follows:

Nr	Activity
1.	Log in to the Azure portal Browse to https://portal.azure.com and login with the appropriate credentials.
2.	In the portal menu (up left in the Azure portal), select **Dashboard.**

And select the **VMOSManagmentReportingDashboard**.

3.	On the **VMOSManagmentReportingDashboard** dashboard, scroll down to the **VM OS Image Gallery** tile and select it.
4.	In the **VM OS Image Gallery** blade all image versions configured in the Azure environment are displayed.

5.	Click the entry in the last column **ResourceId,** for the desired image version Resource ID.
6.	In the **Details** blade click the copy button to copy the Resource ID.

Details

Search

Value

/subscriptions/f70fef27-24b0-4190-950b-1475810ae77a/resourceGroups/cu1-lnd2-d-r...

The Resource ID can be pasted and used with code.
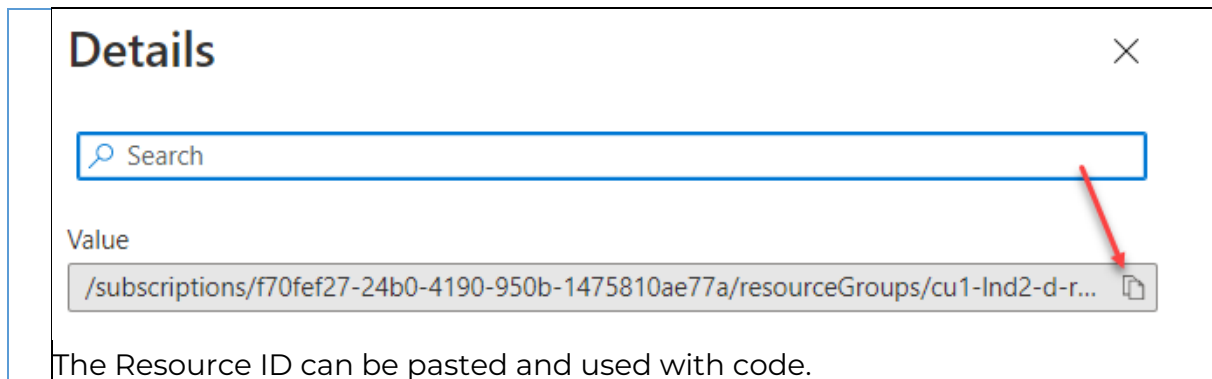
3.2 From the portal; step-by-step description

This step-by-step description focuses on the VM image and other related details of VM creation.

There are several extra sections (Disks, Networking, Management, Advanced & Tags) which are out of scope.

When using the portal to create resources there are multiple ways which lead to Rome.
This sub paragraph will describe two.
1. Creation using the Virtual Machines blade.
2. Creation starting from the Shared Image gallery blade.
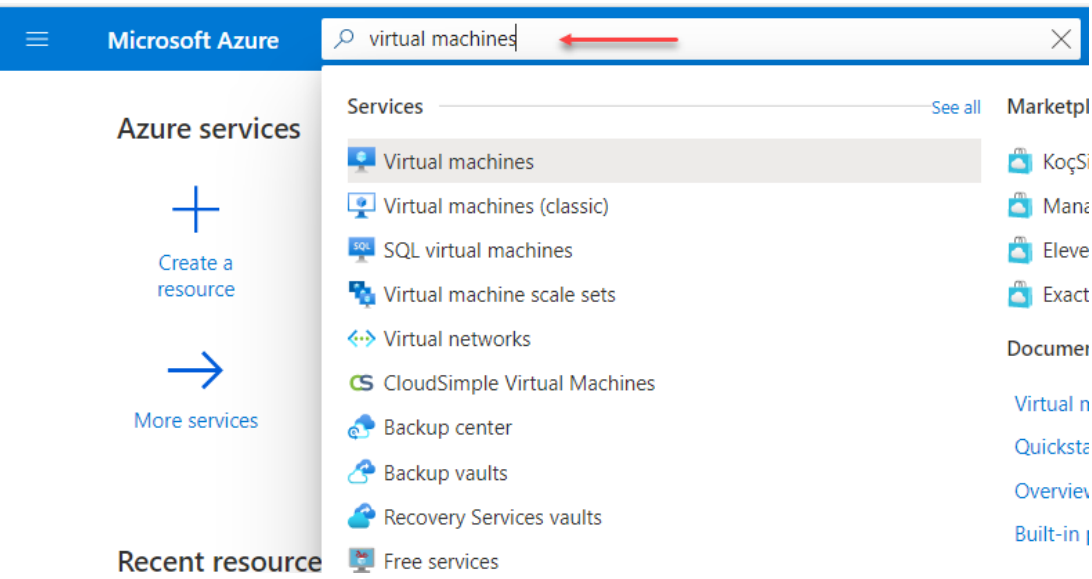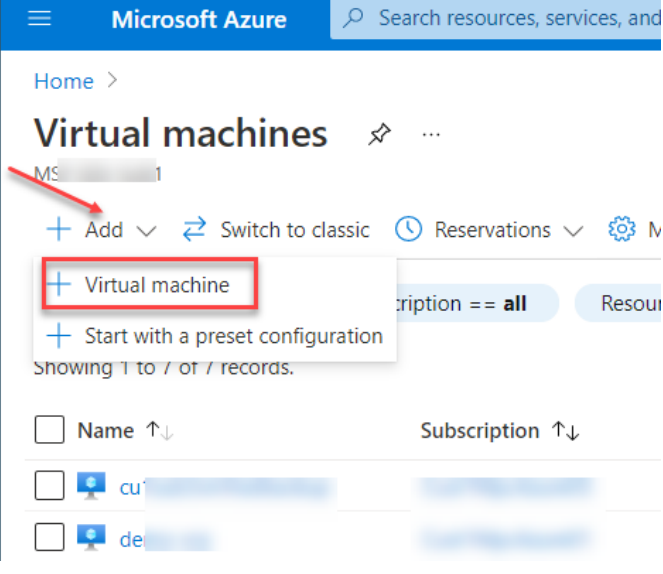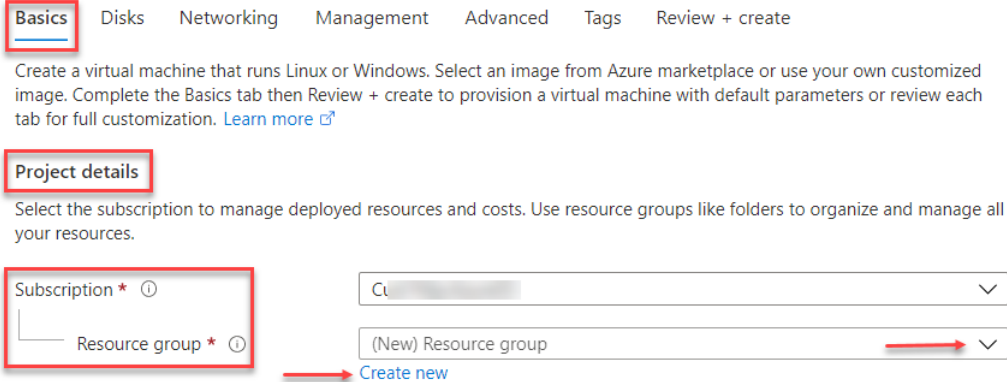
Note: When creating a VM from the portal, the latest version of the image is automatically selected. Creation of VMs from other versions of the image is currently not possible from the portal.

3.3 Virtual Machines blade

Nr	Activity
1.	Log in to the Azure portal Browse to https://portal.azure.com and login with the appropriate credentials.

2.	In the top search bar of the Azure portal page, type 'virtual machines' Choose **Virtual machines** from the results. This will take you to an overview (blade) of all the created virtual machines visible to the logged in user.
3.	In the **Virtual machines** blade select **Add** button, then click **Virtual machine**, to start the process of creating a VM.

4.	In the **Create Virtual machine** blade.
	In the **Basics** tab, under **Project details**, make sure the correct **Subscription** is selected and then choose to **Create new Resource group** and type '<resourcegroupname>' for the name or select the correct resource group from the list.
5a.	Under **Instance details**, type '<the desired VM name>' for the **Virtual machine name** and choose '<the region name>' for your **Region**.
	For the **Image**; select **See all images**.

Instance details

Virtual machine name *	
Region *	(Europe) West Europe
Availability options	No infrastructure redundancy required
Image *	Ubuntu Server 18.04 LTS - Gen1
	See all images
Azure Spot instance	☐
Size *	Standard_DS1_v2 - 1 vcpu, 3.5 GiB memory (US$49.57/month)
	See all sizes

5b. From the new **Select an image** blade, select My Items and click **Shared Images.**

Select an image

Marketplace   **My Items**

My Images

Shared Images

Publisher

All

🔍 Search

UbuntuApache
Atos   DemoGallery

WindowsCRM
Atos   DemoGallery

LinuxDef1
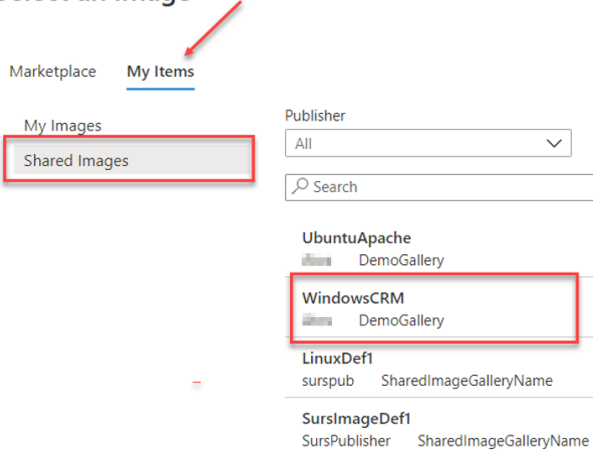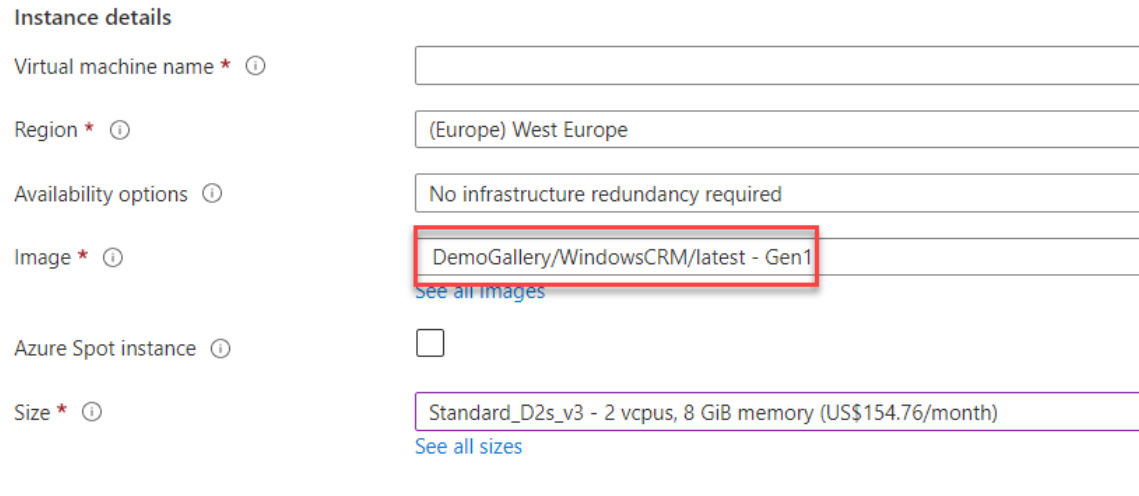surspub   SharedImageGalleryName

SursImageDef1
SursPublisher   SharedImageGalleryName

From the **Select an image** blade, select the desired image definition in the **Shared Image** gallery.

5c.	The selected image is displayed in the **Image** field. Select the '<the desired Size>' for the Size. Leave the other defaults.
6	For Linux OS': Under **Administrator account**, select **SSH public key**. In **Username** type the '<desired admin username>'. For **SSH public key source**, leave the default of Generate new key pair, and then type '<the desired key name>' for the **Key pair name**.

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	Administrator account Authentication type ⓘ ◉ SSH public key ○ Password ⓘ Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine. Username * ⓘ azureuser ✓ SSH public key source Generate new key pair ⌄ Key pair name * Name the SSH public key During the VM creation process (after selecting the **Review+ create** button), the **Generate new key pair window** opens, select **Download private key and create resource**. Your key file will be download as '<the desired key name>'.pem. This is needed when connecting to the VM.
7	For Windows OS': Under **Administrator account**, provide a username, and a password. **Administrator account** Username * ⓘ → adminazure Password * ⓘ → ••••••••••••• Confirm password * ⓘ → •••••••••••••
8.	Under **Inbound port rules** > **Public inbound ports**, choose **Allow selected ports** and then select the desired ports to allow, for example HTTPS (443), from the drop-down. **Inbound port rules** Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granul network access on the Networking tab. Public inbound ports * ⓘ ○ None ◉ Allow selected ports Select inbound ports * HTTPS (443)
9.	Leave the remaining defaults and then select the **Review + create** button at the bottom of the page.

3.4 Shared Image gallery blade.

The step-by-step guide(s) for creating a VM from the Shared Image gallery blade can be found on docs.microsoft.com.

The Linux guide is here and the Windows guide here.