AR4000S-Cloud on Microsoft Azure Installation Guide

Installation Guide

Introduction

The AR4000S-Cloud is a virtual router appliance product that provides functions such as VPN and firewall.

This installation guide enables you to install and configure your AR4000S-Cloud in a Microsoft Azure cloud environment.

Note: This document contains a lot of Azure-specific terminology. For more detailed information about Azure terms and concepts, please refer to the Azure documentation. Also, the screen-shots shown were current at the time of creation, but are subject to change.

AlliedWare Plus™
OPERATING SYSTEM

Contents

Procedure overview

The general procedure for setting up this product on Azure is as follows:

1. "Create a Microsoft Azure image"

Upload the VHD image file of this product to Azure to create a Microsoft Azure image.

2. "Create an instance"

Create an instance (virtual machine) of this product from the image created in Step 1.

Create a Microsoft Azure image

The standard way to create virtual machines on Microsoft Azure is to use a Virtual Machine Image. A virtual machine image is a **template** containing all the information needed to create instances of a specific type.

To allow the creation of AR4000S-Cloud instances on Microsoft Azure, an AR4000S-Cloud virtual machine image is needed.

The following section covers downloading AR4000S-Cloud from the Allied Telesis Download Center, and the requirements to upload the Virtual Hard Disk (VHD) image to your Microsoft Azure account as a virtual machine image.

Prerequisites

To create a Microsoft Azure AR4000S-Cloud image, you will need access to the following:

- A PC, connected to the Internet.

- A Microsoft Azure account.

- A Microsoft Azure AR4000S-Cloud VHD image. This can be downloaded from the Allied Telesis Download Center.

- The Microsoft Azure CLI 2.51. This can be downloaded from https://docs.microsoft.com/en-us/cli/azure/install-azure-cli.

Note: This process was tested with version 2.51. Later versions of the Microsoft Azure CLI will likely also work, but have not been specifically tested.

Uncompress the VHD image

The VHD image downloaded from the Allied Telesis Download Center will be in a compressed .gz format. Before it can be used, it must be uncompressed.

Using gunzip   On platforms where it is supported, such as Unix and Linux, the .gz file can be uncompressed using the **gunzip** command. To uncompress the file, use the following command:

```
gunzip <name_of_file.gz>
```

Using 7-Zip   On platforms where gunzip is not available, such as Windows, use 7-Zip to uncompress the file. 7-Zip can be downloaded from http://www.7-zip.org.

Install the Microsoft Azure CLI 2.51

The following steps require the use of the Microsoft Azure CLI 2.51. This can be downloaded from https://docs.microsoft.com/en-us/cli/azure/install-azure-cli. For instructions on how to install Microsoft Azure CLI 2.51, and documentation of its functionality, refer to https://docs.microsoft.com/en-us/cli/azure/overview.

Login to Microsoft Azure

To configure your Microsoft Azure account and upload the VHD, it is necessary to log in to the Microsoft Azure account using the Microsoft Azure CLI 2.51.

1. At the command line, enter the following command:

```
az login
```

2. This will open a web browser to authenticate your connection. Log in using your Microsoft Azure credentials.

Create the Microsoft Azure resource group

A Microsoft Azure Resource Group is required to associate all of your Microsoft Azure resources.

Note: If you already have an existing Resource Group that you want to use, you may skip this step.

Enter the following command at the Microsoft Azure CLI 2.51 command line:

```
az group create --location <region> --name <group>
```

The following parameters are required:

Table 1: az group create Command Parameters

`<region>`	The Microsoft Azure region for the Resource Group.
`<group>`	The name for the Resource Group.

Example:

```
az group create --location westus --name myresourcegroup
```

Note: For a list of an account's supported regions, use the following command:

```
az account list-locations --output table
```

Create the Microsoft Azure storage account

A Microsoft Azure Storage Account is required to store all of your Microsoft Azure resources.

Note: If you already have an existing Storage Account that you want to use, you may skip this step.

Enter the following command at the Microsoft Azure CLI 2.51 command line:

```
az storage account create --resource-group <group> --name <account> --sku
Standard_LRS
```

The following parameters are required:

Table 2: az storage account create Command Parameters

`<group>`	The name of the Resource Group where the Storage Account will be created.
`<account>`	The name for the Storage Account. Must be globally unique across all Microsoft Azure accounts.
Standard_LRS	A Microsoft Azure Standard Managed Disk using Locally Redundant Storage.

Example:

```
az storage account create --resource-group myresourcegroup
--name mystorageaccount --sku Standard_LRS
```

Create the Microsoft Azure storage container

A Microsoft Azure Storage Container is required as a specific area for your Microsoft Azure resources. This storage container will hold the uploaded AMF Cloud VHD.

Enter the following command at the Microsoft Azure CLI 2.51 command line:

```
az storage container create --account-name <account> --name <container>
```

The following parameters are required:

Table 3: az storage container create Command Parameters

`<account>`	The name of the Storage Account where the Storage Container will be created.
`<container>`	The name for the Storage Container.

Example:

```
az storage container create --account-name mystorageaccount
--name mycontainer
```

Upload the VHD to Microsoft Azure

The AMF Cloud VHD needs to be uploaded to the Storage Container. From there, it will be used to create the AMF Cloud image.

Enter the following command at the Microsoft Azure CLI 2.51 command line:

```
az storage blob upload --account-name <account> --container-name
<container> --name <vhd> --type page --file <path>
```

The following parameters are required:

Table 4: az storage blob upload Command Parameters

`<account>`	The name of the Storage Account.
`<container>`	The name of the Storage Container.
`<vhd>`	The destination name of the VHD to create.
`page`	VHD files must be uploaded as page blobs.
`<path>`	The path to the VHD file on your local machine.

Example:

```
az storage blob upload --account-name mystorageaccount
--container-name mycontainer --name AR4000S-Cloud-1.8.3-5.5.3-
1.3.vhd --type page --file "C:\VHD\AR4000S-Cloud-1.8.3-5.5.3-
1.3.vhd"
```

Determine the VHD URL

To create the AMF Cloud image, it is necessary to determine the blob URL of the uploaded VHD.

Enter the following command at the Microsoft Azure CLI 2.51 command line:

```
az storage blob url --account-name <account> --container-name <container>
--name <vhd>
```

The following parameters are required:

Table 5: az storage blob url Command Parameters

`<account>`	The name of the Storage Account.
`<container>`	The name of the Storage Container.
`<vhd>`	The name of the VHD file.

Example:

```
az storage blob url --account-name mystorageaccount --container-
name mycontainer --name AR4000S-Cloud-1.8.3-5.5.3-1.3.vhd
```

Note: Make note of the URL returned by this command, as it will be used in the next part of the process.

Create the Microsoft Azure image

Now create the Microsoft Azure AMF Cloud image, using the blob URL of the VHD.

Enter the following command at the Microsoft Azure CLI 2.51 command line:

```
az image create --resource-group <group> --name <image> --os-type Linux --
source <url>
```

The following parameters are required:

Table 6: az storage blob url Command Parameters

`<group>`	The name of the Resource Group.
`<image>`	The name for the image being created.
`Linux`	Operating system type. This must be Linux for AMF Cloud.
`<url>`	The blob URL for the VHD, from the previous step.

Example:

```
az image create --resource-group myresourcegroup --name AR4000S-
Cloud-1.8.3-5.5.3-1.3 --os-type Linux --source
"https://mystorageaccount.blob.core.windows.net/vhds/AR4000S-
Cloud-1.8.3-5.5.3-1.3.vhd"
```

Create an instance

The next step in the process is to create an instance (virtual machine).

Prerequisites

To create an instance, you need an AMI as a template. This section assumes that you have already completed the "Create a Microsoft Azure image" section.

Network configuration, SSH keys, access control, etc, also need to be planned in advance. This document assumes these have already been completed.
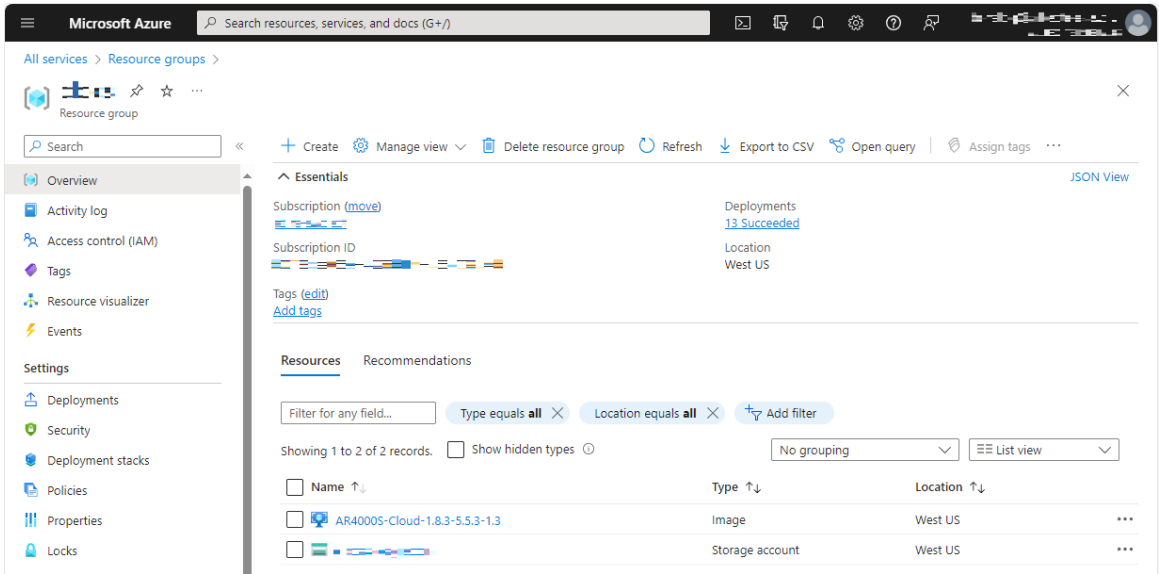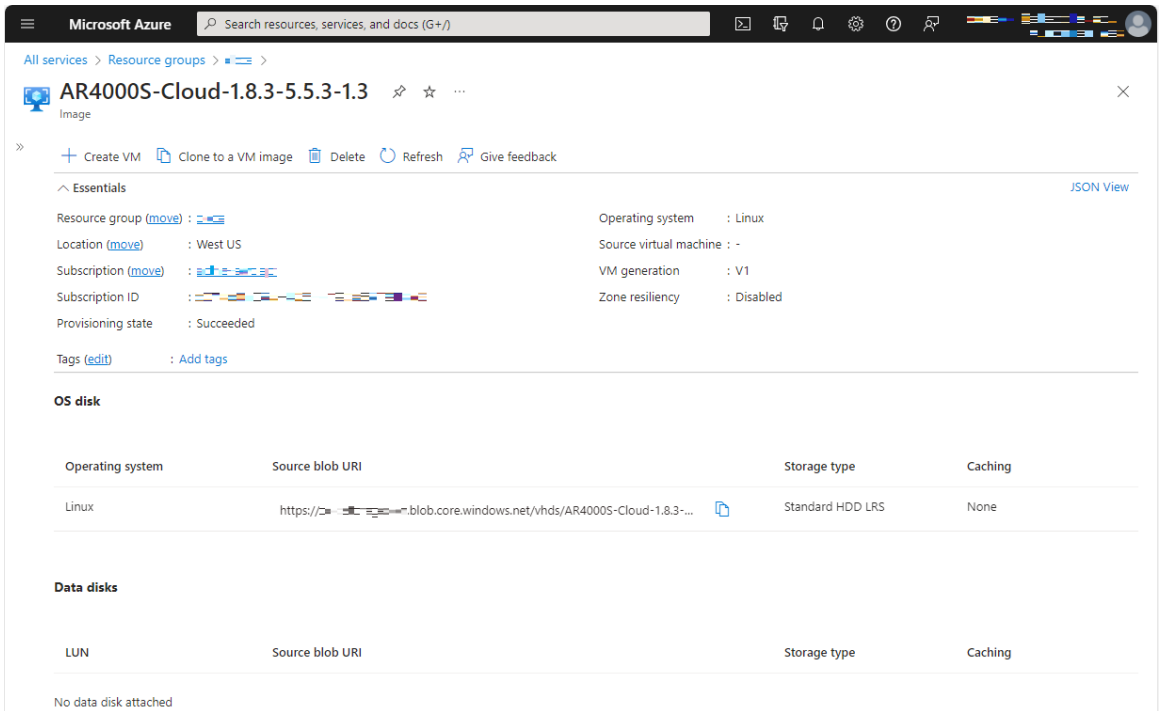
1. From the **All Services** page of Microsoft Azure, select the **Resource groups** service.
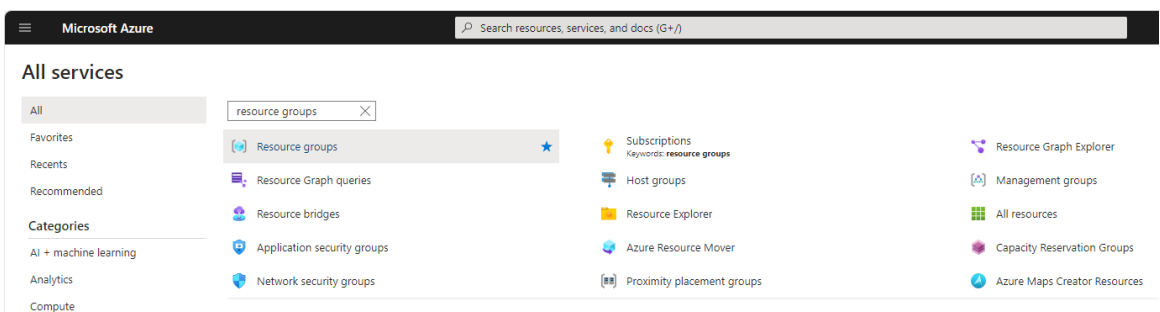
2. All of the resource groups are listed in the **Resource groups** service. Select the resource group created earlier.
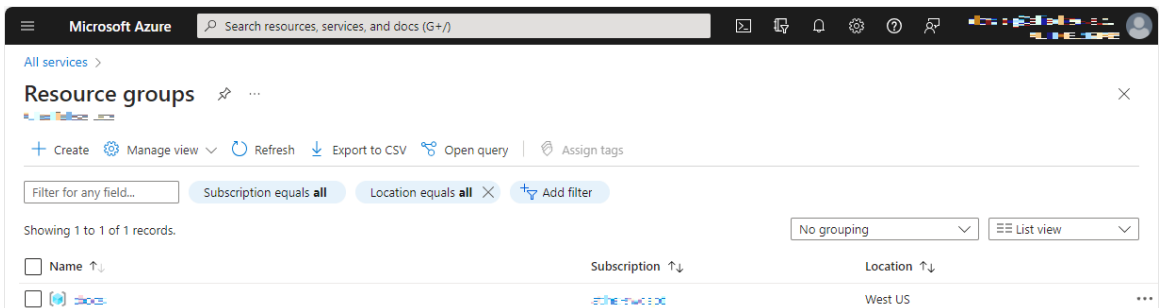
3. This view shows all the resources stored in the selected resource group. Select the image created earlier.

4. From the image view, select **+Create VM**.

5. From the **Create a virtual machine** page, the **Image** field should contain the image created earlier. The supported **VM Size** is Standard_B1 and above. When you have finished configuring the options, click on **Review + Create**.

6. This default setup will create a VM that can be connected to via SSH, using the default user-name and password, on the public IP listed on the instance page.

Note: The SSH private key generated by Azure is not used by AR-Cloud. For more information about configuring an SSH key to authenticate connecting users, refer to the Secure Shell (SSH) Feature Overview and Configuration Guide.

7. From the **All Services** page of Microsoft Azure, select the **Virtual machines** service.
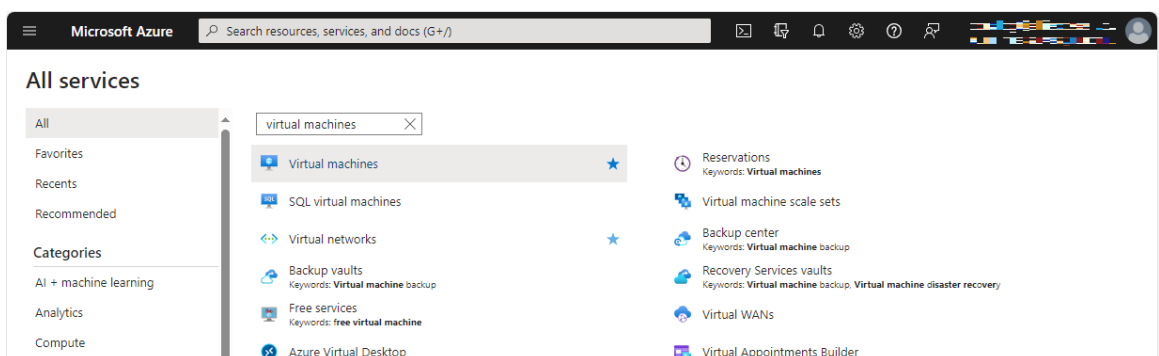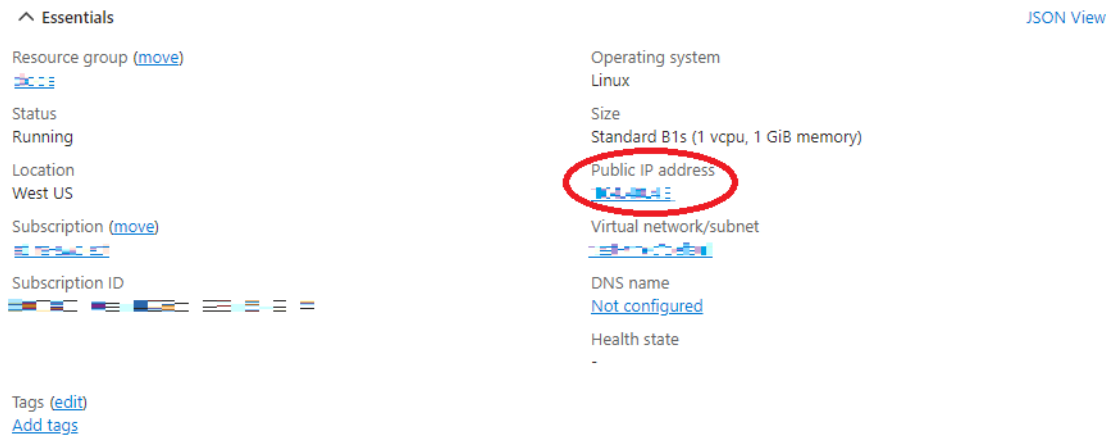
8. Select the VM you newly created.
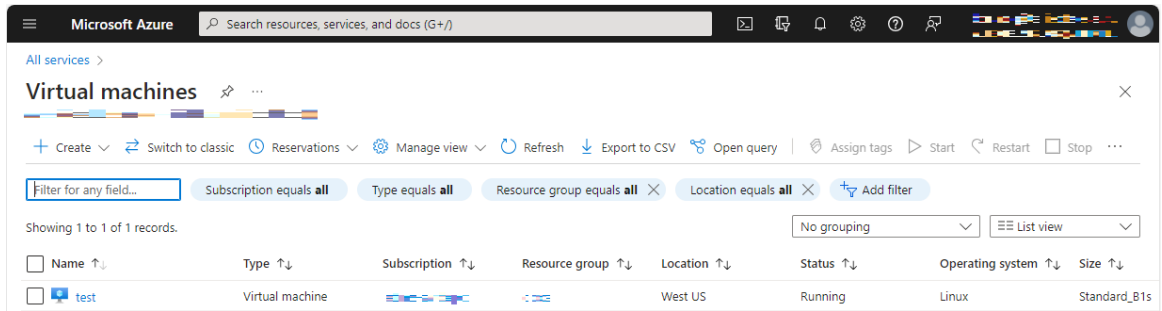
9. The service page shows information specific to the selected VM, including the public IP. You can connect to the VM using the default user-name and password. In the VM details, find the **Public IP address** of your VM, then use the following command to connect:

```
ssh <public-ip-of-vm>
```