

# Unified Access Gateway Powershell Deployment to Microsoft Azure

Technical Note

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Unified Access Gateway 3.7



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# Contents

- 1** Introduction 4
- 2** Prepare the Windows Client 5
- 3** Prepare the Microsoft Azure Environment 6
- 4** Upload the Unified Access Gateway Image to Microsoft Azure 8
- 5** Prepare an INI File 9
- 6** Deploy Unified Access Gateway to Azure with the uagdeployaz.ps1 PowerShell Command 12

# Introduction

This technical note describes the PowerShell command to deploy Unified Access Gateway 3.5 or later to Microsoft Azure. It describes the required steps to prepare the Azure environment before creating any Unified Access Gateway instances. It gives details of the INI file containing the configuration settings and shows how to run the deployment PowerShell command.

# Prepare the Windows Client

Prepare your Windows client for the PowerShell deployment.

## Prerequisites

Ensure that you are running this from a Windows 10 machine with access to the Internet.

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**Note** Other Windows operating systems may also be supported but these instructions are for Windows 10.

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## Procedure

- 1 Open the PowerShell command window with administrative rights.
- 2 Run the command.

```
Install-Module -Name AzureRM -Force
```

- 3 To log in to your Azure environment, run the command.

```
connect-AzurerMAccount
```

# Prepare the Microsoft Azure Environment

## 3

You can prepare the Azure environment before deployment.

### Procedure

- 1 Add a group named **Azure Resource Group** in to which Unified Access Gateway appliances will be deployed. It can either be done using the Azure Portal web interface, or by running the PowerShell command as in this example:

```
$resourceGroup="uagrg"
$location="uk south"
New-AzureRmResourceGroup -Name $resourceGroup -Location $location
```

- 2 Add a storage account, and a blob container called vhds within that storage account. It is to store the Unified Access Gateway images. It can be done using the Azure Portal web interface, or by running the PowerShell commands as in this example:

```
New-AzureRmStorageAccount -ResourceGroupName $resourceGroup -AccountName uagstore -Location $location -SkuName Standard_LRS
New-AzureRmStorageContainer -Name vhds -ResourceGroupName $resourceGroup -StorageAccountName uagstore
```

- 3 Create a Virtual Network with a default subnet.

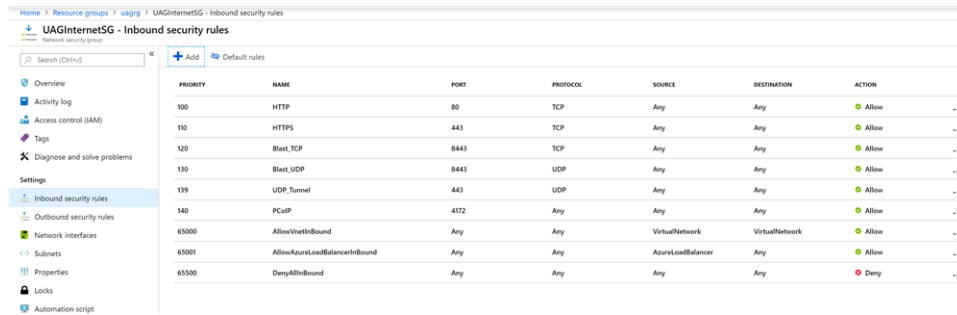
```
New-AzureRmVirtualNetwork -Name VirtualNetwork -ResourceGroupName $resourceGroup `
-Location $location -AddressPrefix "10.0.0.0/16"
```

- 4 Alternatively, the virtual network can have specified subnets so they can be specified as follows.

```
$frontendSubnet = New-AzureRmVirtualNetworkSubnetConfig -Name frontendSubnet -AddressPrefix "10.0.1.0/24"
$backendSubnet = New-AzureRmVirtualNetworkSubnetConfig -Name backendSubnet -AddressPrefix "10.0.2.0/24"
New-AzureRmVirtualNetwork -Name VirtualNetwork -ResourceGroupName $resourceGroup -Location $location -AddressPrefix "10.0.0.0/16" -Subnet $frontendSubnet,$backendSubnet
```

- 5 If the Unified Access Gateway appliance is to be directly accessed from the Internet, add a security group called **UAGInternetSG** to control the inbound port access from the Internet to each Unified Access Gateway. It can be done through the portal or with PowerShell. This security group can be shared by several Unified Access Gateway appliances. For example with the Horizon access, allow the following ports:

- HTTPS - TCP 443
- HTTP - TCP 80
- Blast -TCP 8443
- Blast/BEAT UDP 8443
- UDP Tunnel - UDP 443
- PCoIP - TCP and UDP 4172

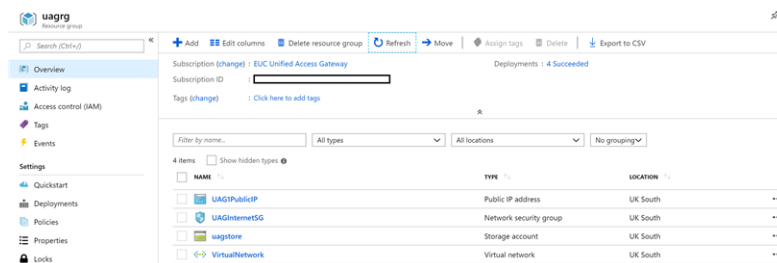


PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
100	HTTP	80	TCP	Any	Any	Allow
110	HTTPS	443	TCP	Any	Any	Allow
120	Blast_TCP	8443	TCP	Any	Any	Allow
130	Blast_UDP	8443	UDP	Any	Any	Allow
139	UDP_Tunnel	443	UDP	Any	Any	Allow
140	PCoIP	4172	Any	Any	Any	Allow
65000	AllowVnetInbound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInbound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInbound	Any	Any	Any	Any	Deny

- 6 Optionally add a public IP address object.

```
New-AzureRmPublicIpAddress -Name UAG1PublicIP -ResourceGroupName $resourceGroup -
AllocationMethod Static -Location $location
```

The objects are displayed in the Azure portal.



NAME	TYPE	LOCATION
UAG1PublicIP	Public IP address	UK South
UAGInternetSG	Network security group	UK South
uagstore	Storage account	UK South
VirtualNetwork	Virtual network	UK South

# Upload the Unified Access Gateway Image to Microsoft Azure

## 4

You can upload the Unified Access Gateway .vhd image to Azure.

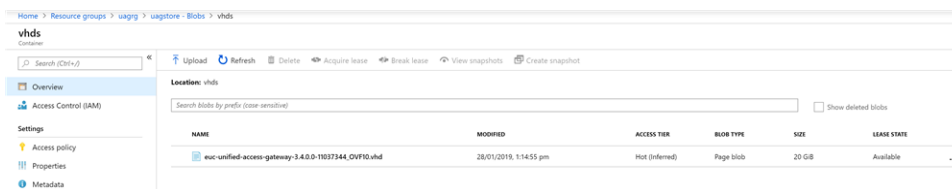
### Procedure

- 1 Obtain a Unified Access Gateway .vhd image file of the specific Unified Access Gateway version from VMware.
- 2 Use the following example PowerShell commands to upload the .vhd image to the vhds container created earlier.

```
$imageURI = "https://uagstore.blob.core.windows.net/vhds/euc-unified-access-gateway-3.4.0.0-11037344_OVF10.vhd"
```

```
$imagePath = "E:\UAGImages\euc-unified-access-gateway-3.4.0.0-11037344_OVF10.vhd"
```

```
Add-AzureRmVhd-ResourceGroupName $resourceGroup -LocalFilePath $imagePath `
-Destination $imageURI -NumberOfUploaderThreads 32
```



The screenshot shows the Azure portal interface for a container named 'vhds'. The left sidebar includes navigation options like Overview, Access Control (IAM), Settings, Properties, and Metadata. The main area displays a table of blobs. One blob is listed with the name 'euc-unified-access-gateway-3.4.0.0-11037344\_OVF10.vhd', modified on 28/01/2019 at 1:14:55 pm, with a size of 20 GiB and a lease state of 'Available'.

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
euc-unified-access-gateway-3.4.0.0-11037344_OVF10.vhd	28/01/2019, 1:14:55 pm	Hot (inferred)	Page blob	20 GiB	Available



## Prepare an INI File

Most sections of the INI file are identical to the standard INI settings for Unified Access Gateway as supported for vSphere, Hyper-V, and Azure deployments.

Refer to <https://communities.vmware.com/docs/DOC-30835>. For Microsoft Azure deployments, the following settings in the General section are not used.

- diskMode
- ds
- folder
- netInternet
- netManagementNetwork
- netmask0
- netmask1
- netmask2
- netBackendNetwork
- source
- target
- All the IPv4 settings
- All the IPv6 settings

For Microsoft Azure, there is a new group called Azure that contains all the settings specific to Microsoft Azure deployments.

**Table 5-1. Settings Specific to Azure Deployments**

Group Name	Value	Example	Description
Azure	diskStorageContainer	diskStorageContainer=uagdisks	Blob container name for the storage of the Unified Access Gateway disk image. If this container does not exist, it is created automatically.
	imageURI	imageURI=https://uagstore.blob.core.windows.net/vhds/euc-unified-access-gateway-3.4.0.0-11037344_OVF10.vhd	URI of the Unified Access Gateway .vhd image file to deploy.
	location	location=uksouth	Azure location for the Unified Access Gateway deployment.

**Table 5-1. Settings Specific to Azure Deployments (continued)**

Group Name	Value	Example	Description
	networkSecurityGroupName0	networkSecurityGroupName0=UAGInternetSG	Optional Azure network security group name for the eth0 NIC.
	networkSecurityGroupName1	networkSecurityGroupName1=UAGManagementSG	Optional Azure network security group name for the eth1 NIC.
	networkSecurityGroupName2	networkSecurityGroupName2=UAGBackendSG	Optional Azure network security group name for the eth2 NIC.
	publicIPAddressName0	publicIPAddressName0=UAG1PublicIP0	Optional Azure public IP address object name for eth0 NIC.
	publicIPAddressName1	publicIPAddressName1=UAG1PublicIP1	Optional Azure public IP address object name for eth1 NIC.
	publicIPAddressName2	publicIPAddressName2=UAG1PublicIP2	Optional Azure public IP address object name for eth2 NIC.
	resourceGroupName	resourceGroupName=uagrg	Name of the resource group for the Unified Access Gateway deployment.
	subnetName0	subnetName0=subneta	Optional subnet name for eth0 NIC subnet within the specified virtual network. If it is not set, it uses the default subnet for the virtual network.
	subnetName1	subnetName1=subnetb	Optional subnet name for eth1 NIC subnet within the specified virtual network. If it is not set, it uses the default subnet for the virtual network.
	subnetName2	subnetName2=subnetc	Optional subnet name for eth2 NIC subnet within the specified virtual network. If it is not set, it uses the default subnet for the virtual network.
	storageAccountName	storageAccountName=uagstore	Azure storage account name for location of the vhds container and for the disk images.
	subscriptionID	subscriptionID=12345678-1234-1234-1234-123456788901	Azure account subscription ID.
	virtualNetworkName	virtualNetworkName=VirtualNetwork	Azure Virtual Network name.
	vmSize	vmSize=Standard_A2_v2	Azure VM image size.

## Example of an INI File

```
[General]
name=UAG11
deploymentOption=twonic
licenseEdition=Advanced
honorCipherOrder=true

[Azure]
subscriptionID=12345678-1234-1234-1234-123456788901
resourceGroupName=uagrg
```

```
location=uk south
storageAccountName=uagstore
imageURI=https://uagstore.blob.core.windows.net/vhds/euc-unified-access-
gateway-3.4.0.0-11037344_OVF10.vhd
diskStorageContainer=uagdisks
vmSize=Standard_A2_v2
virtualNetworkName=VirtualNetwork

# eth0 settings
subnetName0=subneta
publicIPAddressName0=UAGPublicIP0
networkSecurityGroupName0=UAGInternetSG

# eth1 settings
subnetName1=subnetb
```

# Deploy Unified Access Gateway to Azure with the uagdeployaz.ps1 PowerShell Command

## 6

You can deploy Unified Access Gateway to Azure with the PowerShell command.

### Procedure

- 1 Download `uagdeployaz.ps1` and `uagdeploy.psm1` into a folder on your Windows machine.
- 2 Run the command.

```
uagdeployaz.ps1 uag1.ini
```