

Migrating Azure Virtual Machines to AWS using AWS SMS Connector for Azure

AWS released April 18, 2019 support for migrating virtual machines from Microsoft Azure to AWS through the AWS Server Migration Service (SMS) service. The new feature makes it easy to migrate existing applications running on Microsoft Azure to the AWS cloud to take advantage of increased reliability, faster performance, more security features, and lower costs.

AWS Server Migration Service is an agentless service that facilitates and expedites the migration of your existing workloads to AWS. The service enables you to automate, schedule, and monitor incremental replications of active server volumes, which facilitates large-scale server migration coordination. So far, customers could migrate VMs running in the VMware vSphere and Microsoft Hyper-V environments. As of today, customers can use the simplicity and ease of use of Server Migration Service to also migrate VMs running on Microsoft Azure. You can discover Azure VMs, group them into applications, and migrate a group of applications as a single unit without having to go through the hassle of coordinating the replication of the individual servers or decoupling the application dependencies. Server Migration Service significantly reduces application migration time, as well as decreases the risk of errors in the migration process.

This tutorial will take you step-by-step on how to provision the AWS Server Migration Service (SMS) virtual machine on Microsoft Azure, discover the virtual machines in Microsoft Azure, create a replication job, and finally launch the instance on AWS.

Steps for this procedure include:

- 1 - Provision the AWS Server Migration Service (SMS) virtual machine on Microsoft Azure.
- 2 - Replicating virtual machines to AWS.
- 3 - Launch the migrated virtual machines as an Amazon EC2 Instance.

1- Provision the AWS Server Migration Service (SMS) virtual machine on Microsoft Azure.

1. Access the website <https://docs.aws.amazon.com/server-migration-service/latest/userguide/Azure.html> and download three powershell scripts:

File	URL
Installation script	https://s3.amazonaws.com/sms-connector/aws-sms-azure-setup.ps1
MD5 hash	https://s3.amazonaws.com/sms-connector/aws-sms-azure-setup.ps1.md5
SHA256 hash	https://s3.amazonaws.com/sms-connector/aws-sms-azure-setup.ps1.sha256

2. Validate the integrity and signature of the scripts to ensure that they were not modified during transit to your computer. * Requires Powershell 5.1 or newer *

- 2.1 To validate the MD5 hash, run the following command and wait for something similar as a result:

```
PS C:\SMSAzure> Get-FileHash aws-sms-azure-setup.ps1 -Algorithm MD5
Algorithm      Hash
-----
MD5           4BF7A374D19A24CEAB8A05CA1260EE6B
```

- 2.2 To validate the SHA256 hash, run the following command and wait to see something similar as a result:

```
PS C:\SMSAzure> Get-FileHash aws-sms-azure-setup.ps1 -Algorithm SHA256
Algorithm      Hash
-----
SHA256        1A0119CBFEBBD63E8C1C8A1165BA728D5541D03B5748E084C130C5004B92D7BF
```

- 2.3 Compare the returned values by opening the aws-sms-azure-setup.ps1.md5 and aws-sms-azure-setup.ps1.sha256 files in your favorite text editor.

- 2.4 To validate if the Powershell script has a valid AWS signature, run the following command:

```
PS C:\SMSAzure> Get-AuthenticodeSignature .\aws-sms-azure-setup.ps1 | Select *
signerCertificate   : [Subject]
                     : CN="Amazon Web Services, Inc.", OU=EC2 Windows, O="Amazon Web Services, S=Washington, C=US, PostalCode=98109, STREET=410 Terry Ave N, SERIALNUMBER=OID.1.3.6.1.4.1.311.60.2.1.2=Delaware, OID.1.3.6.1.4.1.311.60.2.1.3=US, O=organization
                     : [Issuer]
                     : CN=Digicert EV Code Signing CA (SHA2), OU=www.digicert.com, O=Digicert Inc.
                     : [Serial Number]
                     : 015739DFC76C6256E7F4637282ACF160
                     : [Not Before]
                     : 6/1/2017 12:00:00 AM
                     : [Not After]
                     : 6/4/2020 12:00:00 PM
                     : [Thumbprint]
                     : C21B73FB4E5B64D1AB23A6E4620E7780819446E9
TimestampperCertificate :
Status          : valid
StatusMessage   : Signature verified.
Path            : C:\SMSAzure\aws-sms-azure-setup.ps1
SignatureType   : Authenticode
IsOSBinary     : False
```

3. Before running the script for provisioning of the SMS virtual machine, it's a requirement to have a vNET and a StorageAccount in which it will be used temporarily to store metadata for the tasks of the SSM in the Microsoft Azure Subscription. A good recommendation is to use the same vNET as the virtual machines to be migrated since the SSM virtual machine performs REST API communications to communicate with AWS endpoints as well as the Azure Cloud Service.

It is not necessary for the SMS virtual machine to have a Public IP or Internet Inbounds Rules.

- Run the installation script: .\aws-sms-azure-setup.ps1.

```
PS C:\SMSAzure> .\aws-sms-azure-setup.ps1

Security warning
Run only scripts that you trust. While scripts from the internet can be useful,
this script can potentially harm your computer. If you trust this script, use the
Unblock-File cmdlet to allow the script to run without this warning message. Do
you want to run C:\SMSAzure\aws-sms-azure-setup.ps1?
[D] Do not run [R] Run once [S] Suspend [?] Help (default is "D"): R
```

- Enter the StorageAccount and vNET already created in the subscription

```
PS C:\SMSAzure> .\aws-sms-azure-setup.ps1

Security warning
Run only scripts that you trust. While scripts from the internet can be useful,
this script can potentially harm your computer. If you trust this script, use the
Unblock-File cmdlet to allow the script to run without this warning message. Do
you want to run C:\SMSAzure\aws-sms-azure-setup.ps1?
[D] Do not run [R] Run once [S] Suspend [?] Help (default is "D"): R

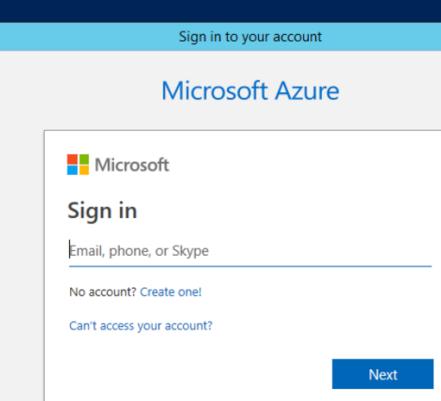
cmdlet aws-sms-azure-setup.ps1 at command pipeline position 1
Supply values for the following parameters:
StorageAccountName: azuretoawssms
ExistingVNetName: VNET01
```

- The Microsoft Azure modules will be imported into Powershell, and you will be prompted for the credential with subscription access.

```
PS C:\SMSAzure> .\aws-sms-azure-setup.ps1

Security warning
Run only scripts that you trust. While scripts from the internet can be useful,
this script can potentially harm your computer. If you trust this script, use the
Unblock-File cmdlet to allow the script to run without this warning message. Do
you want to run C:\SMSAzure\aws-sms-azure-setup.ps1?
[D] Do not run [R] Run once

cmdlet aws-sms-azure-setup.ps1
Supply values for the following parameters:
StorageAccountName: azuretoawssms
ExistingVNetName: VNET01
[working] Verifying PowerShell
[success] PowerShell version 5.1 found at https://docs.microsoft.com/en-us/powershell/
[working] Verifying Az Module
[success] Found an installed version of Az module
[success] Current Az Module version is 1.1.0.
[working] Importing Az Module
[success] Successfully imported Az module
```



- A summary of the features that will be created in the subscription will be displayed:

```

[INFO] This means the Connector being deployed can only migrate VMs in "eastus" and under t
e-4097-ac37-f06c22d4205a".
[INFO] The Connector VM access is restricted.
[INFO] Connector VM will be configured to have Inbound SSH/HTTPS access only from within it
[INFO] Connector will have Internet outbound access enabled in order to access AWS services
[INFO] Following the deployment, you need to register the connector.
[INFO] In order to register, please use a machine from "vNET01" to access https://<Connecto

[INFO] The following resources will be created under the subscription: 5b317c3a-519e-4097-a

SubscriptionId : 5b317c3a-519e-4097-ac37-f06c22d4205a
ResourceGroupName : sms-connector-rg1-eastus
StorageAccountName : azuretoawssms
StorageAccountResourceGroupName : AzuretoAWS
LocationName : eastus
ContainerName : sms-connector-container-eastus
BlobName : sms-connector-blob1.2.0.269-eastus
DiskName : sms-connector-disk-eastus
RoleName : sms-connector-role
RoleSASName : sms-connector-role-azuretoawssms
ExistingVirtualNetworkName : VNET01
VirtualNetworkResourceGroupName : AzuretoAWS
SubnetName : default
NICName : sms-connector-nic-eastus
NSGName : sms-connector-nsg-eastus
PIPName : sms-connector-pip-eastus
VirtualMachineName : sms-connector-vm-eastus
VirtualMachinesize : Standard_F4s
VirtualMachineTagKey : sms-connector-tag-eastus
Stage : Initialize

```

- Wait for the process to complete. It may take a few minutes:

```

[working] Copying Container if needed ...
[working] Creating Container if needed ...
[working] Checking previously initiated Blob copy ...
[working] Initiating Blob Copy from "https://awssmsconnector.blob.core.windows.net" ...
[working] Waiting for Blob Copy to Finish ...
[working] Copystate: Pending; Bytes Copied: 0; Progress: 0% ...
[working] CopyState: Pending; Bytes Copied: 0; Progress: 0% ...
[working] CopyState: Pending; Bytes Copied: 134217728; Progress: 0% ...
[working] Copystate: Pending; Bytes Copied: 471859200; Progress: 1% ...
[working] CopyState: Pending; Bytes Copied: 786432000; Progress: 1% ...
[working] CopyState: Pending; Bytes Copied: 1077936128; Progress: 2% ...
[working] CopyState: Pending; Bytes Copied: 1316147200; Progress: 2% ...
[working] Copystate: Pending; Bytes Copied: 1630720000; Progress: 3% ...
[working] CopyState: Pending; Bytes Copied: 1831206912; Progress: 3% ...
[working] CopyState: Pending; Bytes Copied: 2145779712; Progress: 3% ...
[working] CopyState: Pending; Bytes Copied: 2374258688; Progress: 4% ...
[working] CopyState: Pending; Bytes Copied: 2688831488; Progress: 4% ...
[working] Copystate: Pending; Bytes Copied: 3070513152; Progress: 5% ...
[working] CopyState: Pending; Bytes Copied: 3317977088; Progress: 5% ...
[working] CopyState: Pending; Bytes Copied: 3607678976; Progress: 6% ...
[working] CopyState: Pending; Bytes Copied: 3922251776; Progress: 6% ...
[working] Copystate: Pending; Bytes Copied: 4127092736; Progress: 6% ...
[working] CopyState: Pending; Bytes Copied: 4259065856; Progress: 7% ...
[working] CopyState: Pending; Bytes Copied: 4539863040; Progress: 7% ...
[working] CopyState: Pending; Bytes Copied: 4568896000; Progress: 7% ...
[working] Copystate: Success; Bytes Copied: 64424509952; Progress: 100% ...
[Success] Blob Copy Complete
[working] Saving Deployment Progress ...
[Success] Saved Deployment Progress
[working] Current Deployment Stage: Blob_Copy. Transitioning to Next Stage ...
[working] Verifying Blob for Integrity ...

```

- In the end, an Output will inform us about the Object Id of System Assigned Identity and Private IP. Save this information as it will be used to register the connector to the SMS service.

```
*****
[INFO] Connector VM Name: "sms-connector-vm-eastus" (Resource Group: "sms-connector-rg1-eastus")
[INFO] Connector Private IP: 10.0.0.4
[INFO] Object Id of System Assigned Identity for Connector VM: [REDACTED]
[INFO] From a VM in VNet: VNET01, Goto https://10.0.0.4
[INFO] Complete Connector Registration. Use the above Object Id at the last step of Registration.
*****
```

10. You can also check the provisioned resources directly in the Microsoft Azure Portal under the Resource Group option. In this automatic provisioning method, the AWS script performs role creation in the Microsoft Azure IAM and allows the virtual machine to make use of the services necessary for its use through REST API over HTTPS calls and to authenticate via Azure Inbuilt Instance Metadata Service (IMDS).

11. You will now need to create an IAM Role on the AWS Console or via CLI in which it contains the necessary permissions for the SMS service to perform the migration. Go to the IAM console and Roles on the AWS Console:

12. Select SMS

Create role

1 2 3 4

Select type of trusted entity

 AWS service EC2, Lambda and others	 Another AWS account Belonging to you or 3rd party	 Web identity Cognito or any OpenID provider	 SAML 2.0 federation Your corporate directory
-------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose the service that will use this role

EC2

Allows EC2 instances to call AWS services on your behalf.

Lambda

Allows Lambda functions to call AWS services on your behalf.

API Gateway	CodeDeploy	EKS	Kinesis	S3
AWS Backup	Comprehend	EMR	Lambda	SMS
AWS Support	Config	ElastiCache	Lex	SNS
Amplify	Connect	Elastic Beanstalk	License Manager	SWF
AppSync	DMS	Elastic Container Service	Machine Learning	SageMaker
Application Auto Scaling	Data Lifecycle Manager	Elastic Transcoder	Macie	Security Hub
Application Discovery Service	Data Pipeline	Elastic Load Balancing	MediaConvert	Service Catalog
Batch	DataSync	Forecast	OpsWorks	Step Functions
CloudFormation	DeepLens	Glue	RAM	Storage Gateway
CloudHSM	Directory Service	Greengrass	RDS	Transfer
CloudTrail	DynamoDB	GuardDuty	Redshift	Trusted Advisor
CloudWatch Application Insights	EC2	Inspector	Rekognition	VPC
CloudWatch Events	EC2 - Fleet	IoT	RoboMaker	WorkLink
CodeBuild	EC2 Auto Scaling	KMS		

SMS

13. Review the permissions that will be attached to the role and click **Next: Tag**

14. Optionally add tags to your role.

Create role

1 2 3 4

Add tags (optional)

IAM tags are key-value pairs you can add to your role. Tags can include user information, such as an email address, or can be descriptive, such as a job title. You can use the tags to organize, track, or control access for this role. [Learn more](#)

Key	Value (optional)	Remove
<input type="text" value="Add new key"/>	<input type="text"/>	

You can add 50 more tags.

15. Give the role a name, in the example below I used the name **azuretoawssms** and Click on **Create Role** in the lower right corner of the page.

Create role

1 2 3 4

Review

Provide the required information below and review this role before you create it.

Role name*

Use alphanumeric and '+=_,@-' characters. Maximum 64 characters.

Role description

Maximum 1000 characters. Use alphanumeric and '+=_,@-' characters.

Trusted entities

Policies  [ServerMigrationServiceRole](#)

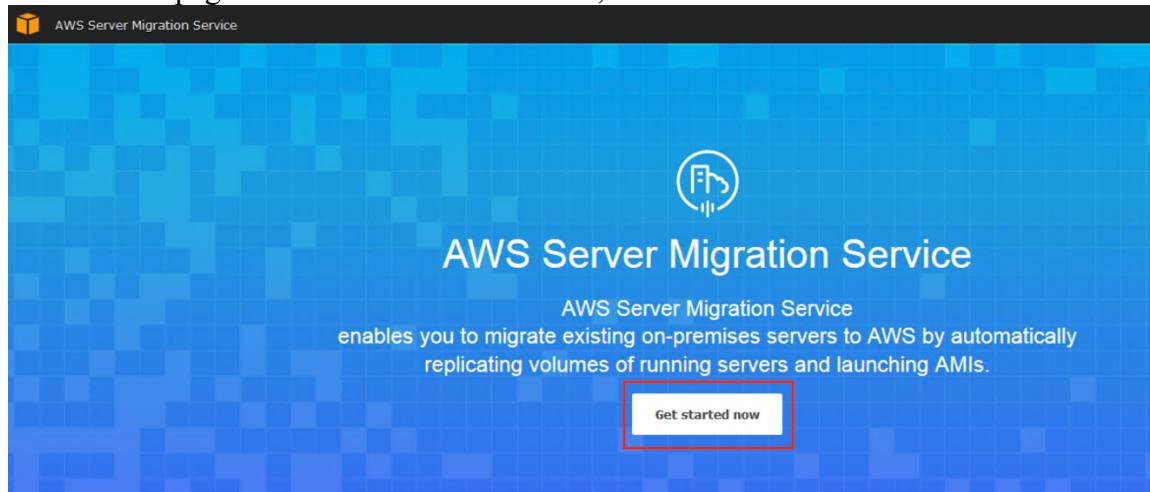
Permissions boundary

No tags were added.

- Via an SMS virtual machine, access the configuration using a browser. In my example, the IP is 10.0.0.4. Access: <https://10.0.0.4>

```
*****  
[INFO] Connector VM Name: "sms-connector-vm-eastus" (Resource Group: "sms-connector-rg1-eastus")  
[INFO] Connector Private IP: 10.0.0.4  
[INFO] Object Id of System Assigned Identity for Connector VM: XXXXXXXXXX  
[INFO] From a VM in VNet: VNET01, Goto https://10.0.0.4  
[INFO] Complete Connector Registration. Use the above object Id at the last step of Registration.  
*****
```

- On the main page of the SMS virtual machine, click Get Started Now



18. Read and accept the terms of the contract.

The screenshot shows the AWS Server Migration Service setup interface. On the left, a sidebar titled "Setup" lists steps: Step 1 : License Agreement (highlighted in blue), Step 2 : Create a Password, Step 3 : Network Info, Step 4 : Log Uploads, and Step 5 : Server Migration Service. The main content area is titled "License Agreement" and contains the "AWS Server Migration Connector Agreement". The agreement text is as follows:

THIS IS AN AGREEMENT BETWEEN YOU AND AMAZON WEB SERVICES, INC. (WITH ITS AFFILIATES, "AWS" OR "WE") THAT GOVERNS YOUR USE OF THE AWS SERVER MIGRATION CONNECTOR SOFTWARE (TOGETHER WITH ANY UPDATES AND ENHANCEMENTS TO IT, AND ACCOMPANYING DOCUMENTATION, THE "SOFTWARE") THAT WE MAKE AVAILABLE TO YOU. IF YOU INSTALL OR USE THE SOFTWARE, YOU WILL BE BOUND BY THIS LICENSE AGREEMENT. UNLESS OTHERWISE DEFINED IN THIS LICENSE AGREEMENT, CAPITALIZED TERMS WILL HAVE THE SAME MEANING AS SET FORTH IN THE AWS CUSTOMER AGREEMENT POSTED AT AWS.AMAZON.COM/AGREEMENT (THE "AWS AGREEMENT").

1. Use of the Software

We hereby grant you a personal, limited, nonexclusive, non-transferable, non-sublicenseable license to install and use the Software on computer equipment owned or controlled solely for your internal business purposes to access Your Content used in connection with the Services. You may not use the Software if you do not have an account in good standing with AWS. Some components of the Software (whether developed by AWS or third parties) may also be governed by applicable open source software licenses located in the software component's source code. Your license rights with respect to these individual components are defined by the applicable open source software license, and nothing in this Agreement will restrict, limit, or otherwise affect any rights or obligations you may have, or conditions to which you may be subject, under such open source software licenses.

2. Limitations

You may not, and you will not encourage, assist or authorize any other person to, (a) incorporate any portion of it into your own programs or compile any portion of it in combination with your own programs; or (b) sell, rent, lease, lend, loan, distribute, act as a service bureau, publicly communicate, transform, or sub-license the Software or otherwise assign any rights to the Software in whole or in part; (c) modify, alter, tamper with, repair, or otherwise create derivative works of the Software, (d) reverse engineer, disassemble, or decompile the Software or apply any other process or procedure to derive the source code of any software included in the Software, or (e) access or use the Software or the Service in a way intended to avoid incurring fees or exceeding usage limits or quotas. All rights granted to you are conditioned on your continued compliance with this License Agreement, and will immediately and automatically terminate if you do not comply with any term or condition of this License Agreement or the AWS Customer Agreement, including any failure to remit timely payment for the Software or the Service.

3. Reservation of Rights

You may not use the Software for any illegal purpose. The Software is the intellectual property of AWS or its licensors. The structure, organization, and code of the Software are valuable trade secrets and confidential information of AWS. The Software is protected by law, including without limitation copyright laws and international treaty provisions. Except for the rights explicitly

Next

19. Create a password that will be used to login later in the connector console.

The screenshot shows the AWS Server Migration Service setup interface. On the left, a sidebar titled "Setup" lists steps: Step 1 : License Agreement, Step 2 : Create a Password (highlighted in blue), Step 3 : Network Info, Step 4 : Log Uploads, and Step 5 : Server Migration Service. The main content area is titled "Create a Password" and contains fields for "New password" and "Reenter new password", both showing masked input. Below the fields, a note says "Your password must contain the following:" followed by a list of requirements:

- At least 6 characters and up to 20 characters
- At least one uppercase (A to Z) and one lowercase (a to z) character
- At least one numeric character (0 to 9)
- At least one of the following characters: @ # \$ % ^ & * ()
- It should not be the same as your old password

Previous Next

20. View the network settings and click **Next**.

The screenshot shows the AWS Server Migration Service Setup wizard. The left sidebar lists steps: Step 1: License Agreement, Step 2: Create a Password, **Step 3: Network Info**, Step 4: Log Uploads, and Step 5: Server Migration Service. The main panel is titled "Network Info". It contains a list of tasks:

- 0. Exit
- 4. Type 2 for network settings:
 - Reconfigure your network:
 1. Renew or acquire a DHCP lease
 2. Set up a static IP
 3. Set up a web proxy for AWS communication
 4. Set up a DNS suffix search list
 - 0. Exit

Below this, instructions say: "Use these options to complete the following tasks:" followed by a numbered list (a, b, c, d) describing how to configure the SMS Connector for network settings.

Note
This option requires that you've set your initial password by logging into the connector using https://ip_address/, where ip_address is the IP address of the connector management console.

d. Configure the DNS suffix search list so that SMS Connector can migrate VMs from your VM Manager.

5. If the IP address changes or the proxy settings change, re-register the SMS Connector as follows:

- a. Using a web browser, open the SMS Connector management console.
- b. From the dashboard, click Register the SMS Connector.
- c. Follow the directions to complete the registration wizard.

At the bottom right, there are "Previous" and "Next" buttons, with "Next" being highlighted with a red box.

21. If you want to send usage logs anonymously to AWS to help improve the service and click **Next**.

The screenshot shows the AWS Server Migration Service setup process at Step 4: Log Uploads. On the left, a sidebar lists steps: Step 1: License Agreement, Step 2: Create a Password, Step 3: Network Info, Step 4: Log Uploads (which is bolded), and Step 5: Server Migration Service. The main panel is titled "Log Uploads" and contains a section titled "Upload logs automatically". A checkbox is checked with the text: "If you leave this option selected, you agree that AWS can collect log data that includes information about how the AWS Server Migration Service is being used. The collected data is anonymous. All data will be handled according to the AWS Privacy Policy." At the bottom right, there are "Previous" and "Next" buttons, with "Next" being highlighted with a red box.

22. Insert an Access Key and Secret Key whose only policy is attached: "ServerMigrationConnector" Also, select the region in which the SMS endpoint will be used and click Next.

The screenshot shows the AWS Server Migration Service setup process at Step 5: Server Migration Service. On the left, a sidebar lists steps: Step 1: License Agreement, Step 2: Create a Password, Step 3: Network Info, Step 4: Log Uploads & Upgrades, and Step 5: Server Migration Service (which is bolded). The main panel is titled "Server Migration Service" and contains sections for "AWS Region" and "AWS Credentials". Under "AWS Region", it says "Choose region for Server Migration Service" with a dropdown menu set to "US East (N. Virginia)". Under "AWS Credentials", it says "The AWS credential will be used to communicate with AWS for migration purpose. The user should have the "ServerMigrationConnector" policy attached." It shows an "Access Key" field containing "AKIA3T5VPT6XQI5SYZ6H" and a "Secret Key" field containing a long string of asterisks. At the bottom right, there are "Back" and "Next" buttons, with "Next" being highlighted with a red box.

23. Enter the **Object Id of System Assigned Identity** you copied in step 11 and click Next.

Setup

Step 1: License Agreement
Step 2: Create a Password
Step 3: Network Info
Step 4: Log Uploads & Upgrades
Step 5: Server Migration Service

Server Migration Service

Azure Account Verification

Please follow the instructions in the [AWS Server Migration Service User Guide](#) to configure your Azure connector for migration use.

This Connector can migrate virtual machines from the following subscription and location:

Subscription Id: 5b317c3a-519e-4097-ac37-f06c22d4205a
Location: eastus

To verify that the Connector was correctly deployed, please enter the Object id (also known as Principal Id) of the System Assigned Identity for this Connector VM resource. This should have been provided to you during Connector deployment. You can also get this Id from the Azure Portal by going into the Identity section of the Connector VM (under System Assigned Identity)

Object Id of System Assigned Identity

[Back](#) [Next](#)

24. Congratulations, you have successfully configured the Azure connector, click on **Go to connector dashboard**.

Setup

Step 1: License Agreement
Step 2: Create a Password
Step 3: Network Info
Step 4: Log Uploads & Upgrades
Step 5: Server Migration Service

Server Migration Service

Congratulations

You have successfully set up your SMS Connector.
We recommend applying security patches to Connector appliance operating system periodically. Please visit [AWS Connector Operating System Upgrade](#) for detailed instructions.

[Go to connector dashboard](#)

25. Verify that the connector status is already operational via the SMS Console.

The AWS SMS Connector is the appliance we provide that is installed in your data centers. It creates the bridge between your data center and SMS, providing the view of your server catalog in the SMS console. The AWS SMS Connector is also the worker that manages the replication job for each server.

[Import server catalog](#) [SMS Connector setup guide](#)

Connector IP address 10.0.0.4		Disassociate	
Status	HEALTHY	VM Manager type	AZURE
Connector ID	<input type="text"/>	VM Manager ID	<input type="text"/>
Connector MAC address	<input type="text"/>	VM Manager IP address	<input type="text"/>
Connector version	1.2.0.269	Associated on	2019-05-02T10:08:03:00

2 – Replicating virtual machines to AWS

- Access the AWS SMS console and go to the Servers option. Click **Import Server Catalog** or **Re-Import Server Catalog** if you have already done so.

The screenshot shows the AWS SMS console interface. The top navigation bar includes the AWS logo, Services dropdown, Resource Groups dropdown, and a star icon. On the left, there's a sidebar with links for Dashboard, Servers (which is selected and highlighted in orange), Applications, Replication jobs, and Connectors. The main content area is titled 'Servers' and contains a table with three rows. The columns are labeled 'VM name', 'Server ID', 'Replication job ID', 'Job state', and 'VM'. The rows show entries for 'VMAPP01', 'VMSQLDEV01', and 'sms-connector-vm-eastus', each with a corresponding Server ID and Job state.

- Select the virtual machines to be migrated and click **Create Replication Job**.

This screenshot is similar to the one above, but it shows that two VMs, 'VMAPP01' and 'VMSQLDEV01', have been selected (indicated by checked checkboxes). The 'Create replication jobs (2)' button is highlighted with a red box.

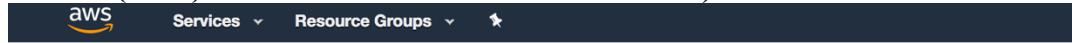
- Select which type of licensing best suits your environment, such as:

- Auto (Current licensing autodetection)
- AWS (Even Licensing)
- BYOL (Bring your licensing).

See options:<https://aws.amazon.com/pt/windows/resources/licensing/>

The screenshot shows the 'Create replication jobs' wizard, specifically Step 2: Configure server-specific settings. On the left, a vertical navigation pane lists steps: Step 1: Select the servers, Step 2: Configure server-specific settings (which is selected and highlighted in orange), Step 3: Configure replication job settings, and Step 4: Review. The main right-hand panel is titled 'Configure server-specific settings' and contains a table with four columns: VM name, VM ID, VM manager, and Server ID. Two rows are listed: 'VMAPP01' and 'VMSQLDEV01'. To the right of the table is a 'License type' dropdown menu with three options: 'Auto', 'AWS', and 'BYOL'. The 'BYOL' option is currently selected.

4. Select the replication frequency, when the replication should start, and the IAM role created in step **11 of item 1 (Provision the AWS Server Migration Service (SMS) virtual machine in Microsoft Azure.)**



Create replication jobs

Step 1: Select the servers

Step 2: Configure server-specific settings

Step 3: Configure replication job settings

Step 4: Review

Configure replication job settings

Replication job type replicate server every [? i](#)

1 Hour

One-time migration [? i](#)

Start replication run immediately [? i](#)

at a later time and date [? i](#)

IAM service role

sms

Description

Up to 100 characters

Enable automatic AMI deletion No [? i](#)

Yes [? i](#)

Enable AMI encryption No [? i](#)

5. A summary of the settings, and click **Create**.



Create replication jobs

Step 1: Select the servers

Step 2: Configure server-specific settings

Step 3: Configure replication job settings

Step 4: Review

Attention: Please do not create or delete snapshots on the VM being migrated as unexpected snapshots can cause migration issues.

Review

VM name	VM ID	VM manager	VM path
VMAPP01	/subs...	5b317c3a-519e-4097...	/subscriptions/5b3...
VMSQLDEV01	/subs...	5b317c3a-519e-4097...	/subscriptions/5b3...

Replication job configurations

Runs will begin [immediately](#)

6. Go to the **Replication Jobs** option and follow the migration status:

Replication jobs

Replication job ID	VM name	Job state	Latest AMI ID	Latest AMI completed on	Next run start time	Server ID
sms-job-f0608599	VMAPP01	Active	-	-	-	s-64a5400d
sms-job-f360859a	VMSQLDEV01	Active	-	-	-	s-67a5400e

Replication job ID: sms-job-f0608599 VM name: VMAPP01

Job details Run history

Current replication run Uploading... Step 2 of 4 in progress

- After completion access to the **EC2 console**, go to AMIs, and a list of the AMIs generated by the SMS will be made available. In the example below several AMIs were generated because the replication frequency is 1h.

EC2 Dashboard

Events

Tags

Reports

Limits

INSTANCES

- Instances
- Launch Templates
- Spot Requests
- Reserved Instances
- Dedicated Hosts
- Scheduled Instances
- Capacity Reservations

IMAGES

AMIs Selected

- Bundle Tasks

ELASTIC BLOCK STORE

Launch Actions

Name	AMI Name	AMI ID
Created by (sms-job-f0608599/sms-run-e467868d)	ami-0fe32eb73d4d254e	
Created by (sms-job-f0608599/sms-run-c36786aa)	ami-0f11d10b60c7cb3	
Created by (sms-job-f0608599/sms-run-ae6786c7)	ami-0d765e76be96c7	
Created by (sms-job-f0608599/sms-run-9b6786f2)	ami-055c317dd9bce9f	
Created by (sms-job-f0608599/sms-run-9b6485f2)	ami-06c77889c1b4d0	
Created by (sms-job-f0608599/sms-run-976786fe)	ami-09385d1b7c6b34	
Created by (sms-job-f0608599/sms-run-8b6786e2)	ami-0b4f5cfeec7f87ac	
Created by (sms-job-f0608599/sms-run-7766871e)	ami-08c87404f201cd	
Created by (sms-job-f0608599/sms-run-6367860a)	ami-0969bfd210d807c	
Created by (sms-job-f0608599/sms-run-61668708)	ami-093677ed7b736c	
Created by (sms-job-f0608599/sms-run-4667862f)	ami-0d8a3d1c84d0fb	
Created by (sms-job-f0608599/sms-run-3e678657)	ami-066c0cae188fd7d	
Created by (sms-job-f0608599/sms-run-18678671)	ami-0d6d88a4fc427e	

- Back to the SMS console, click on **Launch Instance** and follow the processes for creating a new Amazon EC2 instance.

Replication jobs

Replication job ID	VM name	Job state	Latest AMI ID	Latest AMI completed on	Next run start time	Server ID
sms-job-f0608599	VMAPP01	Active	ami-08c87404f201...	-	-	s-64a5400d

Replication job ID: sms-job-f0608599 VM name: VMAPP01

Job details Run history

Current replication run Creating AMI... Step 4 of 4 in progress

VM name VMAPP01 Latest AMI ID ami-08c87404f201cd2d Launch instance

This solution provides a simple, non-intrusive way to the migration process by working in an agentless way, so you do not need to install any agents on the virtual machines and to take advantage of the Microsoft Azure snapshot technology in which you provide VSS for Windows virtual machines.

For more about Windows Workloads on AWS:

https://aws.amazon.com/windows/products/?nc1=h_ls