1. VM Import/Export

This appendix will run through the VM Import/Export migration scenario. The VM Import/Export Service will be used to migrate an existing VMWare image into an EC2 AMI within AWS.

VM Import/Export requires a role to perform certain operations. Create a service role named **vmimport.**

Navigate to the IAM console and click Roles in the left-hand navigation menu.

Click Create role.

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Select Custom trust policy and paste in the following:

{

"Version": "2012-10-17",

"Statement": [

{

"Effect": "Allow",

"Principal": { "Service": "vmie.amazonaws.com" },

"Action": "sts:AssumeRole",

"Condition": {

"StringEquals":{

"sts:Externalid": "vmimport"

}

}

}

]

}

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Click Next.

Name the Role **vmimport** and click Create role.

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With a trust relationship policy document that allows VM Import/Export to assume the role, and you must attach an IAM policy to the role.

Select the Policies option on the navigation menu of the IAM console.

Click Create policy.

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Select the tab for JSON and enter the following:

{

"Version":"2012-10-17",

"Statement":[

{

"Effect": "Allow",

"Action": [

"s3:GetBucketLocation",

"s3:GetObject",

"s3:ListBucket"

],

"Resource": [

"arn:aws:s3:::astellas-poc-migration-vmimport-export-bucket",

"arn:aws:s3:::astellas-poc-migration-vmimport-export-bucket/\*"

]

},

{

"Effect": "Allow",

"Action": [

"s3:GetBucketLocation",

"s3:GetObject",

"s3:ListBucket",

"s3:PutObject",

"s3:GetBucketAcl"

],

"Resource": [

"arn:aws:s3:::astellas-poc-migration-vmimport-export-bucket",

"arn:aws:s3:::astellas-poc-migration-vmimport-export-bucket/\*"

]

},

{

"Effect": "Allow",

"Action": [

"ec2:ModifySnapshotAttribute",

"ec2:CopySnapshot",

"ec2:RegisterImage",

"ec2:Describe\*"

],

"Resource": "\*"

}

]

}

Then, click Next: Tags.

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Select Next: Review.

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Name the role **vmimport-role-policy** and click Create policy.

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This policy will now need to be added to the IAM Role created earlier.

Navigate back to the vmimport role and click *“Add permissions > Attach policies”.*

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Fitler the polies to “vm” and select the “vmimport-role-policy” created earlier. Then, click Attach policies.

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This policy needed to be added as this solution involves a copy of the existing source VMWare OVA or VMDK file into an AWS S3 Bucket.

Create an S3 bucket for the OVA or VMDK file

* *astellas-poc-migration-vmimport-export-bucket*

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Click Upload.

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Click Add folder (or “Add files” if the files do not reside in a folder).

Browse to and select the OVA or VMFK/OVF files and click Upload.

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After you upload your VM image file to Amazon S3, you can use the AWS CLI to import the image. These tools accept the Amazon S3 bucket and path to the file or a URL for a public Amazon S3 file.

Create a new file called *“container.json”* in a directory of choice, paste the following into the file and save (change the bucket and disk file names to match your environment).

*[*

*{*

*"Description": "First disk",*

*"Format": "vmdk",*

*"UserBucket": {*

*"S3Bucket": "astellas-poc-migration-vmimport-export-bucket",*

*"S3Key": "AS041NLME41-Astellas-1.vmdk"*

*}*

*},*

*{*

*"Description": "Second disk",*

*"Format": "vmdk",*

*"UserBucket": {*

*"S3Bucket": "astellas-poc-migration-vmimport-export-bucket",*

*"S3Key": "AS041NLME41-Astellas-2.vmdk"*

*}*

*}*

*]*

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Run the following AWS CLI command to start the task:

*aws ec2 import-image --description "<Server Name>" --disk-containers "file://<path>\containers.json"*

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The following command can then be used to monitor the import:

*aws ec2 describe-import-image-tasks --import-task-ids <import-ami-id>*

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The status will be “active” and the status message will be “converting”. This may take some time depending on the size of your image.

Once the import is complete the AMI is available to launch EC2 instances.

From the EC2 console select AMIs from the navigation menu and filter the AMIs to “Owned by me” and “import”.

### Select the imported AMI to view the details.

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### Click Launch instance from AMI on the top right.

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In the settings to launch the instance use the following settings:

* Tags: *Key: “ssm” Value: “true”*
* Select instance type as the VM Import/Export tool will not automatically select the instance type for you.
* Private Subnet
* SSM-Endpoint Security Group
* SSM\_EC2Role IAM instance profile

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Select Launch instance.

To connect to the new EC2 instance open Fleet Manager from the Systems Manager console and connect to the instance via Remote Desktop.

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Authenticate with your usual user credentials for the server.

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You will now be connected to the migrated server. To upgrade the OS following this migration method, see *Appendix E*.