



# **AWS Application Migration Service (AWS MGN)**

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# What is **Application Migration Service**

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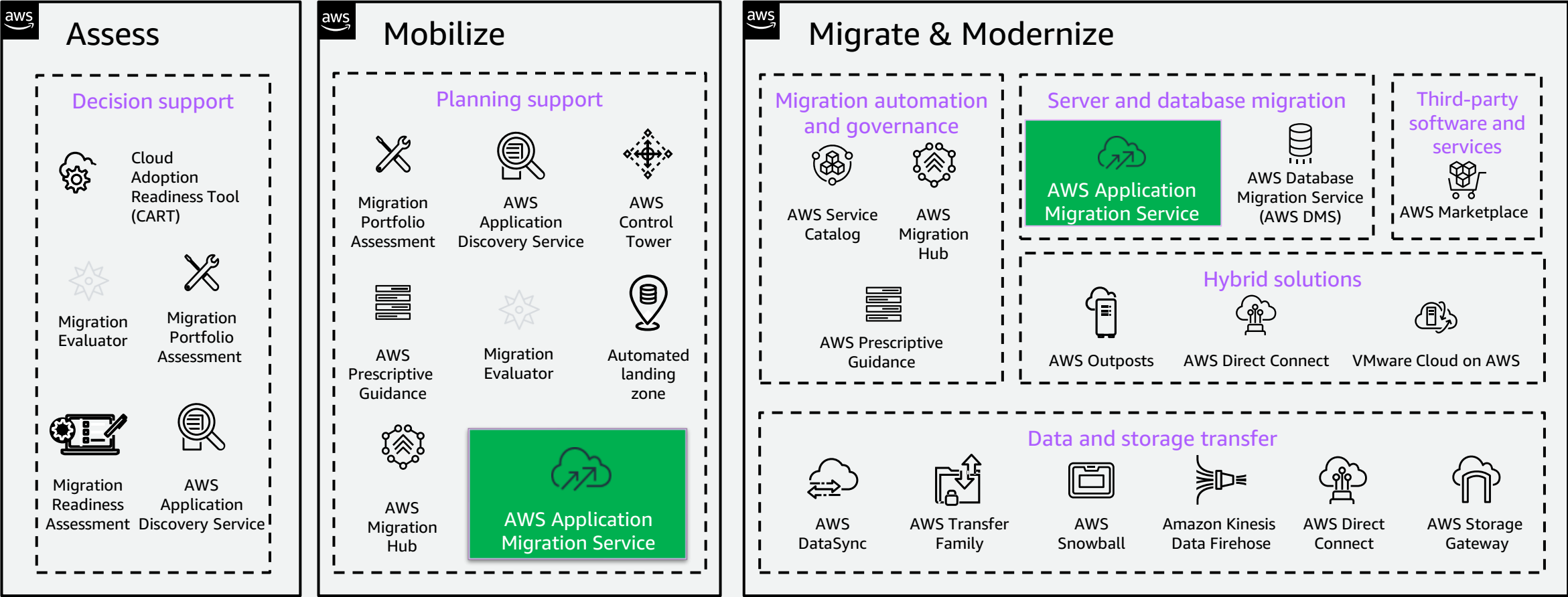
Primary migration service recommended for lift-and-shift migrations  
(previously known as *Cloud Endure Migration*)

A highly automated lift-and-shift solution

Allows migrating physical, virtual and cloud servers to AWS

Simplifies, expedites and reduces the cost of migrating servers and applications

# Broadest and deepest set of migration capabilities



# Application Migration Service benefits

Simplify, expedite, and reduce the cost of migrating your applications to AWS

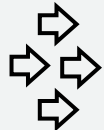
## Flexible



Migrate from  
any source



Wide range of OS, application,  
and database support



Suitable for large-  
scale migrations

## Reliable



Robust, predictable,  
nondisruptive continuous  
replication



Short cutover windows  
with minimal downtime



Highly secure

## Highly automated



Minimal skill set  
required to operate





















Easy, nondisruptive  
tests prior to cutover



Easily plugs into migration  
factories and cloud COEs

# Wide platform support\*

Virtually any application	 ORACLE E-BUSINESS SUITE  SUGARCRM	 ORACLE PEOPLESOFT  IIS	 SAP CRM SharePoint	 SAP Hybris (Y) Microsoft Active Directory	 SAP ERP Microsoft Exchange Server	 Apache Microsoft Dynamics CRM
Virtually any database	Microsoft SQL Server	ORACLE DATABASE	 SAP HANA	 MySQL	 mongoDB	
x86 operating systems	 Red Hat Windows Server 2008	 CentOS Windows Server 2012	ORACLE LINUX Windows Server 2016	 ubuntu Windows Server 2019	 debian Windows Server 2022	 SUSE Windows Workstations Windows Server 2003 Windows 10
Source infrastructure	 Physical data centers	 Cloud sources				

\* See documentation for a complete list and supported versions

# Prerequisites for Application Migration Service

## Network

Source	Destination	Port	For more information, see
Source data center	Amazon S3 service URLs	443 (TCP)	<a href="#">Communication over TCP port 443</a>
Source data center	AWS Region-specific console address for Application Migration Service	443 (TCP)	<a href="#">Communication between the source servers and Application Migration Service over TCP port 443</a>
Source data center	Staging area subnet	1500 (TCP)	<a href="#">Communication between the source servers and the staging area subnet over TCP port 1500</a>
Staging area subnet	AWS Region-specific console address for Application Migration Service	443 (TCP)	<a href="#">Communication between the staging area subnet and Application Migration Service over TCP port 443</a>
Staging area subnet	Amazon S3 service URLs	443 (TCP)	<a href="#">Communication over TCP port 443</a>
Staging area subnet	Amazon EC2 endpoint of the subnet's AWS Region	443 (TCP)	<a href="#">Communication over TCP port 443</a>

## Source servers

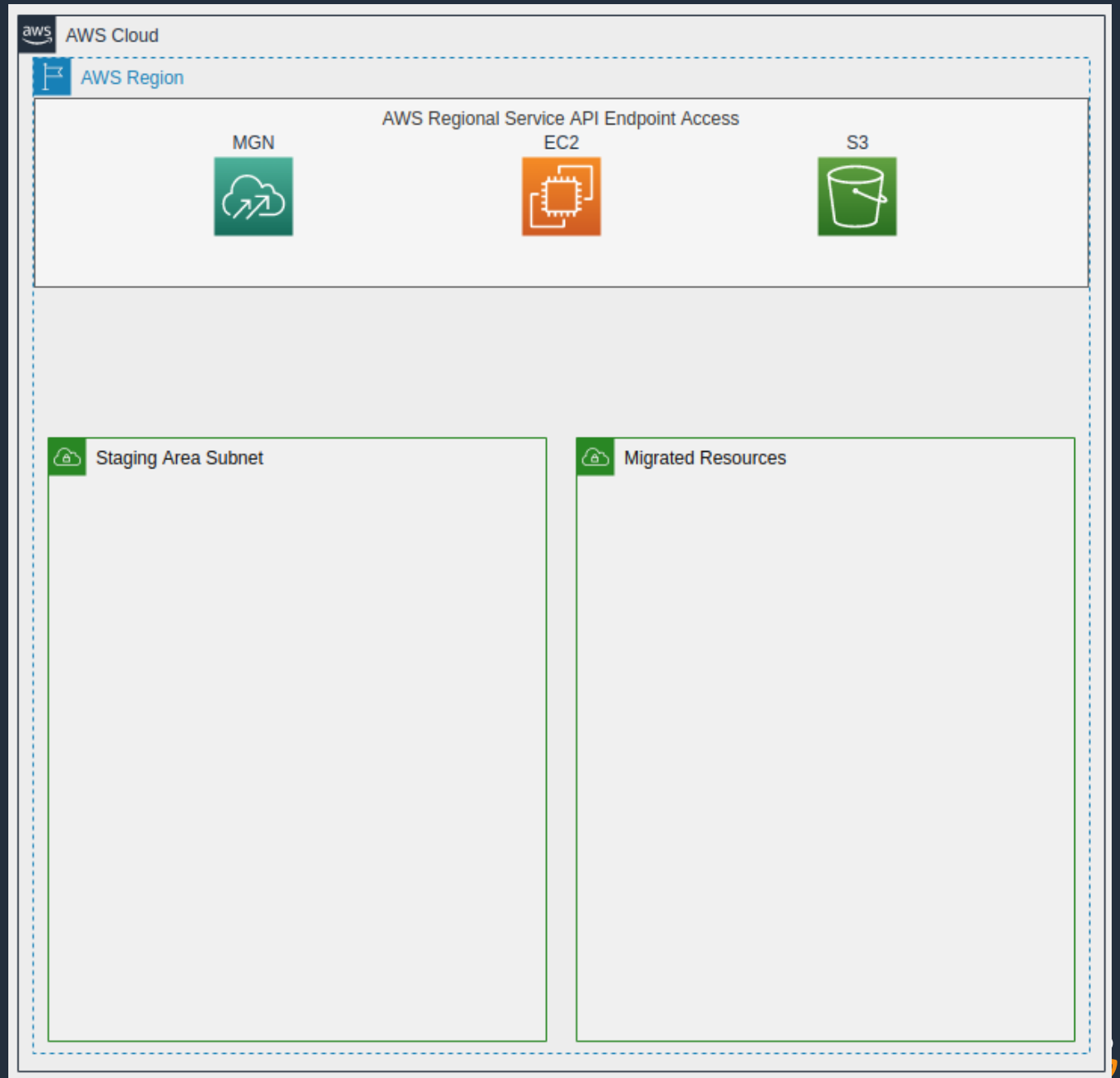
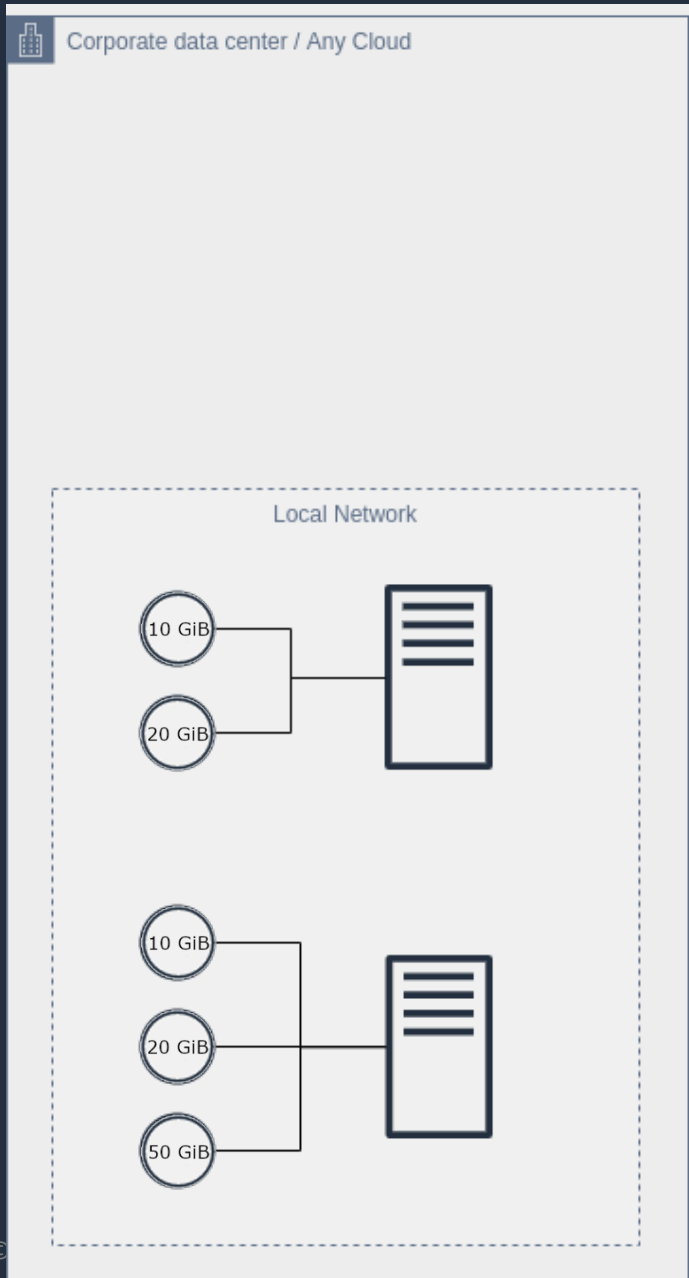
- For a list of supported OS, see <https://docs.aws.amazon.com/mgn/latest/ug/Supported-Operating-Systems.html>
- Media access control address (MAC address) stability
- Root directory – At least 2 GB of free disk space on the root directory (/)
- RAM – At least 300 MB of free RAM to run the AWS Replication Agent

## AWS account

- Application Migration Service initialized
- IAM user
- Amazon S3 interface endpoint
- Application Migration Service interface endpoint
- Amazon EC2 interface endpoint



# How Application Migration Service works

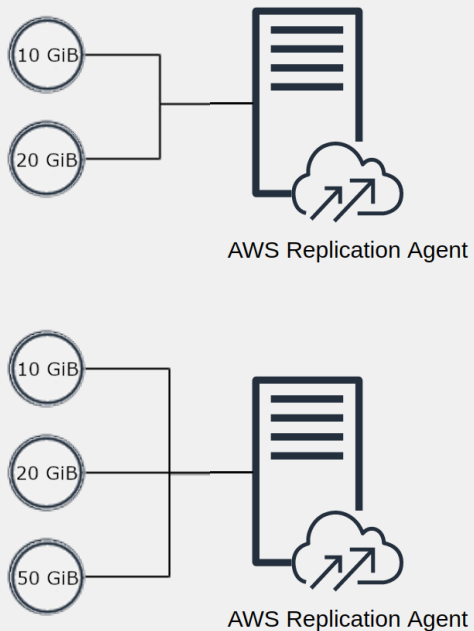




Corporate data center / Any Cloud



Local Network



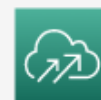
AWS Cloud



AWS Region

AWS Regional Service API Endpoint Access

MGN



EC2



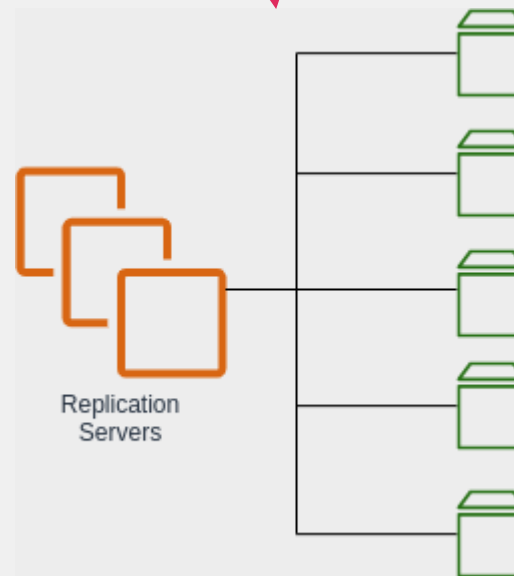
S3



Staging Area Subnet



Migrated Resources







Corporate data center / Any Cloud



AWS Cloud



AWS Region

Migration dashboard

Server Details

Tags

Disks Settings

Replication Settings

Launch Settings

### General launch settings [Info](#)

Edit

Instance type right sizing

On

Operating system BYOL

Yes

Start instance upon launch

Yes

Transfer server tags

No

Copy private IP

No

### EC2 Launch Template

Edit [↗](#)

Template ID

lt-05825555555555555

Instance type

c4.4xlarge

Security groups

Tenancy

-

Placement group name

-

Primary network interface

Description

-

Subnet

-

Public IP

Yes

Private IP Addresses

-

EBS volumes

Volume 1 (12 GiB, EBS, Provisioned IOPS SSD (io1))

Volume 2 (200 GiB, EBS, Provisioned IOPS SSD (io1))

10 GiB

20 GiB

10 GiB

20 GiB

50 GiB



AWS Replication Agent



50 GiB



Corporate data center / Any Cloud



Local Network

10 GiB

20 GiB



AWS Replication Agent

10 GiB

20 GiB

50 GiB



AWS Replication Agent



AWS Cloud

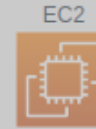


AWS Region



MGN

AWS Regional Service API Endpoint Access



EC2



S3

Test and Cutover ▲

### Testing

Launch test instances

Mark as "Ready for cutover"

Revert to "Ready for testing"

### Cutover

Launch cutover instances

Finalize cutover

Revert to "Ready for cutover"

### Other

Edit Launch Settings

Terminate launched instances

Migrated Resources



10 GiB



20 GiB



10 GiB



20 GiB



50 GiB

Replication  
Servers



Corporate data center / Any Cloud



Local Network

10 GiB

20 GiB



AWS Replication Agent

10 GiB

20 GiB

50 GiB



AWS Replication Agent



AWS Cloud



AWS Region

AWS Regional Service API Endpoint Access

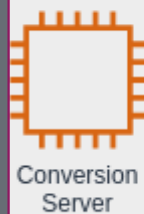
MGN



EC2



S3



Conversion Server

10 GiB

20 GiB

50 GiB

Replication Servers

10 GiB

20 GiB

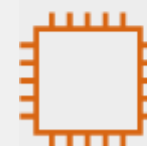
10 GiB

20 GiB

50 GiB



Migrated Resources



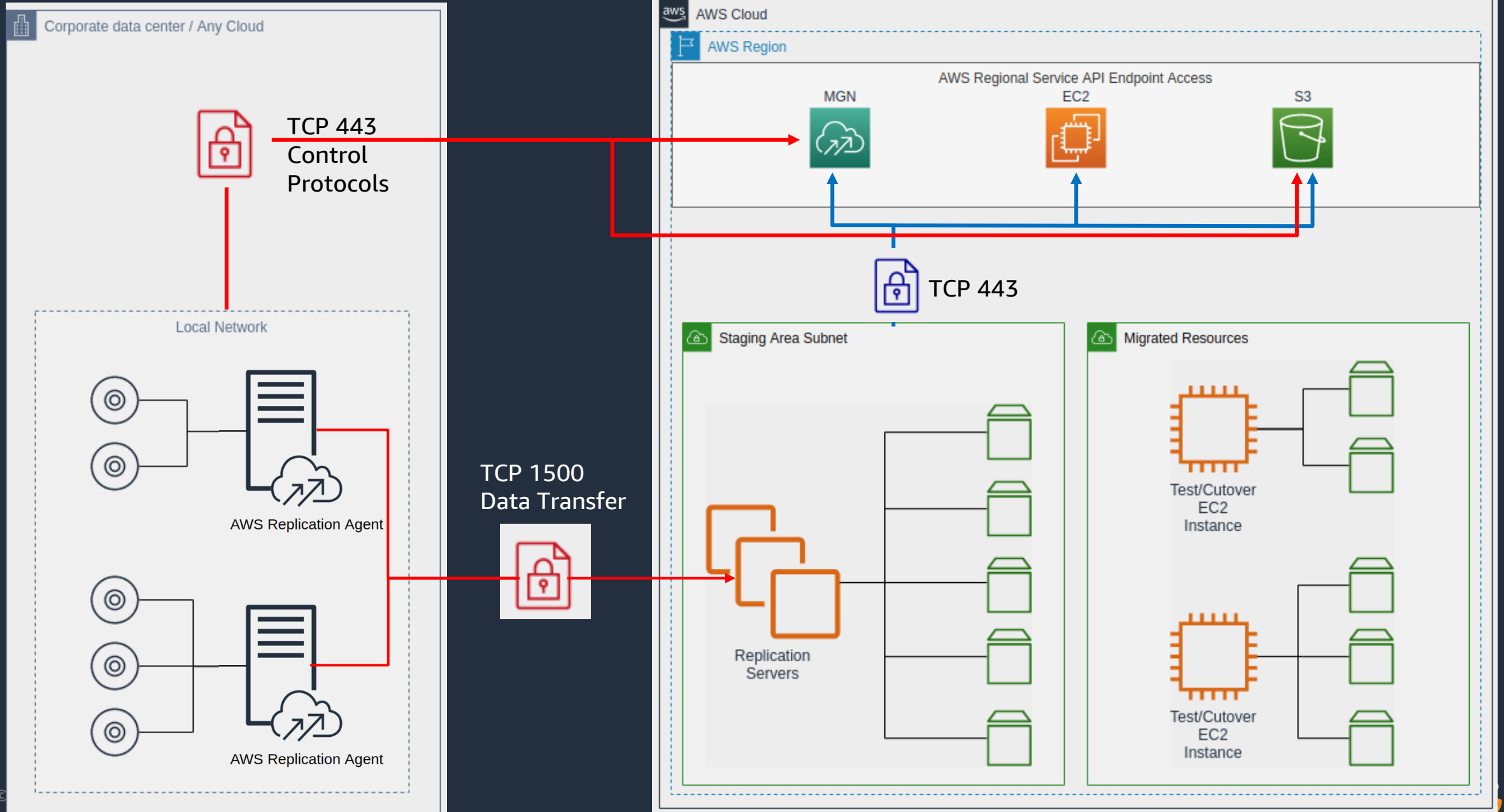
Test/Cutover  
EC2  
Instance

10 GiB

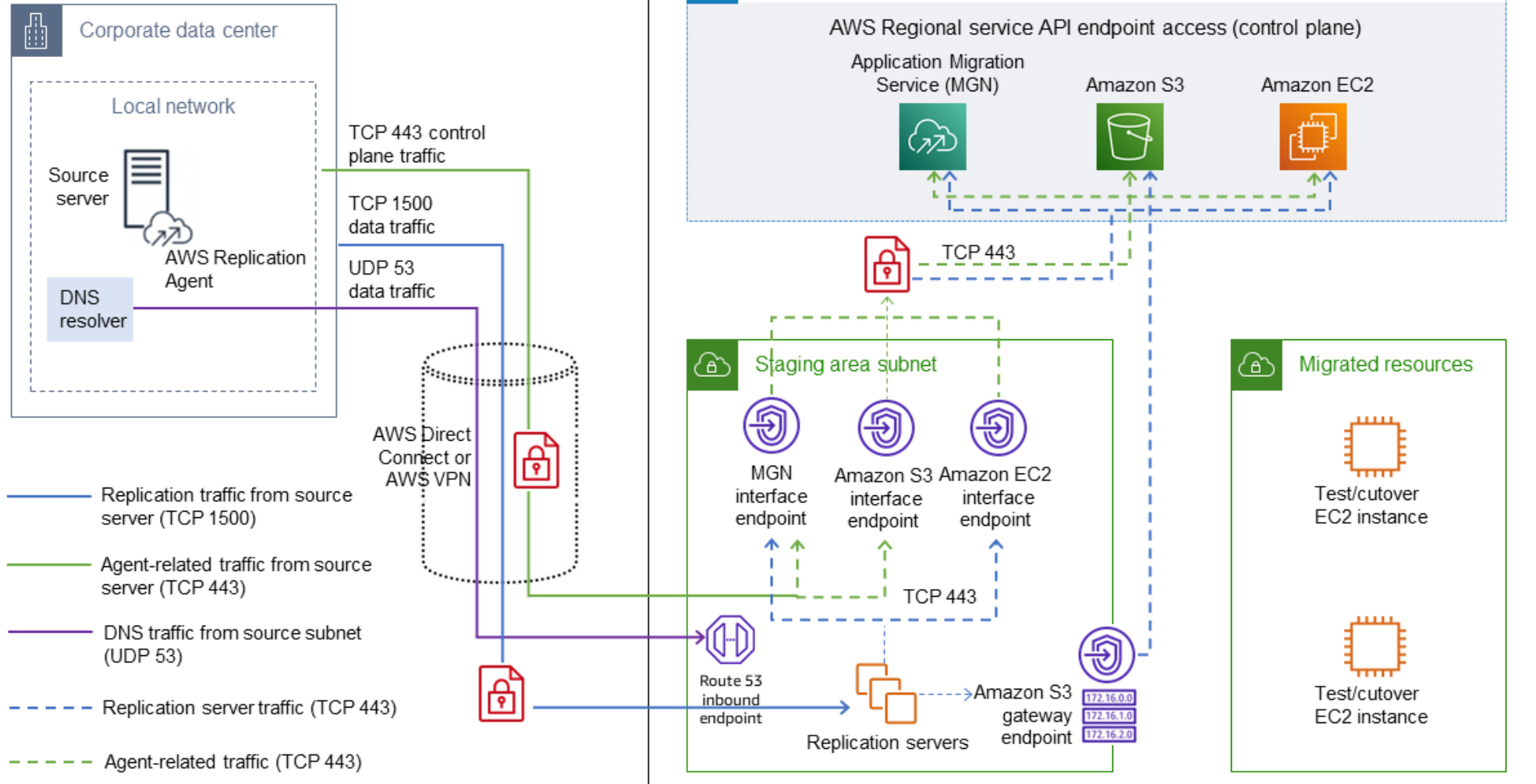
20 GiB

50 GiB

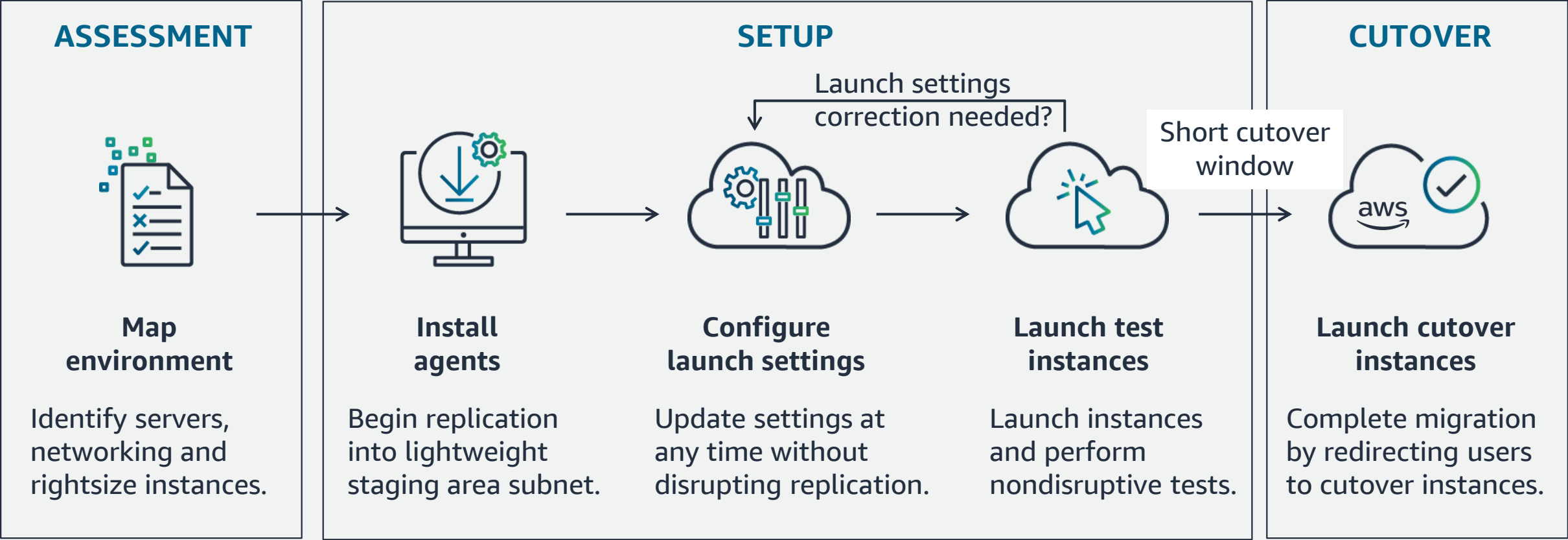
# Network Architecture



# Network Architecture – private subnets

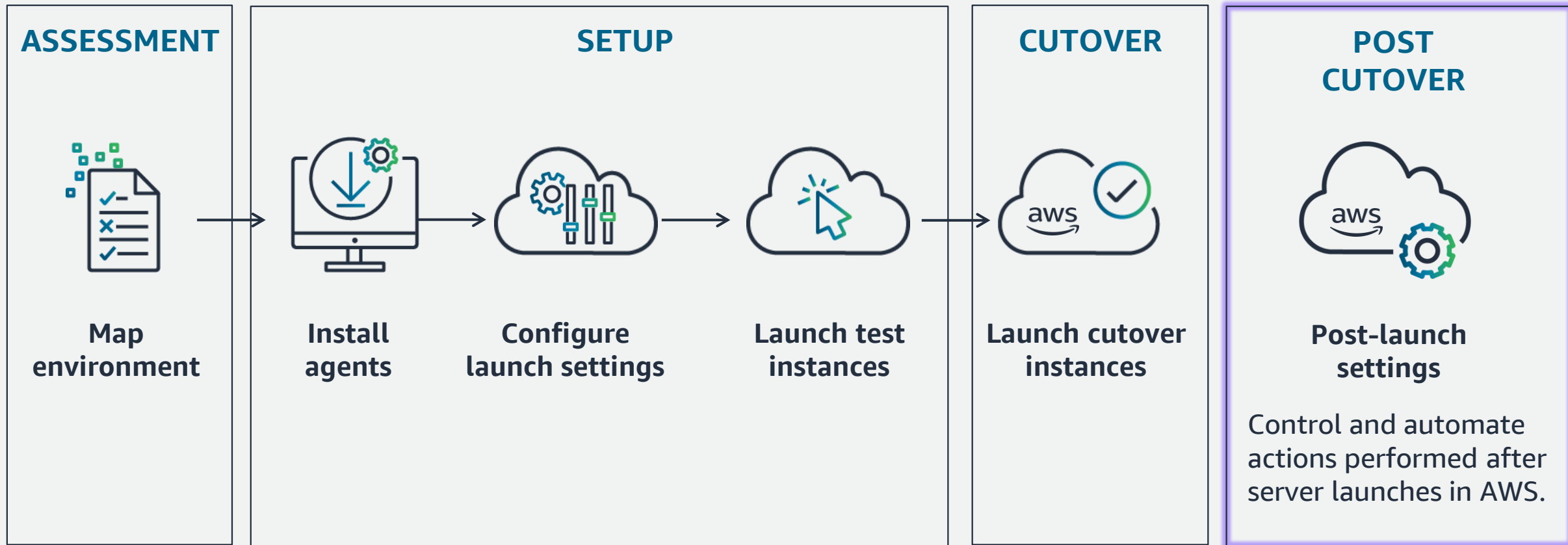


# Rehosting: Application Migration Service workflow



# Post-launch modernization actions

- Automate execution of any SSM document (provided by AWS or third party)
- Create your own SSM documents, when public documents don't meet your needs



# Post-launch modernization actions

## AWS Created actions

- Install SSM Agent
- Configure DR after migration
- Enable Refactor Spaces
- Enable Amazon Inspector
- Deploy Amazon CloudWatch
- Convert CentOS to Rocky Linux
- Convert Windows MS-SQL BYOL and SUSE BYOL to AWS License-Included instances
- Upgrade Windows OS (clone Instance and upgrade)
- Create Amazon Machine Image (AMI) from instance
- AD Join domain

The screenshot displays the 'Post-launch actions settings' interface in the AWS Management Console. It features a sidebar with filters for activation status, platform, creator, and categories. The main area lists 17 actions, each with a status indicator (Active or Not active), a platform (Windows and Linux or Linux), an order number, and a description. Actions include SSM agent, Replace SUSE subscription, CentOS to Rocky, CloudWatch agent installation, Enable Amazon Inspector, Join domain, Linux time sync setting, Volume integrity validation, EC2 connectivity check, Process status validation, Validate disk space, HTTP/HTTPS response validation, Verify tags, DR after migration, and Create AMI from instance.

Action Name	Powered by	Status	Platform	Order	Description
SSM agent	AWS SSM	Active	Windows and Linux	1	Install SSM agent
Replace SUSE subscription	AWS MGN	Not active	Linux	20	Convert a SUSE Linux subscription to an AWS provided SUSE...
CentOS to Rocky	AWS MGN	Not active	Linux	30	Convert the operating system of instances running CentOS Linux to...
CloudWatch agent installation	AWS CloudWatch	Active	Windows and Linux	101	Install and configure CloudWatch agent.
Enable Amazon Inspector	AWS Inspector	Not active	Windows and Linux	205	Enable Amazon Inspector at the account level.
Join domain	AWS Directory Service	Not active	Windows and Linux	330	Join your instances to an AWS Directory Service domain.
Linux time sync setting	AWS MGN	Not active	Linux	340	Configure your Linux instance with Amazon Time Sync Service.
Volume integrity validation	AWS MGN	Not active	Windows and Linux	401	Ensure that volumes on launched instances are identical to the source...
EC2 connectivity check	AWS MGN	Not active	Windows and Linux	405	Check network connectivity to a predefined list of ports and hosts.
Process status validation	AWS MGN	Not active	Windows and Linux	410	Verify that major processes are in a running state following instance...
Validate disk space	AWS MGN	Not active	Windows and Linux	430	Verify available free space (percentages) on a specific target EC2...
HTTP/HTTPS response validation	AWS MGN	Not active	Windows and Linux	450	Validate that the response status matches the configured success...
Verify tags	AWS MGN	Not active	Windows and Linux	460	Verify that tags which have been defined in the launch template and in...
DR after migration	AWS DRS	Active	Windows and Linux	805	Install the AWS Elastic Disaster Recovery (DRS) Replication Agent on...
Create AMI from instance	AWS EC2	Not active	Windows and Linux	860	Create a new Amazon Machine Image (AMI) from your Amazon EC2 instance.

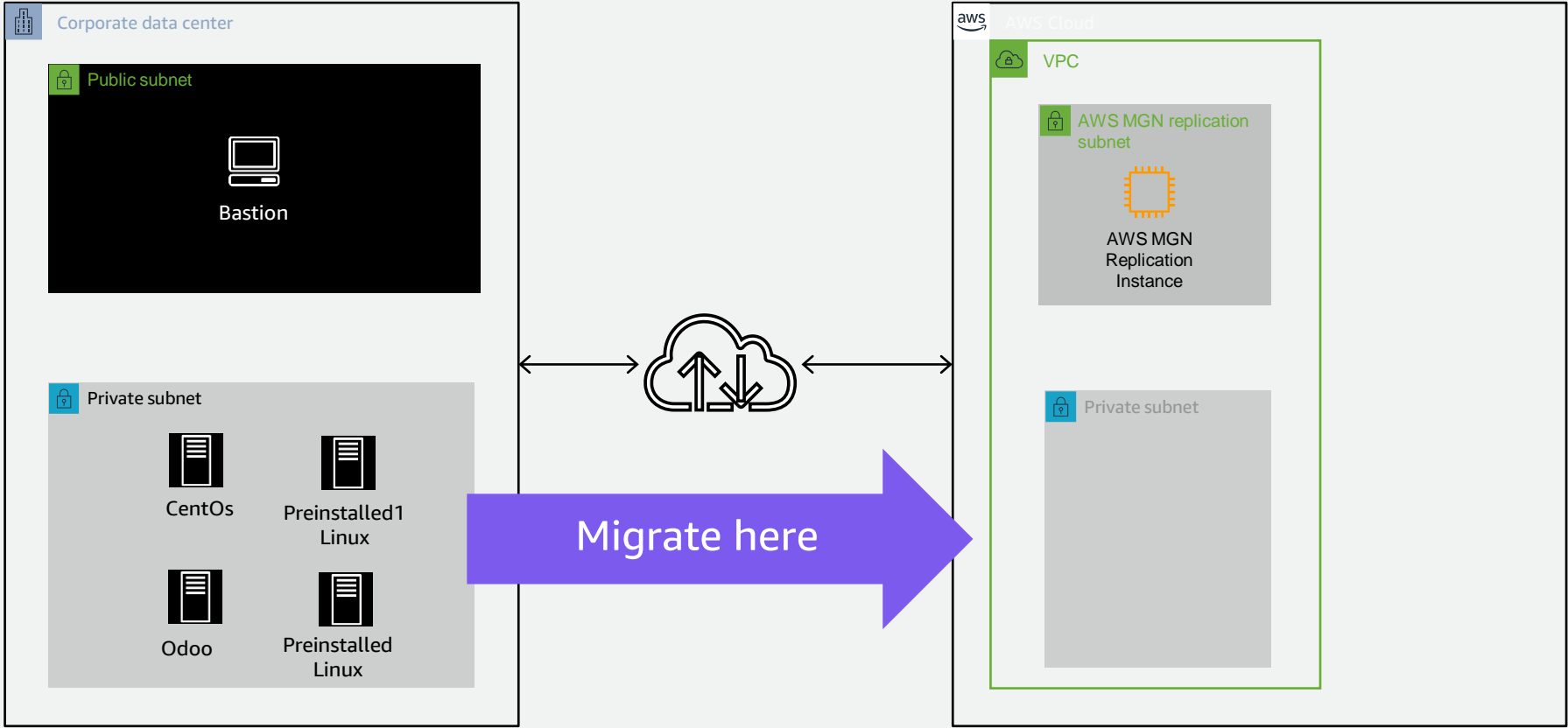




# **AWS Application Migration Service (AWS MGN)**

## **Lab Overview**

# Lab Overview





# Thank you

Corrections, feedback, or other questions?  
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