

Migrate the AWS Well-Architected way using AWS MGN

Sanket Nasre

Sr. Migration Solutions Architect
AWS



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Agenda

AWS Well-Architected Framework

AWS Application Migration Service

Put it together: Optimize migration using best practices

Hands-on labs

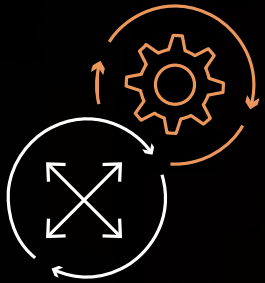


When you look at the workloads your team is building, can you answer the question:

“Are you Well-Architected?”



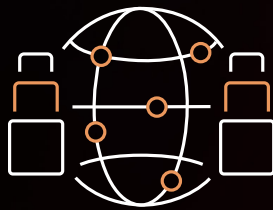
AWS Well-Architected Framework



Operational
excellence



Security



Reliability



Performance
efficiency



Cost
optimization



Sustainability



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Well-Architected is a set of best practices



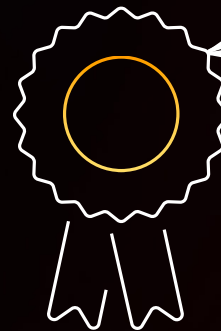
Design principles



Whitepaper



Questions



Best practices

REL 12. How do you test reliability? [Info](#)

After you have designed your workload to be resilient to the stresses of production, testing is the only way to ensure that it will operate as designed, and deliver the resiliency you expect.

☐ Question does not apply to this workload [Info](#)

Select from the following

- ☒ Use playbooks to investigate failures [Info](#)
- ☒ Perform post-incident analysis [Info](#)
- ☒ Test functional requirements [Info](#)
- ☒ Test scaling and performance requirements [Info](#)
- ☒ Test resiliency using chaos engineering [Info](#)
- ☒ Conduct game days regularly [Info](#)

AWS WA Tool



Labs



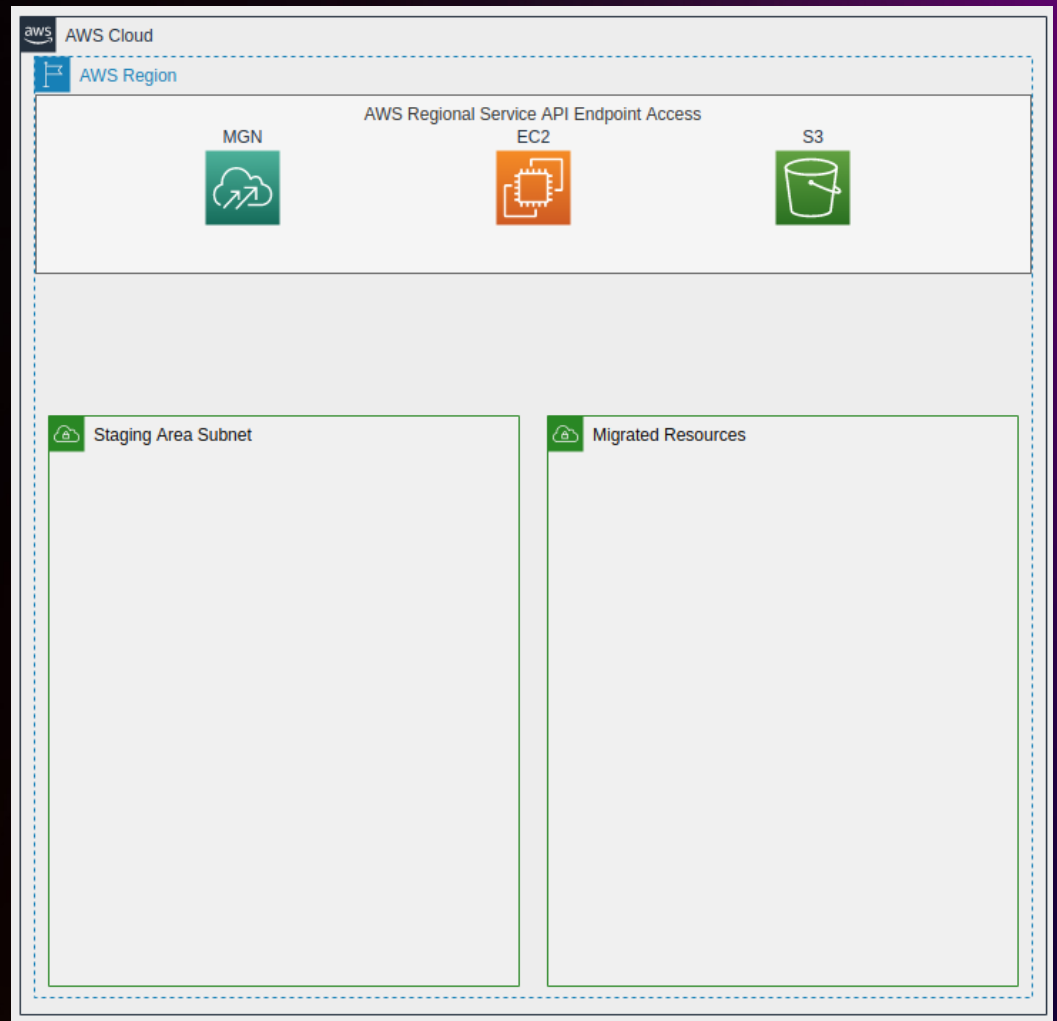
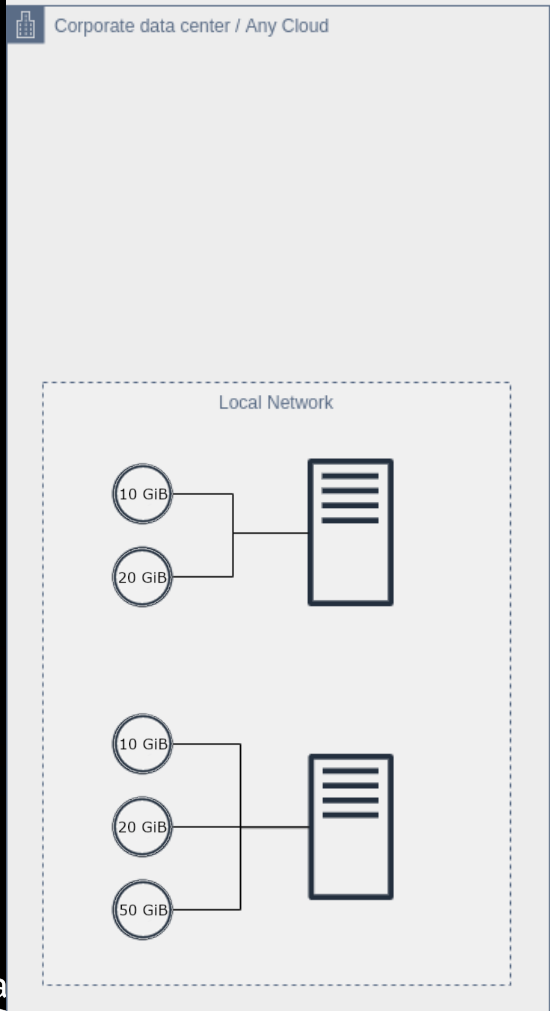
AWS
Well-Architected
Tool





AWS Application Migration Service




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 Corporate data center / Any Cloud

 AWS Cloud

 AWS Region

AWS Regional Service API Endpoint Access

General launch settings [Info](#)

Edit

Instance type right sizing
On


Start instance upon launch
Yes

Copy private IP
No

Operating system BYOL
Yes

Transfer server tags
No

EC2 Launch Template

Edit 

Template ID
lt-0

Instance type
c4.4xlarge

Security groups
-

Tenancy
-

Placement group name
-

Primary network interface

Description
-

Subnet
-

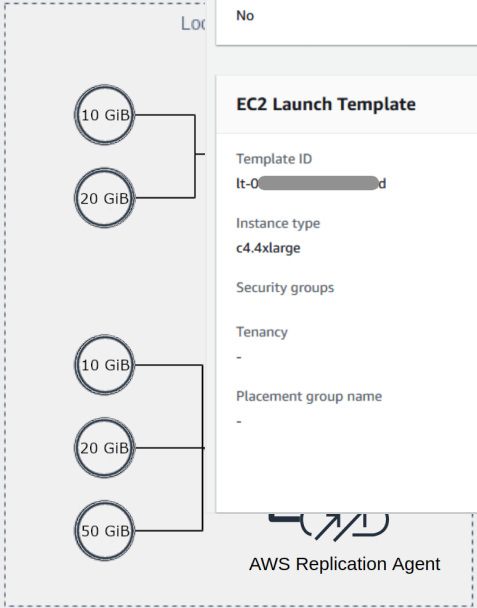
Public IP
Yes

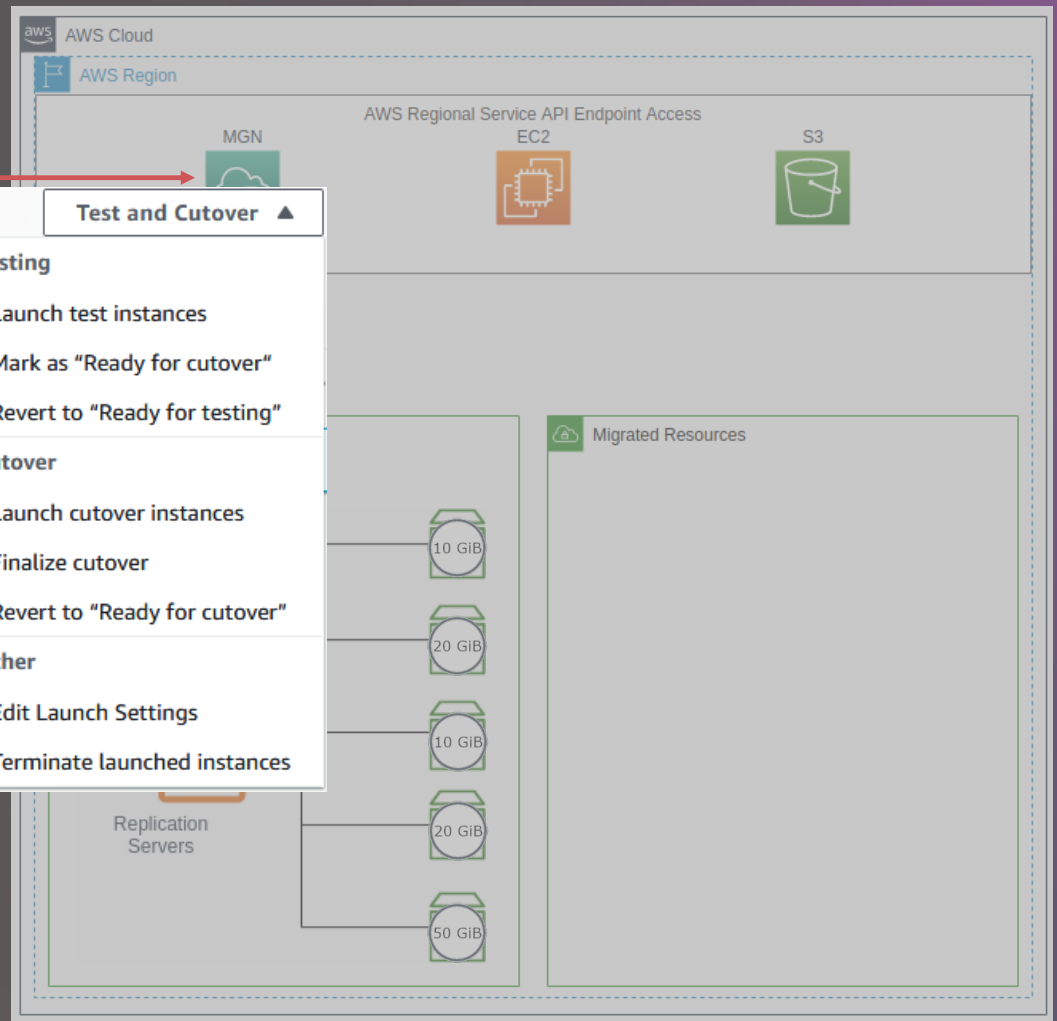
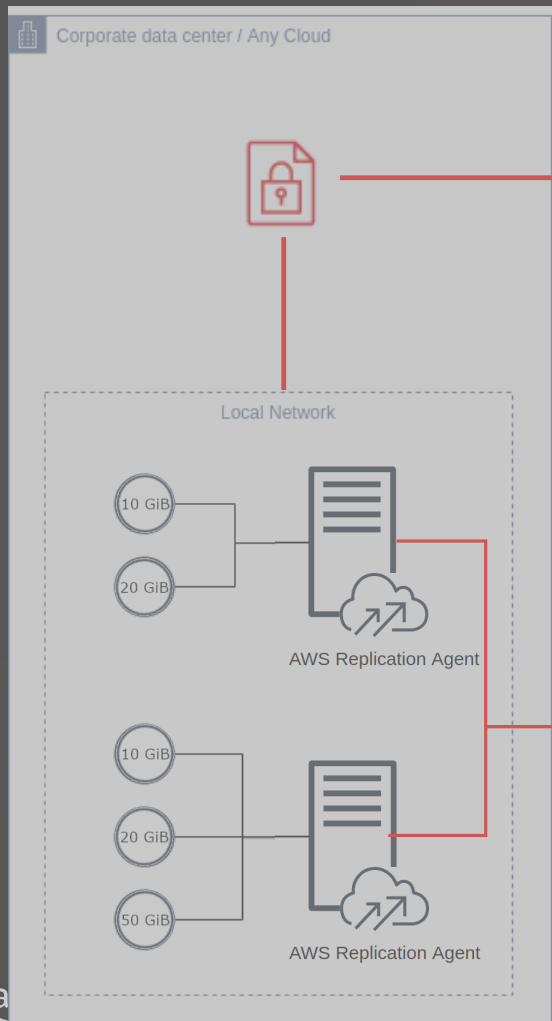
Private IP Addresses
-

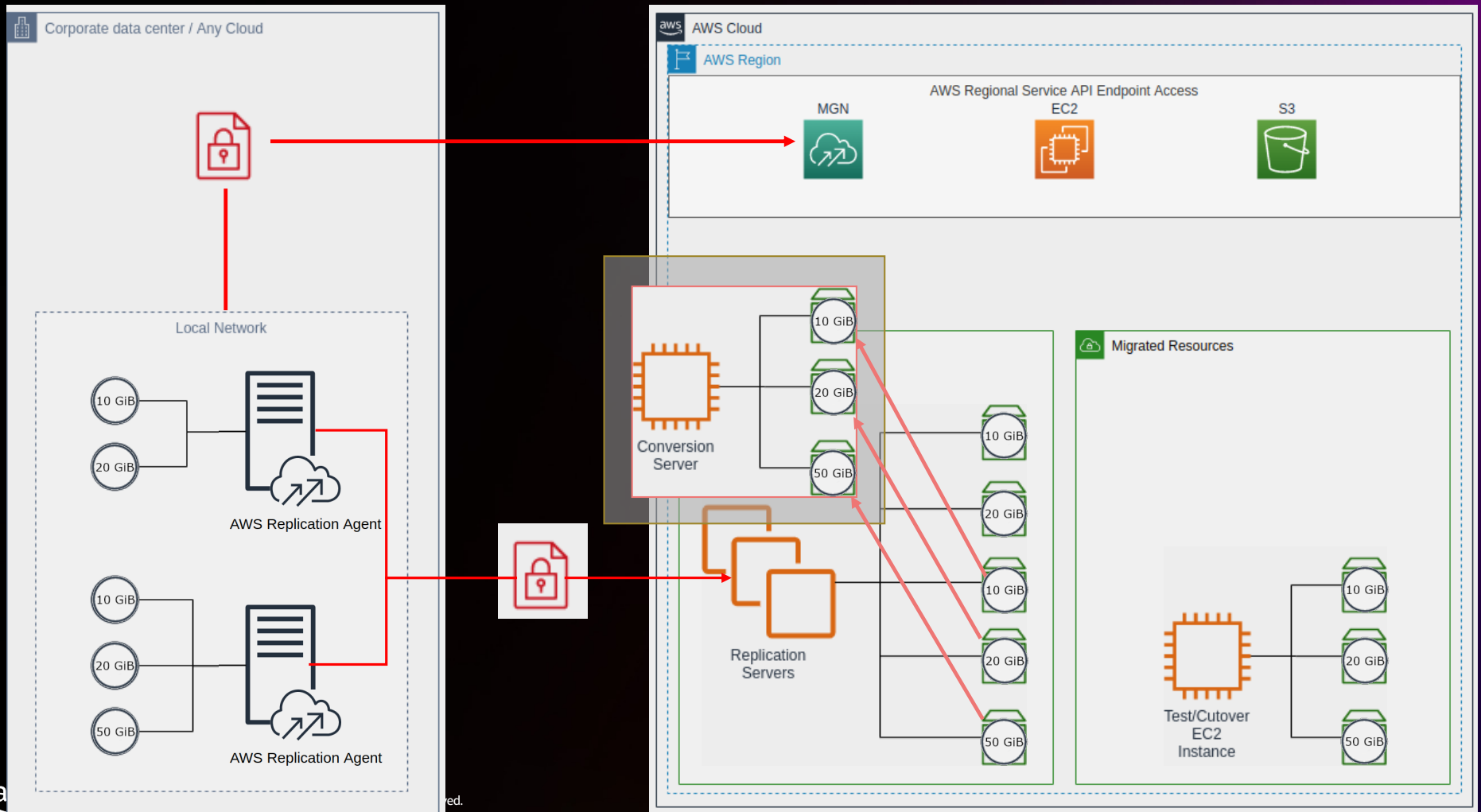
EBS volumes

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

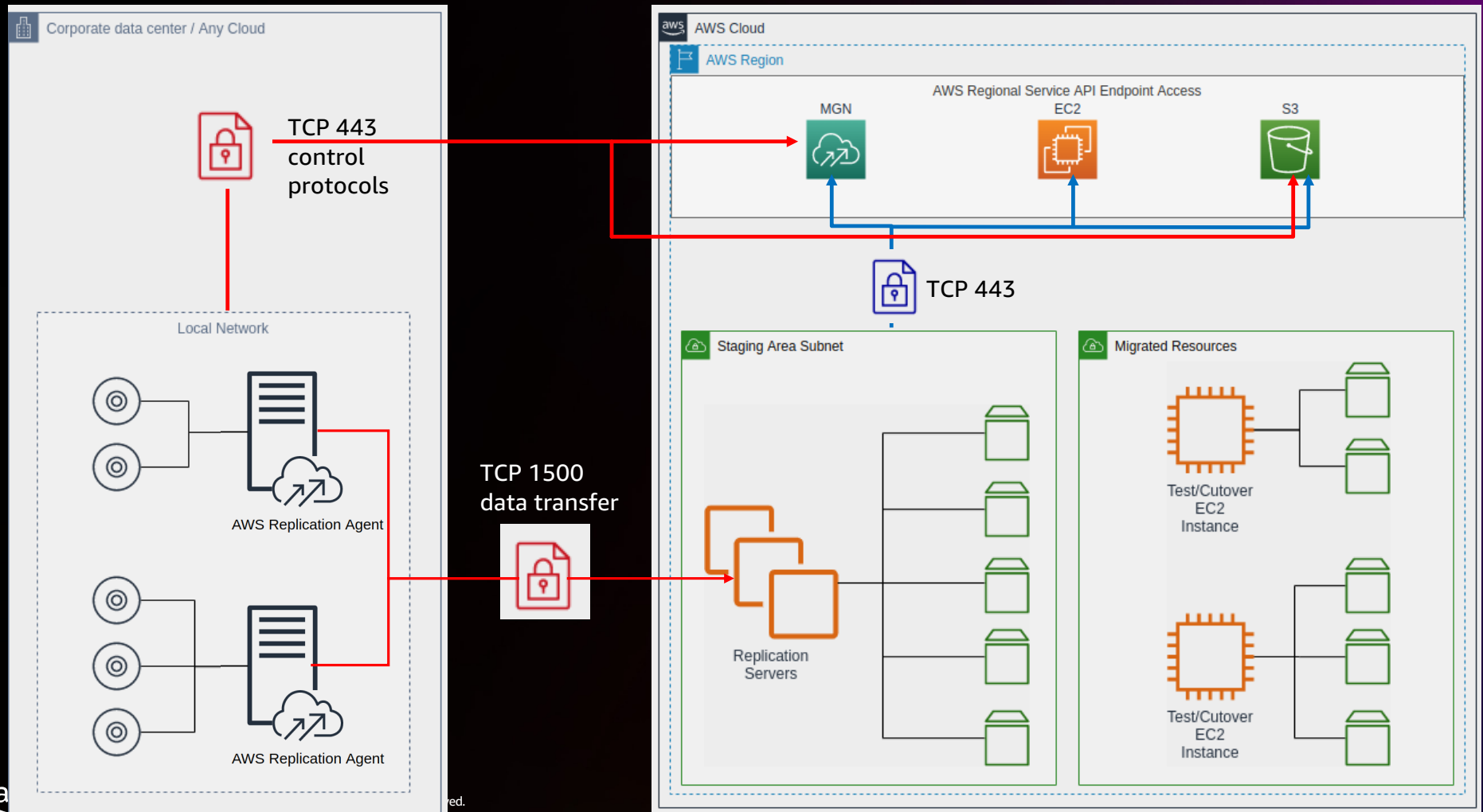
Volume 2 (200 GiB, EBS, Provisioned IOPS SSD (io1))



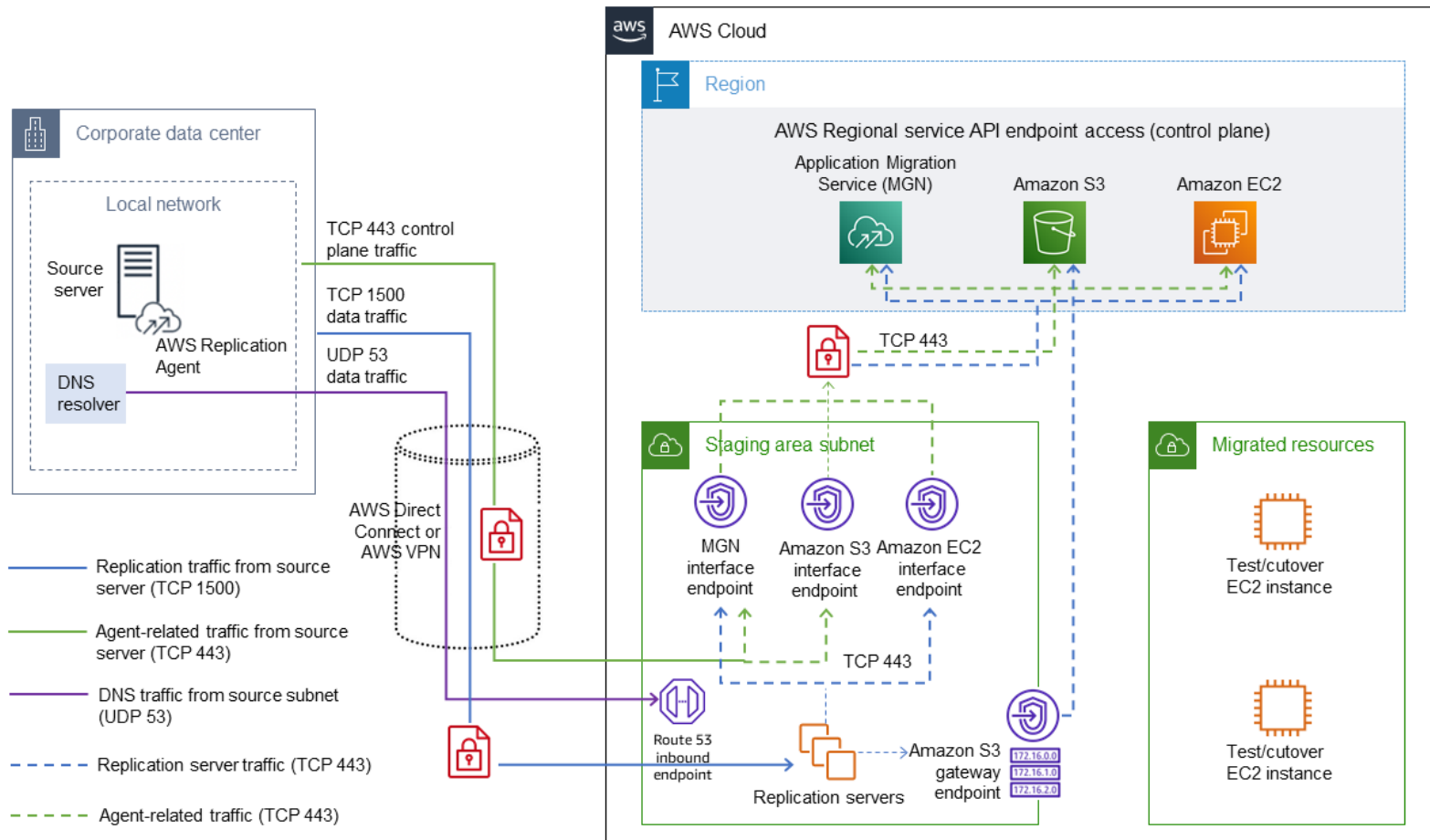




Network architecture



Network architecture: Private subnets

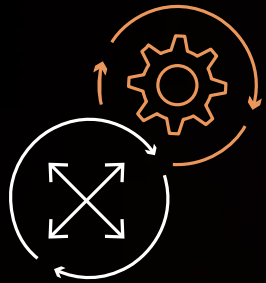


Put it together: Optimize migration using best practices



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Optimize your migration using best practices



Operational
excellence

Understand source environment

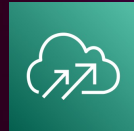
Monitor service quotas

Use automation

Use multiple environments



Migration Evaluator



AWS Application
Migration Service



AWS Systems Manager



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Optimize your migration using best practices



Security

Use of temporary credentials

Use of private connectivity

Encryption of EBS volumes



AWS Identity and Access
Management (IAM)



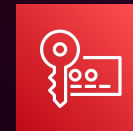
AWS STS



Amazon Virtual Private Cloud
(Amazon VPC)



Endpoints

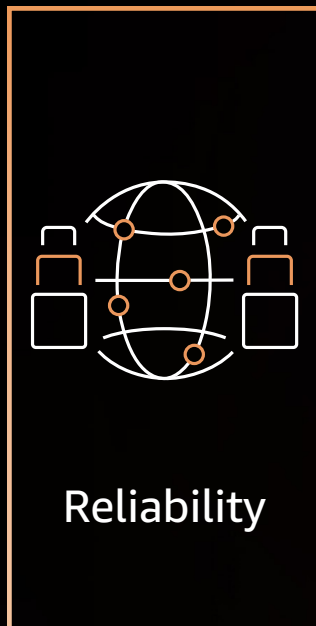


AWS Key Management
Service (AWS KMS)



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Optimize your migration using best practices



Build disaster recovery as you migrate

Integrate with AWS Systems Manager

Use automation to make changes



AWS Elastic Disaster Recovery

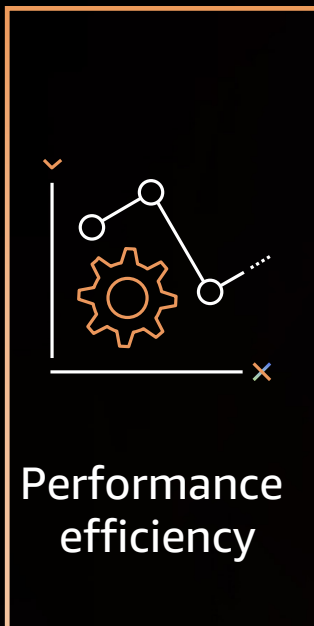


AWS Systems Manager



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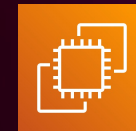
Optimize your migration using best practices



Optimize replication server

Optimize instance/storage types

Monitor Metrics using a dashboard



Amazon Elastic Compute Cloud (Amazon EC2)



Amazon Elastic Block Store (Amazon EBS)



Volume gp3



Optimize your migration using best practices



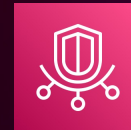
Control migration cost

Using cost allocation tags

Right-sizing target environment



AWS Cost Explorer



AWS Trusted Advisor

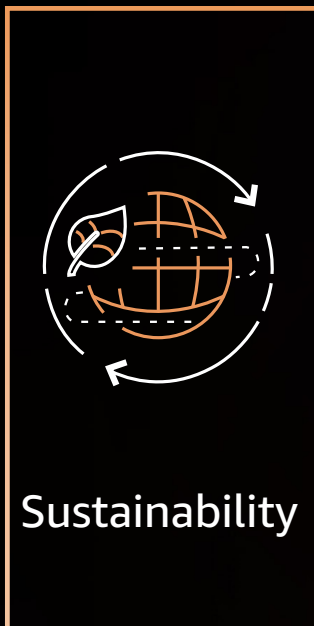


Migration Evaluator



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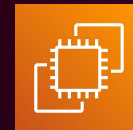
Optimize your migration using best practices



Maximize utilization

Compute optimizer

Trusted advisor



Amazon EC2



AWS Compute Optimizer



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Lab agenda

Pre-migration

Well-Architected Framework and the migration process (assess, mobilize, migrate)

Migration

- Optimize configuration of AWS Application Migration Service per Well-Architected pillars
- Build Amazon CloudWatch dashboard to monitor migration
- Integrate with AWS Systems Manager
- Build disaster recovery for migrated servers
- Perform test, validate, and cutover

Post-migration

- Optimize resources on migrated environment
- Understand and track migration cost



Hands-on labs



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Thank you!

Sanket Nasre

nasres@amazon.com



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