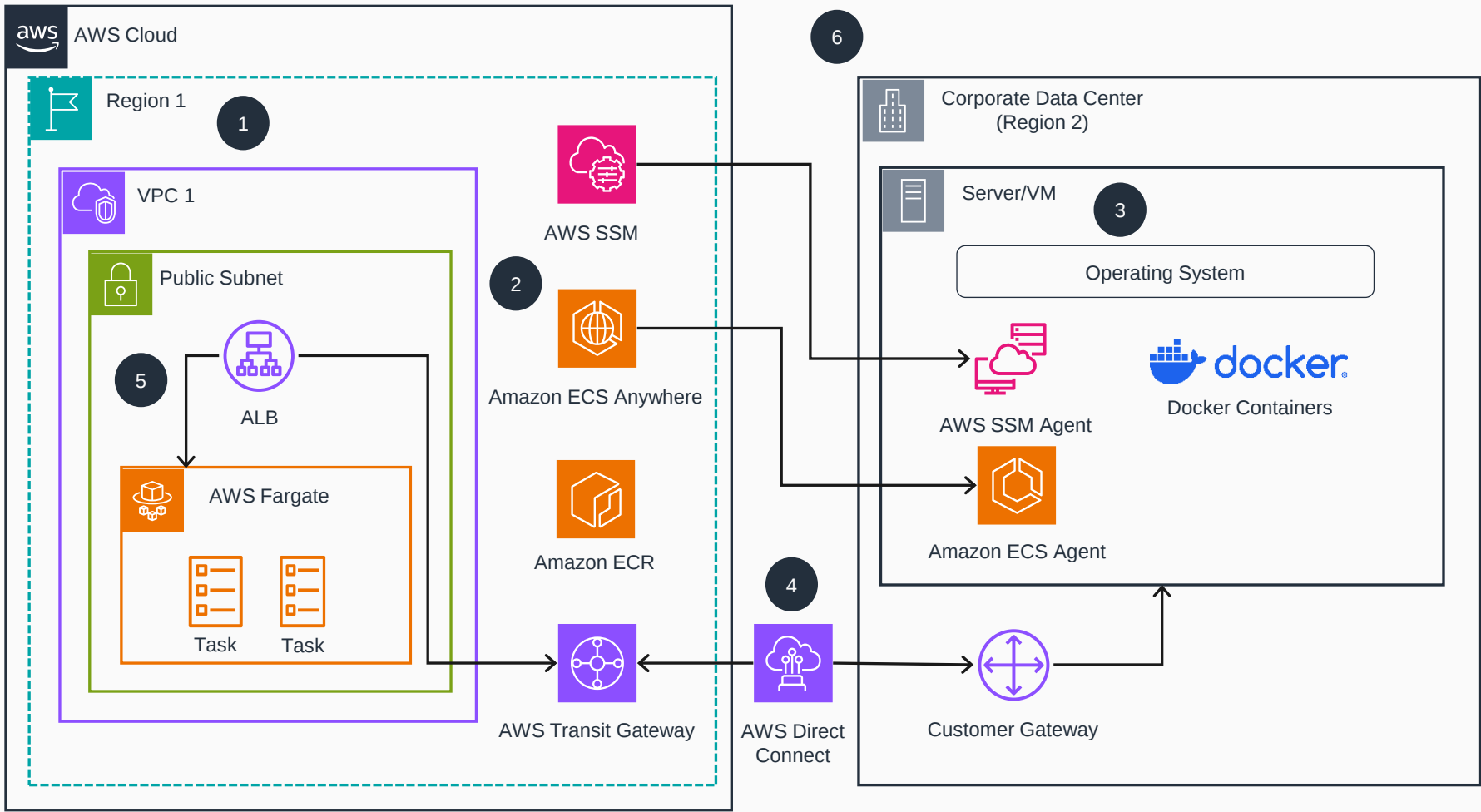


# Guidance for Building a Hybrid Architecture Using Amazon ECS Anywhere

## Anywhere with Cross-Region Load Balancing

This architecture diagram illustrates how to effectively support hybrid architecture on AWS using Amazon ECS. It shows the key components and their interactions, providing an overview of the architecture's structure and functionality.



- 1 The Infrastructure Team deploys AWS Region 1 with VPC1 for cloud workloads and configures on-premises network segments for **Amazon Elastic Container Service (Amazon ECS) Anywhere** nodes, preparing servers for hybrid disaster recovery.
- 2 DevOps Team creates an **Amazon ECS** cluster in AWS, generates **Amazon ECS Anywhere** activation keys via the AWS Console, configures IAM roles, and establishes secure HTTPS connectivity (port 443) from on-premises to AWS service endpoints for **Amazon ECS**, **AWS Systems Manager (AWS SSM)**, and **Amazon Elastic Container Registry (Amazon ECR)**.
- 3 System Administrators provision on-premises servers (2 vCPUs, 4GB RAM minimum), install Docker or Containerd runtime, execute **Amazon ECS Anywhere** installation script to deploy **AWS SSM** or **Amazon ECS** agents, and register nodes using activation credentials through the corporate firewall.
- 4 The Network Team implements **AWS Direct Connect**, configures firewall rules for outbound HTTPS traffic to AWS endpoints, enabling secure **Amazon ECS Anywhere** agent communication with AWS control plane without internet exposure.
- 5 An Application Load Balancer (ALB) distributes incoming requests across healthy containers using target group health checks, routing traffic to both on-premises **Amazon ECS Anywhere** instances and **AWS Fargate** tasks based on configured load balancing algorithms.
- 6 An **Amazon ECS Anywhere** multi-region architecture helps customers to achieve zero-downtime deployments and instant disaster recovery by running the same containerized workloads seamlessly across on-premises data centers, eliminating the risk of complete application failure during regional outages or data center maintenance.