AWS Distributed Perforce Architecture
Hybrid and Multi-Region Deployment

A hybrid multi-Region deployment of Perforce Helix Core in AWS

1. Connect corporate data center edge server to the AWS primary Region by AWS Direct Connect or AWS Site-to-Site Virtual Private Network (VPN) depending on bandwidth and connection stability needs. Connect remote users by AWS Client VPN (or other VPN solution) or virtual workstations on AWS.

2. AWS Transit Gateway connects virtual private clouds (VPCs) and on-premises networks through a central hub-and-spoke model to simplify complex peering relationships and encrypt data in transit.

3. Perforce commit-edge architecture offers the best overall performance with most commands running locally. The primary and replica/high availability servers run in separate availability zones for further high availability.

4. If your depot is less than 16 TB, AWS recommends running Perforce on Amazon Elastic Block Store (Amazon EBS) GP3 volumes. The maximum EBS volume size is 16 TB; therefore, storing the Perforce depot in Amazon Elastic File System (Amazon EFS) is recommended for customers who have a Perforce depot larger than (or will soon be larger than) 16 TB. AWS recommends using Amazon EFS Standard-Infrequent Access (EFS Standard-IA) for cost optimization, because Perforce use is particularly well suited to the EFS Standard-IA cost model.

5. AWS Backup is used for Amazon EFS backups. If you are running Perforce on Amazon EBS only, EBS snapshots are the standard backup mechanism. AWS Backup works with Amazon EBS as well, but is not required.

6. Edge Server high availability is not required, depending on recovery point objective and recovery time objective. Restoring from an EBS snapshot is a slower but more cost effective solution.

7. Use an NAT gateway so that instances in a private subnet can connect to services outside your VPC, but external services cannot initiate a connection with those instances.