AWS Code Commit

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- AWS CodeCommit is a fully-managed source control service that makes it easy for companies to host secure and highly scalable private Git repositories.
- CodeCommit eliminates the need to operate your own source control system or worry about scaling its infrastructure.
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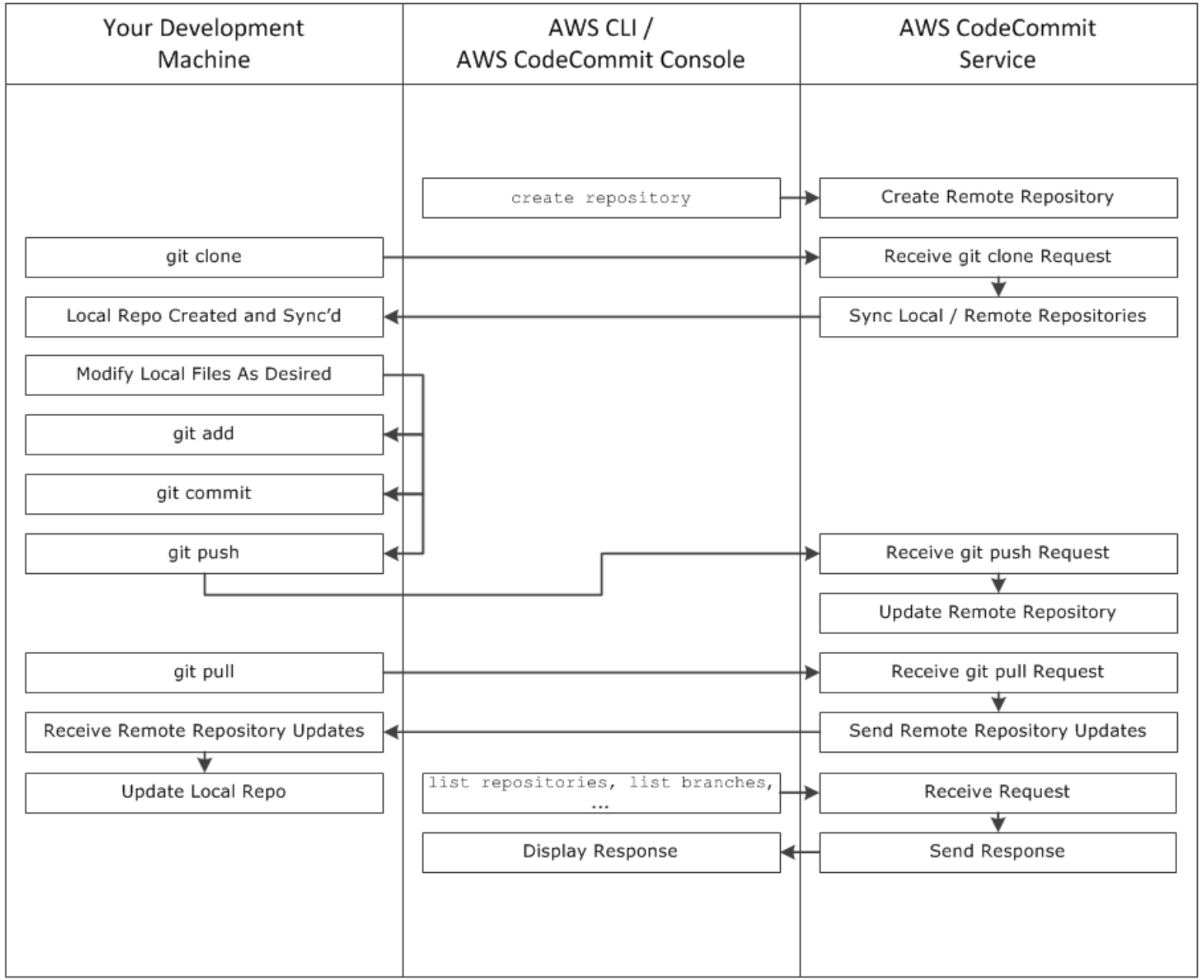
Code Commit Workflow



AWS Code Commit Benefits

- AWS CodeCommit provides high service availability and durability and eliminates the administrative overhead of managing your own hardware and software. There is no hardware to provision and scale and no server software to install, configure, and update.
- **Store your code securely**. AWS CodeCommit repositories are encrypted at rest as well as in transit.
- **Easily scale your version control projects**. AWS CodeCommit repositories can scale up to meet your development needs. The service can handle repositories with large numbers of files or branches, large file sizes, and lengthy revision histories.

AWS Code Commit Benefits

- **Store anything, anytime**. AWS CodeCommit has no limit on the size of your repositories or on the file types you can store.
- **Integrate with other AWS and third-party services**. AWS CodeCommit keeps your repositories close to your other production resources in the AWS cloud, which helps increase the speed and frequency of your development lifecycle. It is integrated with IAM and can be used with other AWS services and in parallel with other repositories.
- **Easily migrate files from other remote repositories**. You can migrate to AWS CodeCommit from any Git-based repository.
- **Use the Git tools you already know**. AWS CodeCommit supports Git commands as well as its own AWS CLI commands and APIs.

Communication Protocols

- **HTTPS**: With HTTPS connections, you allow Git to use a cryptographically signed version of your IAM user credentials or Amazon EC2 instance role whenever Git needs to authenticate with AWS to interact with AWS CodeCommit repositories.
- To do this, you configure a *credential helper* for Git on your local machine. A credential helper is included in the AWS CLI on Linux, OS X, or Unix, and included as part of the AWS SDK for .NET for Windows operating systems.
- Without this credential helper, you would need to manually sign and resubmit a cryptographic version of your IAM user credentials whenever Git must authenticate with AWS. The credential helper manages this process for you automatically.

Communication Protocols

- **SSH**: With SSH connections, you create public and private key files on your local machine that Git and AWS CodeCommit use for SSH authentication.
- You associate the public key with your IAM user. You store the private key on your local machine.
- Because SSH requires manual creation and management of public and private key files, you might find HTTPS simpler and easier to use with AWS Code Commit.