

CODE COMMIT



What is CodeCommit?

- AWS CodeCommit is a managed source code control service that host private Git repositories
- Benefits:
 - Highly available, scalable & fault tolerant
 - No size limit
 - Integrates with other AWS services (i.e. CodePipeline, Lambda & SNS)
 - Easily Migrate files from other Git-based repositories
 - Works with existing Git-based tools

Explain Like I am Five (ELI5):

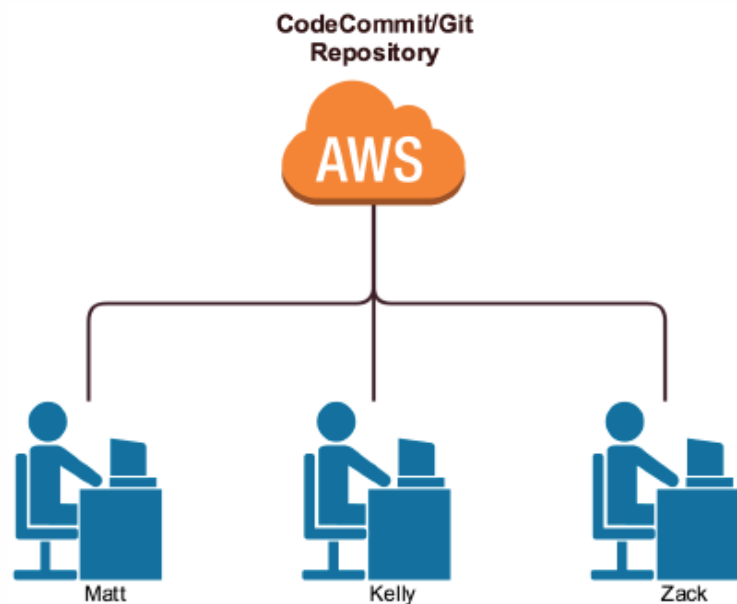
- At the highest level, CodeCommit is a communication tool.
- It is an service that allows developers to collaborate on a project and easily manage, share, update, and coordinate the code they are independently working on.

Meet our Imaginary Developers!

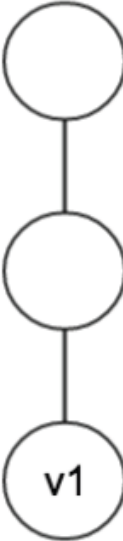
- Matt
- Kelly
- Zack

They are working on a project called:

WonderWidgets



Central Repository



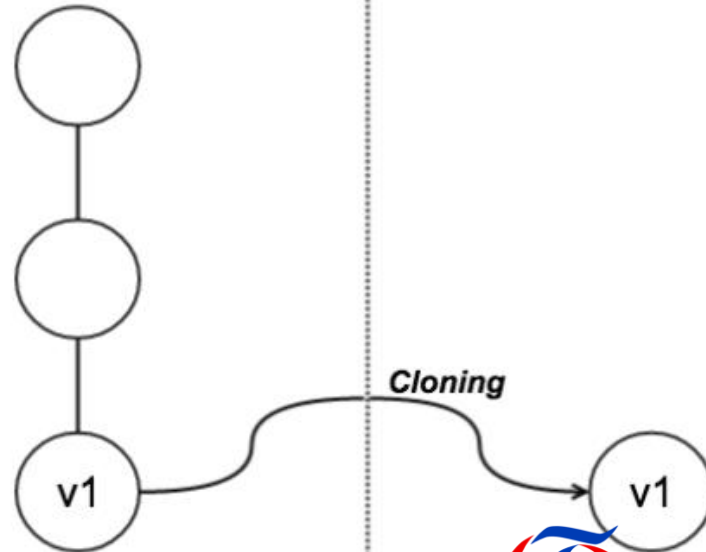
Local Repository



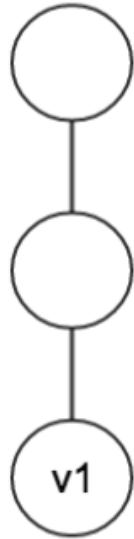
Central Repository



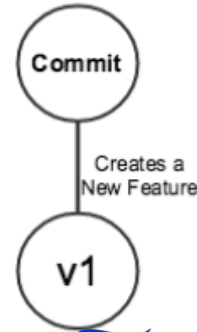
Local Repository



Central Repository



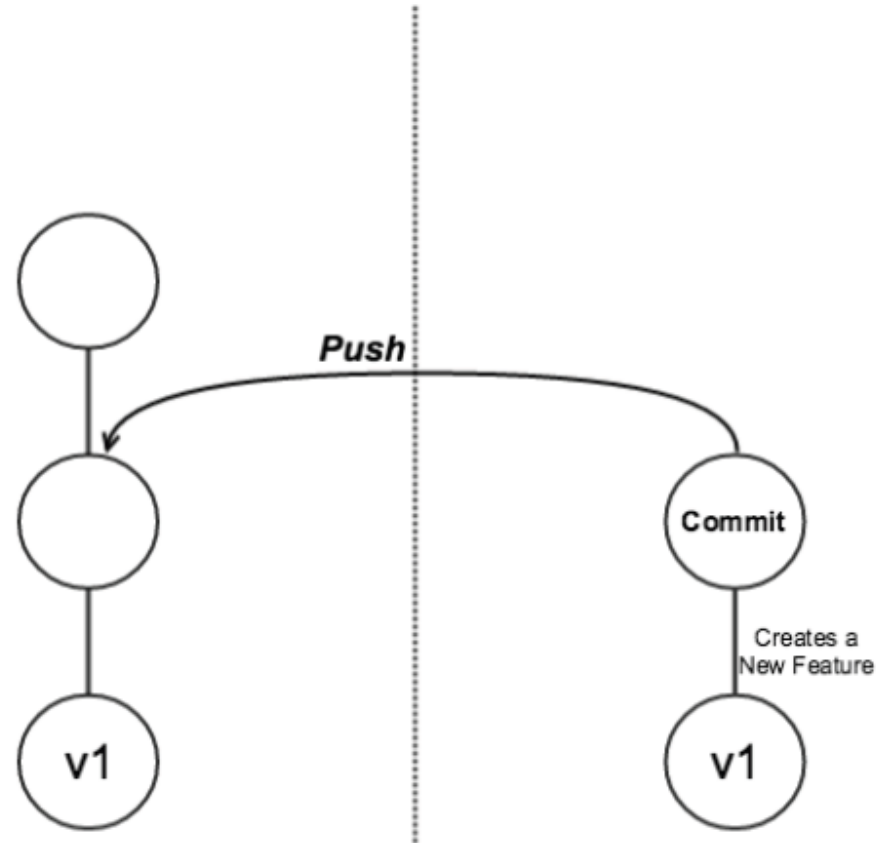
Local Repository



Central Repository



Local Repository



Local Repository



Central Repository



Local Repository



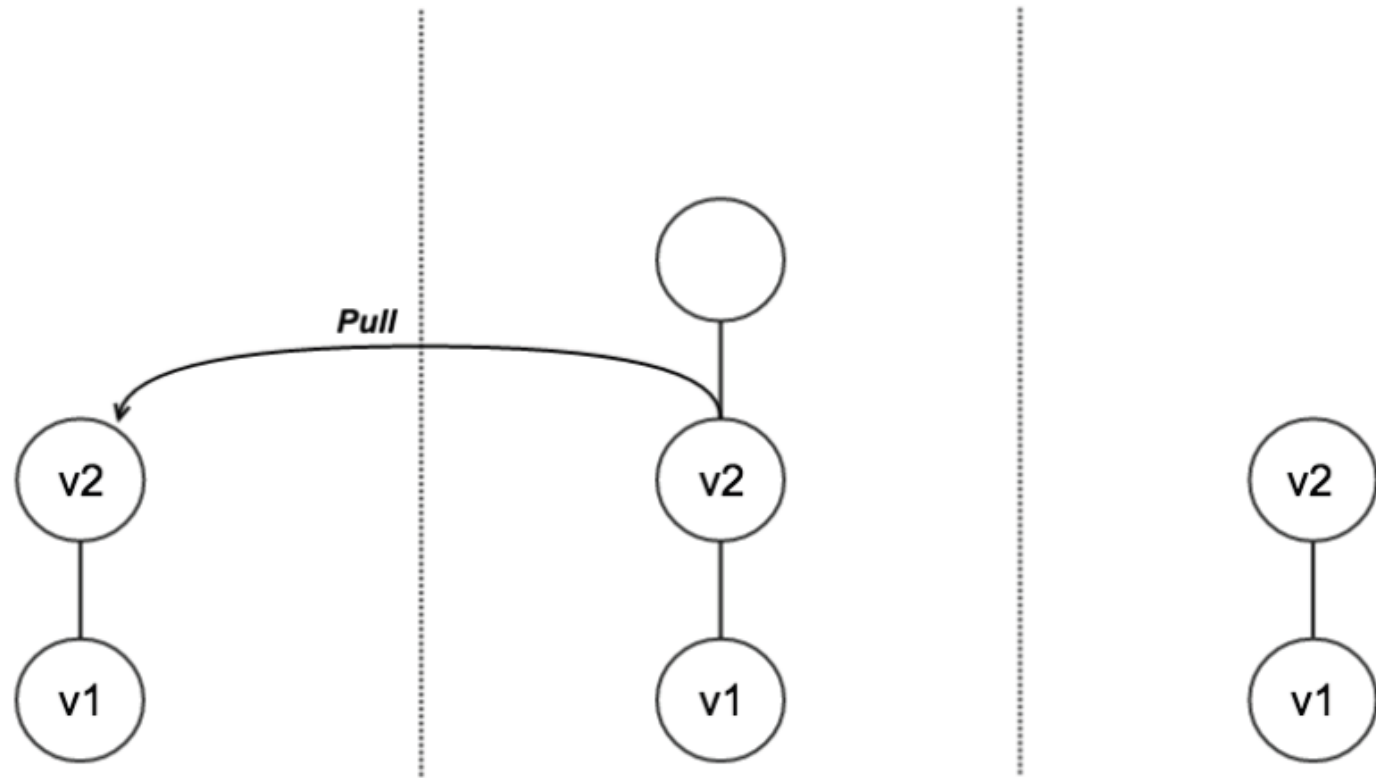
Local Repository



Central Repository



Local Repository



Local Repository



Kelly

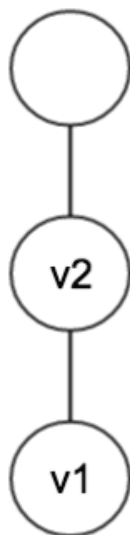
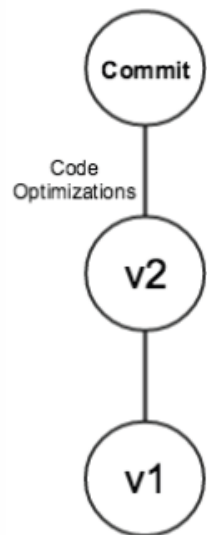
Central Repository



Local Repository



Matt



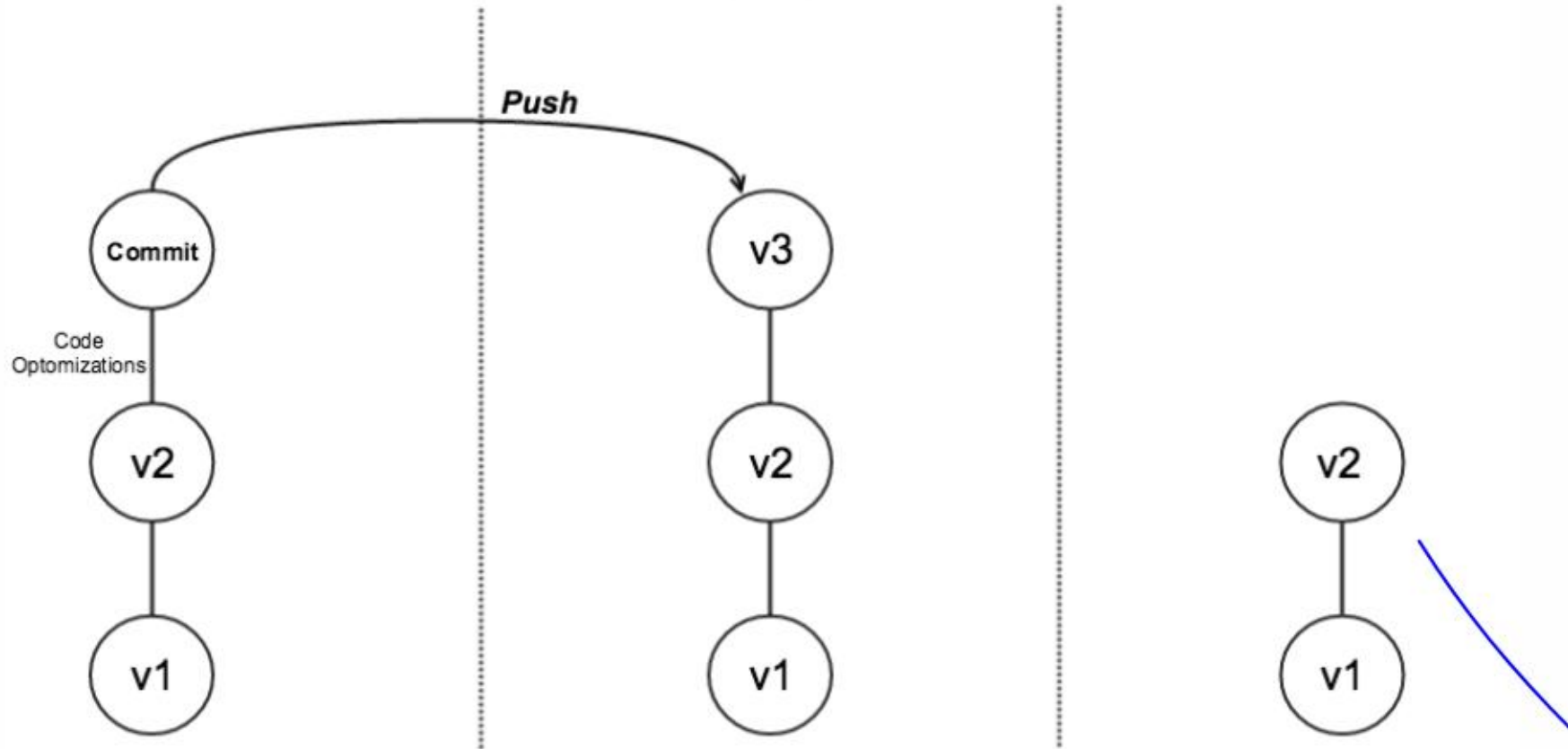
Local Repository



Central Repository



Local Repository



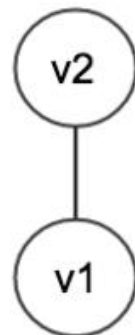
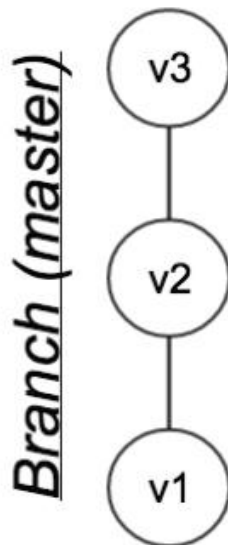
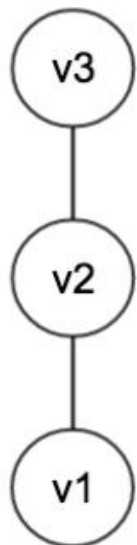
Local Repository



Central Repository



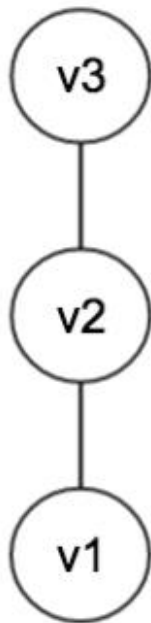
Local Repository



Local Repository



Kelly

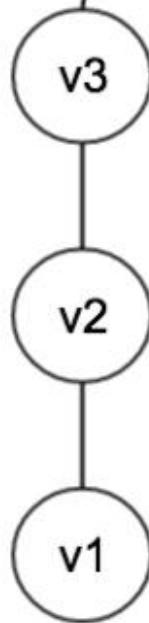


Central Repository



AWS

Branch (master)

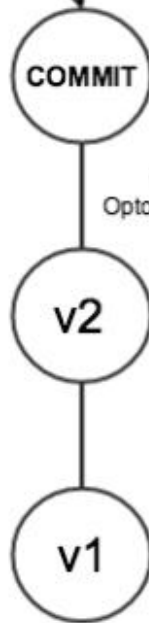


Local Repository



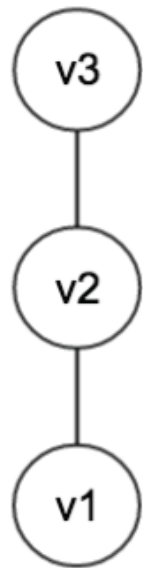
Matt

Pull



Code
Optimizations

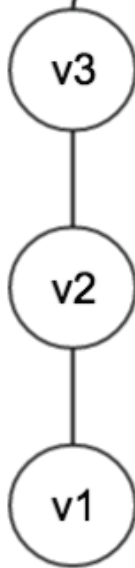
Local Repository



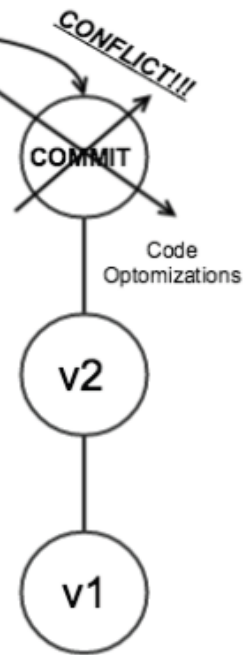
Central Repository



Branch (master)



Local Repository



Setup & Configuration

- Tools we need to use CodeCommit
 - AWS CLI -> create, edit, delete, and view Repositories
 - Git -> clone, commit, push, pull, and create branches
- Communication Protocols
 - SSH
 - HTTPS

Pricing

- Free Teir (first 5 active users)
 - Unlimited repositories
 - 50 GB per month of storage
 - 10,000 Git request per month
- \$1 Per Month (each active user above the first 5)
 - Unlimited repositories
 - 10 GB per month of storage per active user
 - 2,000 Git request per month per active user

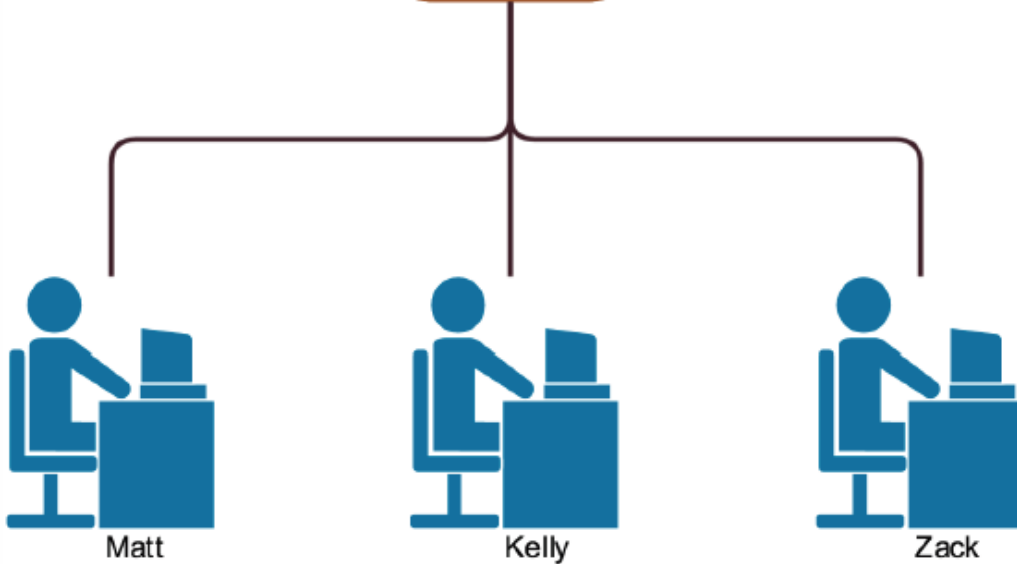
For Example: If you have 8 active users, you totally bill will be \$3, assuming you don't exceed any of the above limits.

- Overage
 - \$0.06 per GB per month
 - \$0.001 per Git request



WonderWidgets Development Team

CodeCommit/Git
Repository



HTTPS or SSH

- Functionally, both protocols are basically the same
 - git clone **https://**git-codecommit.us-east-1.amazonaws.com/v1/repos/MyDemoRepo my-demo-repo
 - git clone **ssh://**git-codecommit.us-east-1.amazonaws.com/v1/repos/MyDemoRepo my-demo-repo
- Storing and verifying credentials is a main point of difference
 - HTTPS: Credential Helper
 - SSH: RSA Key Pairs
- Port access (your firewall and network security)
 - HTTPS: Port 443
 - SSH: Port 22

HTTPS or SSH

- **HTTPS Pros:**
 - Simple credential management
 - All data transfers are encrypted
 - Firewalls are often setup to allow traffic through port 443
- **HTTPS Cons:**
 - MAC OSX Keychain issues
- **SSH Pros:**
 - SSH is efficient
 - All data transfers are encrypted
- **SSH Cons:**
 - Credential management can be slightly more cumbersome
 - Firewalls can sometimes block port 22

HTTPS or SSH: Recommendation

- Windows & Linux: HTTPS
- Mac OSX: SSH (due to keychain issues)

WINDOWS

STEPS

1. Install git
2. Install AWS CLI and configure in cli
3. Create a user with IAM Policy for Code Commit
4. Install AWS sdk for .net
5. Navigate to C:\Program Files (x86)\AWS Tools\CodeCommit
6. Launch command prompt and enter git-credential-AWSS4 and in prompted dialog enter ok
7. Git config --global --edit to check