

Benefits of Source Control in PostgreSQL



Grant Fritchey DevOps Advocate

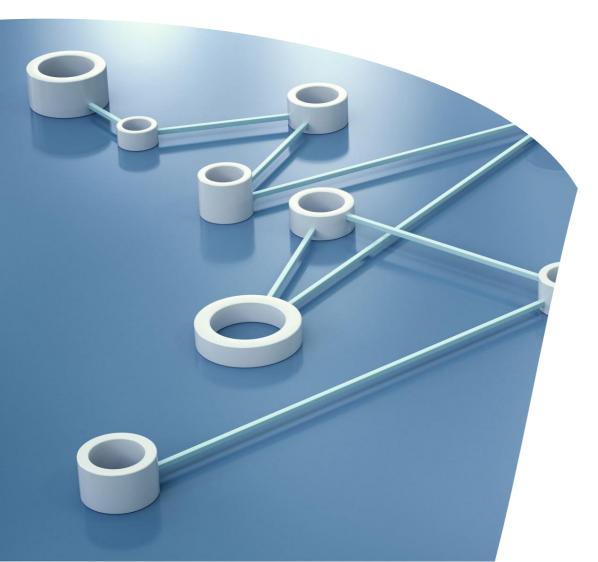
Microsoft Data Platform MVP AWS Community Builder





scarydba.com

Source Control (Version Control)



A system to enhance collaboration by tracking and managing code changes.

Benefits

- Audits
- Undo
- Known State
- Backups
- Development Isolation
- Automation



Audits

- Who made the change?
- When was the change made?
- What was the change?



Undo

- CTL+Z does not work on databases
- Restores can be long and difficult
- Provides a mechanism for rollback



Known State

- Accurately define a moment in time
- Compare between
 environments
- Compare across time





- It may be code only, but it's a backup
- Backups are good





- New versions
- Hot fixes
- Environments

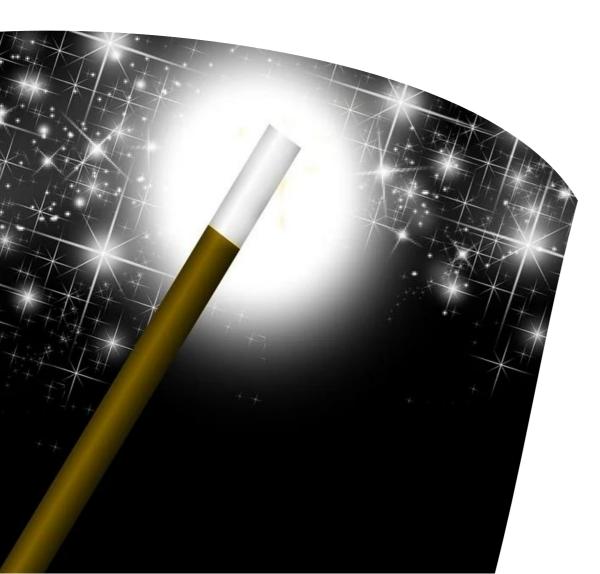


Automation



Source control provides the basis for all automation

Need a Piece of Magic



You will need a magic tool

Ultimate Realization of Benefits



If it's not in source control, it doesn't exist

Where Git

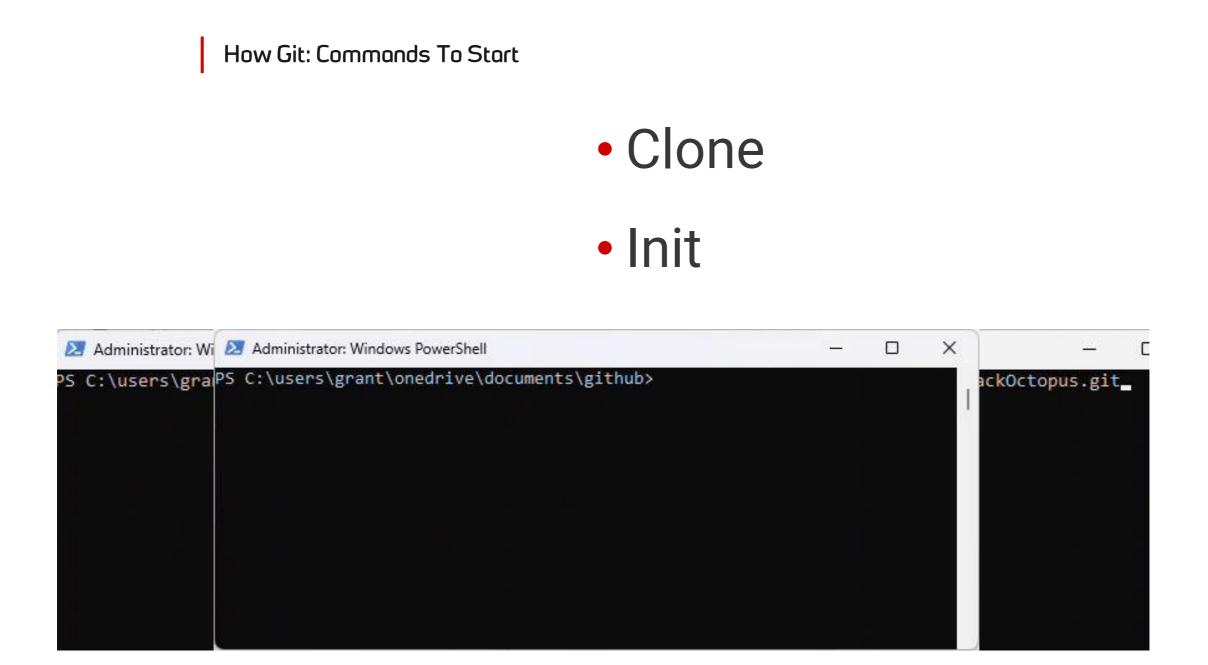


- On your machine
- On your server
- AWS Code Commit
- Azure DevOps
- GitHub
- GitLab
- BitBucket
- Atlassian
- Perforce
- SourceForge
- Launchpad
- Codebase

How Git

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			426	427	
				428	+##a-flyway.check.buildUrl='jdbc:sqlserv true'⊘↔

- Command Line
- Generic GUI
- Specific GUI



How Git: Working Day-To-Day

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Administrator	0 <u>.</u>	×					
5 C:\users\g	rant\onedriv	e\docum	ents\git	thub\adwf]	yway>		

FetchPull

• Add

- Commit
- Push
- Status



Open a pull request

✓ 0 ■■■■■ gitintro.sql []

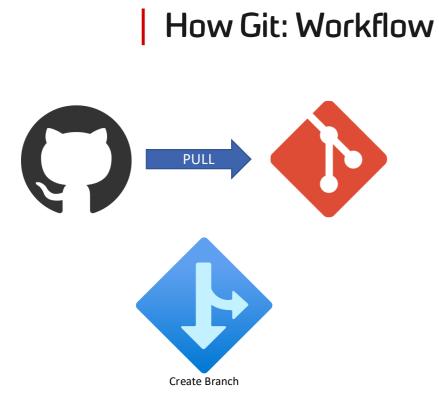
Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks.

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- Branch
- Pull request
- Merge

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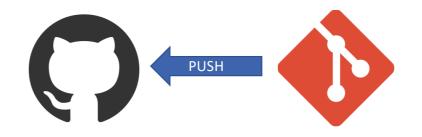
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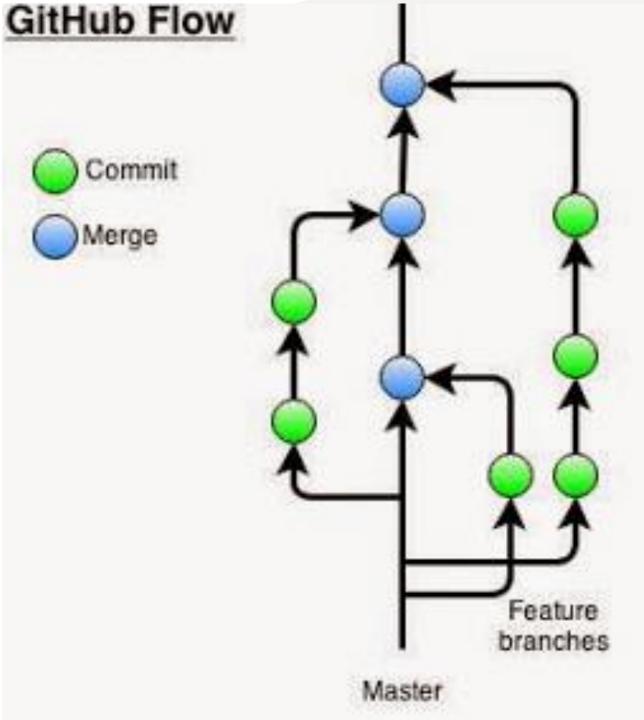
Good Habits



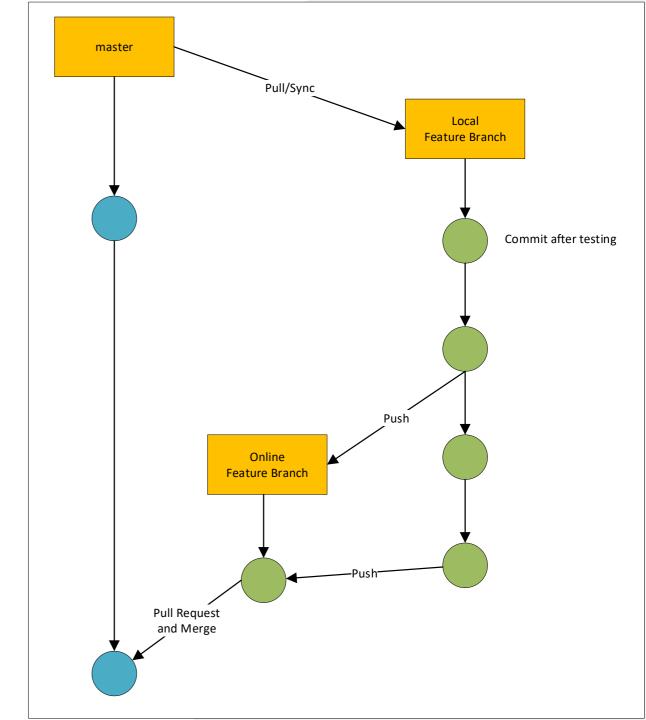
- Commit early & often
 - Especially locally
- Write clear & meaningful commit messages
- Commits should be single purpose
- Develop a branching strategy

GitHub Flow

Sourced: <u>Git</u>
 <u>Workflows That Work</u>



My suggestion



Flow Control

- Chef
- Jenkins
- Azure DevOps
- Octopus
- TeamCity
- GitLab
- GitHub Actions
- ReadyRoll



Database Tooling, the Magic

- DBMaestro
- DbUp
- Liquibase
- Flyway



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Thanks for attending!

