

DBA MASTERY



Database DevOps
con SQL Server





Carlos Robles

Principal Consultant, DBA Mastery



/croblesdba



@dbamastery



crobles@dbamastery.com

Experience

Microsoft Data Platform MVP
Friend of Redgate
Over 10 years of experience
Multi platform Architect

Community

International speaker, author, blogger, mentor
Guatemala SQL Server User Group leader
Simple Talk, SQL Server Central and MSSQL Tips

DBA Mastery

SQL Server tips, scripts, best practices and more



MAXDOP Calculator

Azure Data Studio wait stats widget

PerfMon for DBA's

MSDB tuning

AGENDA

- Containers, que y porque ?
- SQL Server como un componente mas de aplicacion
- CI/CD pipelines con SQL Server containers



PRE-REQUISITOS

- Experiencia basica con Linux y shell scripting
- Experiencia basica con Docker y Cloud computing
- Familiaridad con bases de datos como DBA o developer

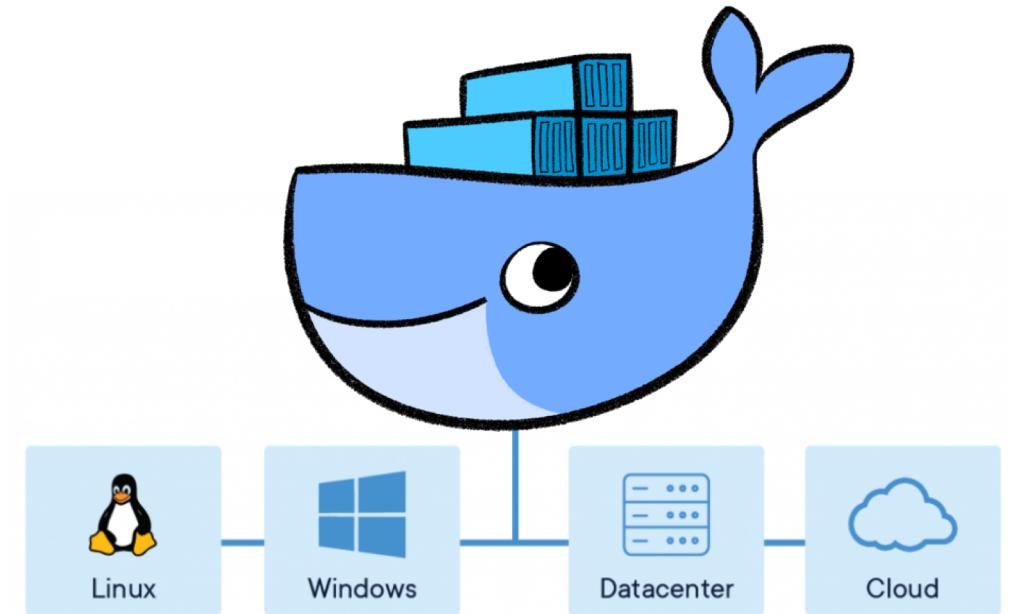


Containers, que y porque?



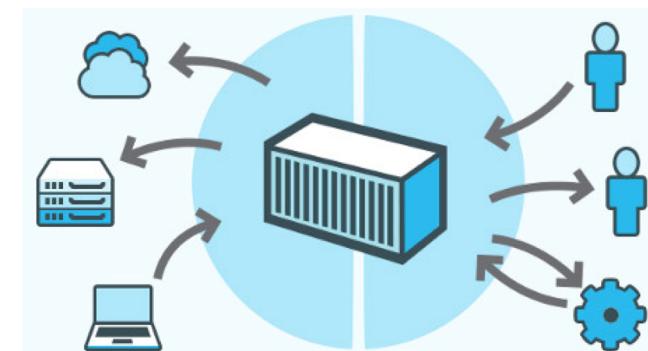
QUE ES UN CONTAINER?

- Unidad estándar de software
- Aislamiento
- Seguro
- Portable / Multiplataforma



POR QUE CONTAINERS?

- Consistentes y predecibles
- Cloud
- Implementacion agil / Automatizacion
- CI / CD
- No mas ambientes compartidos / Contencion de recursos



DEMO

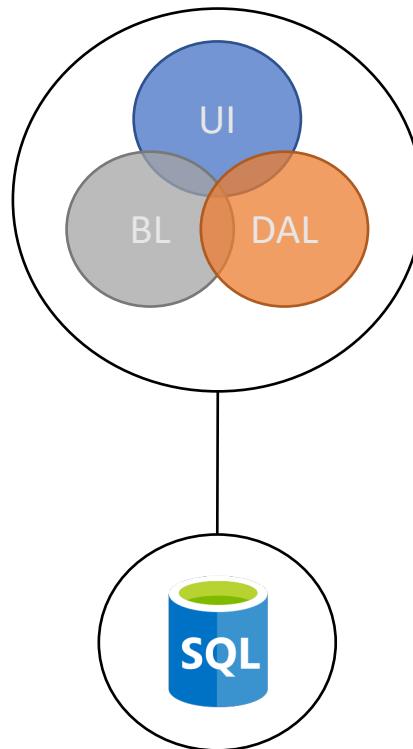
Container personalizado



SQL Server como componente de mi aplicación



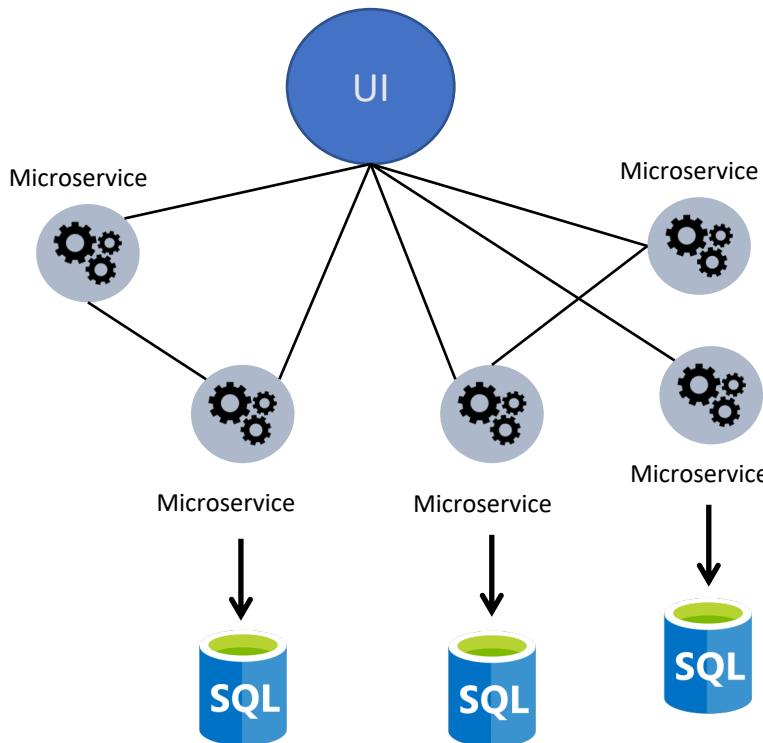
PRACTICA TRADICIONAL



- **Pros**
 - Desarrollo simple
 - Implementacion simple
 - Pruebas sencillas
 - Facil de compartir
- **Cons**
 - Difícil de entender / cambiar
 - Agilidad limitada
 - Lentitud
 - Baja confiabilidad



PRACTICA CONTEMPORANEA

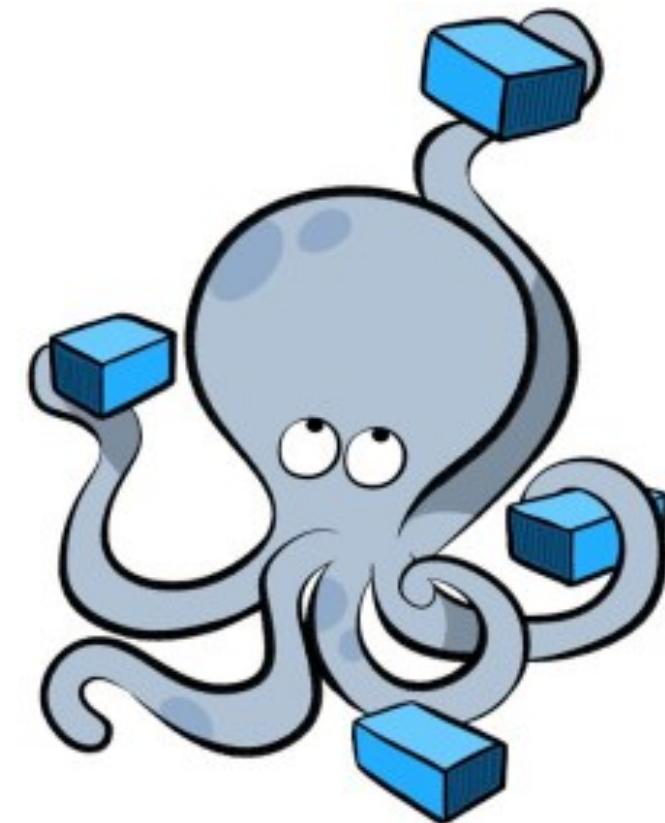


- **Pros**
 - Escalable
 - Confiable
 - Flexible
 - Adopcion facil de nuevas tecnologias
- **Cons**
 - Pruebas de integracion dificiles
 - Complejidad operacional
 - Expertiz alto



ENTER DOCKER COMPOSE

- Definicion de servicios
- Ejecutar multiples containers
- YAML
- Dockerfile (opcional)
- Version 3.0

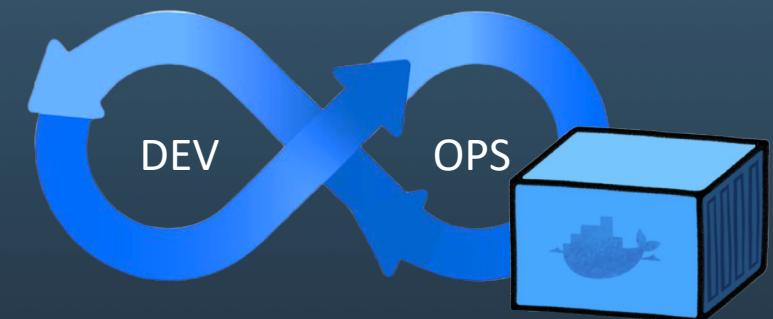


DEMO

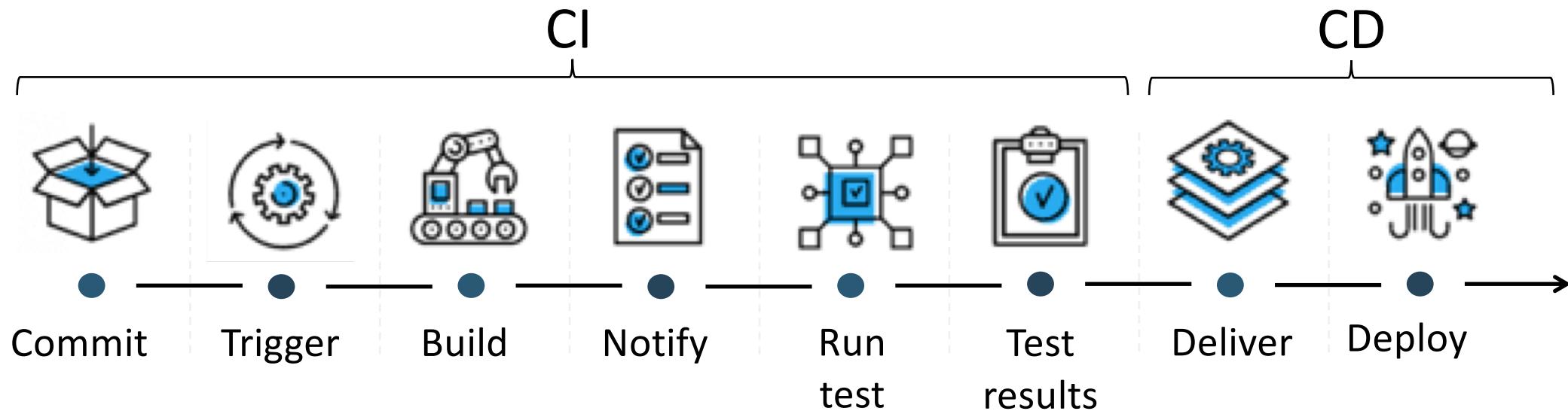
Integracion manual



CI / CD pipelines con SQL Server containers

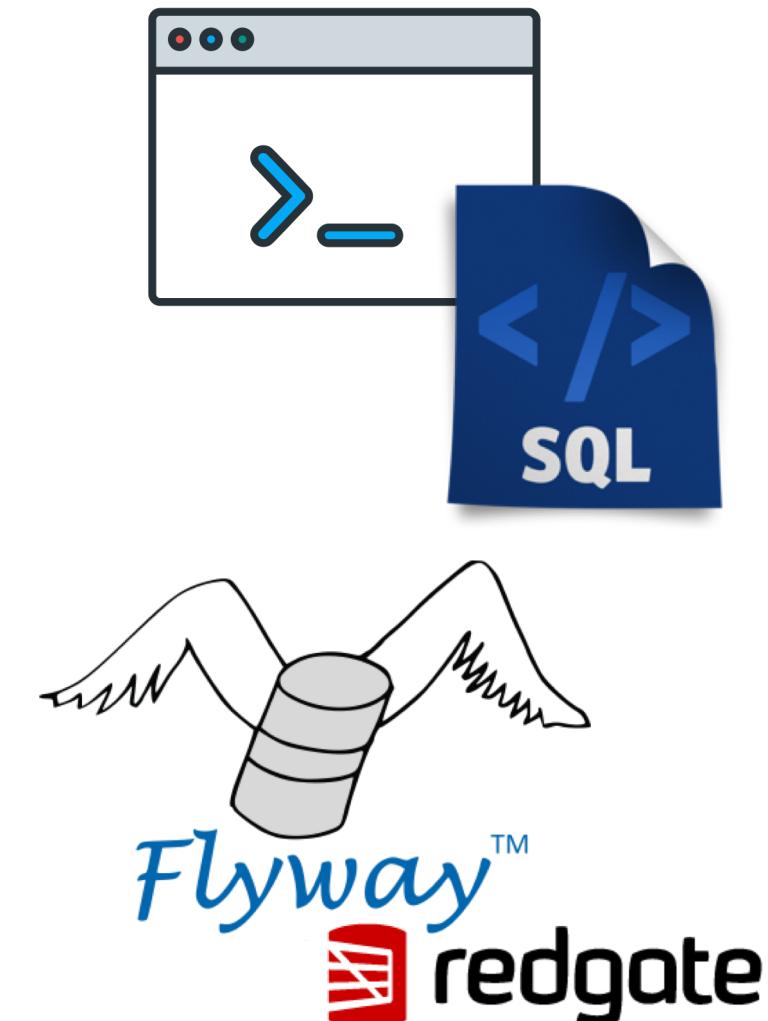


CI / CD PIPELINES



CI/CD BASES DE DATOS

- Dockerfile
- sqlcmd, SSMS, ADS
- ORM
- Flyway by Redgate

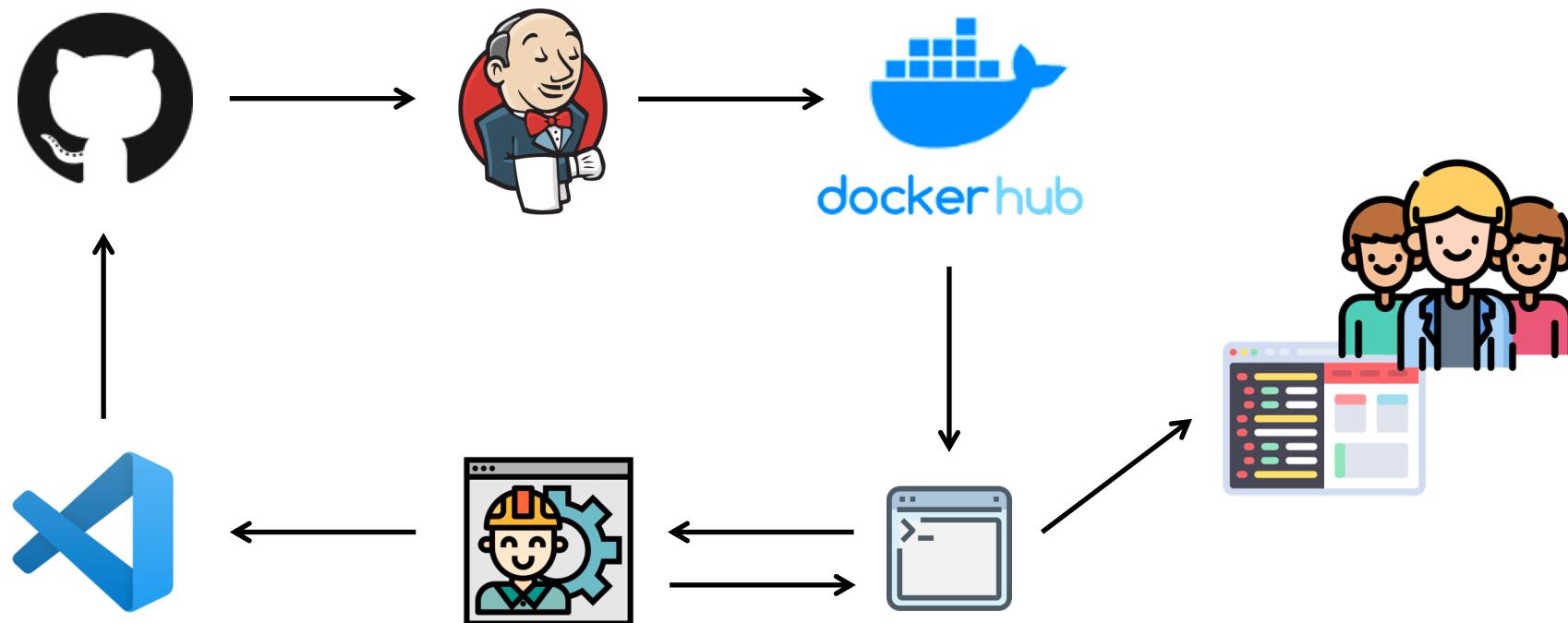


ENTER JENKINS

- Open source
- Server de automatización
- Jobs / pipelines (Jenkinsfile)
- Extensible (master / agents)
- Plugins



PIPELINE - DEV

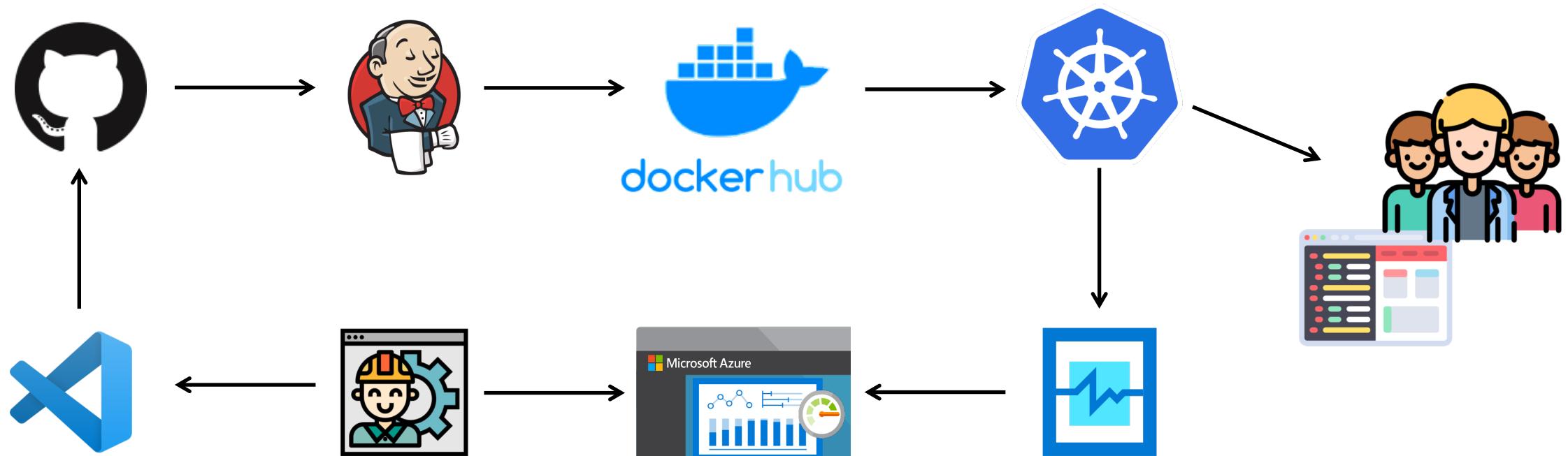


DEMO

Pipeline con Jenkins

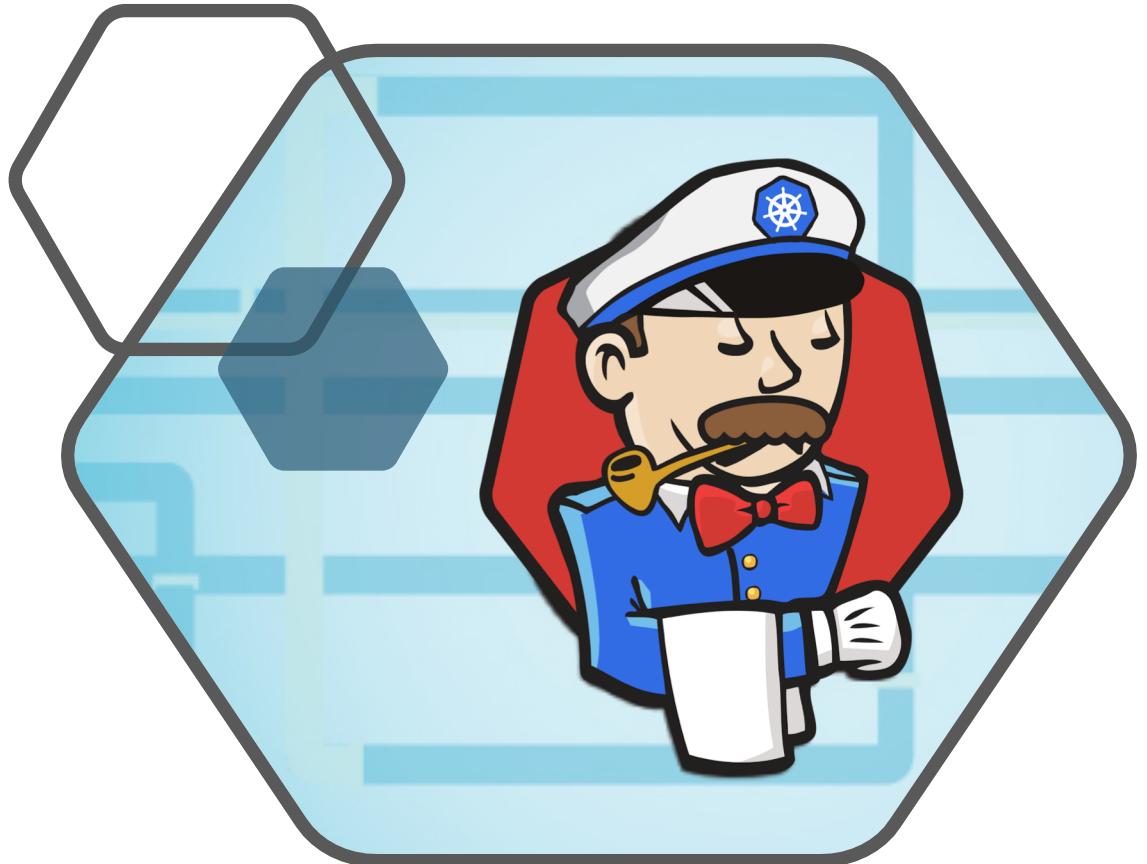


PIPELINE - PROD



DEMO

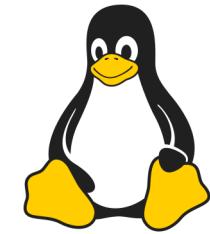
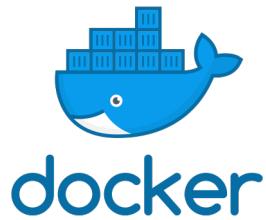
Pipeline con Jenkins y Kubernetes



RECAP

- Multi-plataforma
- SQL Server = componente
- Open source
- CI / CD
- DevOps





Preguntas?



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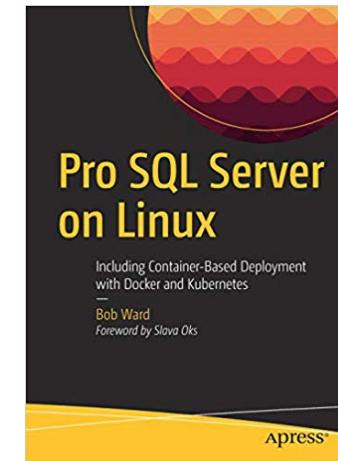


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REFERENCIAS

- Documentacion oficial
 - [Docker Docs](#)
 - [Kubernetes Docs](#)
- SQL Server
 - [SQL Server workshops](#)
 - [SQL Server in Docker](#)
- Libros
 - [The Phoenix / Unicorn Project](#)
 - [The DevOps Handbook](#)
 - [Kubernetes: Up and Running](#)
 - [Designing Distributed Systems](#)
 - [Pro SQL Server On Linux by Bob Ward](#)
- Cursos Pluralsight
 - [Getting Started with Docker](#)
 - [Docker Deep Dive](#)
 - [Docker and Kubernetes: The big picture](#)
 - [Kubernetes Installation and Configuration fundamentals](#)
- Cursos Microsoft Learning
 - [Kubernetes Learning Path](#)
 - [SQL Workshops](#)
- Katacoda
 - [Docker](#)
 - [Kubernetes](#)



ARTICULOS Y MAS

- **YouTube**
 - [SQL Containers on Docker & Kubernetes \(English\)](#)
 - [Todo sobre SQL Server Containers en Docker y K8s](#)
- [Simple Talk](#)
- [SQL Server Central](#)
- [MSSQL Tips](#)





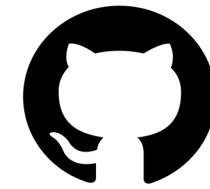
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crobles@dbamastery.com



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Gracias!

