

Pivotal®

Agile Database Development Flyway



Platform Engineering

The Goals

- Develop and push code into production on a regular schedule
 - monthly, weekly, daily, hourly, continuously
- Make integration tests that use to the database easy to write and maintain

The Problem

- Frequent deployment into production means frequent changes to the .sql files
- How to manage the numerous .sql file?
- How to tell if a .sql file has been applied to a database or not?
- How to build a process to move .sql changes through dev, qa, dba's ... etc.
- How to make the db setup trivial for integration tests
- Diagrams: <http://flywaydb.org/getstarted/whyDatabaseMigrations.html>

The Solution



LIQUI  BASE

What Is Flyway

- Database migration framework
- Inspired by Ruby on Rails migrations
- Open Source Apache 2.0 license
- Very nicely documented
- **Super Easy To Learn and Use**
- Developed by Axel Fontaine
- <http://www.flywaydb.org/>

Flyway Demos

- Best way to see how flyway works is to examine some demos that show Flyway in Action

Flyway Demos

- Demo 1 & 2: Basic Idea
 - Diagrams <http://flywaydb.org/getstarted/howFlywayWorks.html>
- Demo 3 : SQL Migrations
 - Diagrams <http://flywaydb.org/documentation/migration/migrationSql.html>

Flyway High Lights

- Simple Easy To use
- Automatic Migration on Startup
- Convention over Configuration
- Plain Old SQL Migrations
- Cluster Safe
- Maven and Ant Support
- Fail fast
- Schema clean
- Command line tools

What is liquibase

- A database migration framework
- Open Source Apache 2.0 license
- Very nicely documented
- <http://www.liquibase.org/>
- Uses XML DSL for capturing changes

Liquibase Features

- Record database refactoring using an XML DSL that is database independent
- Liquibase converts the XML files into SQL for the database it is running against
- Roll forward
- Roll back