redgate Flyway

CI/CD pipelines with Postgres and Flyway

Marko Coha

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“A new feature request would have taken 5 days.

But now with Flyway we’ve reduced that to 1 day and less than 2 hours of hands-on work.”

Director of the Data Team, Genomics Research, Global Pharmaceutical case study

Agenda

- Introduction and who we are
- The challenges for data-driven organizations
- Database change management pitfalls
- Solution: robust database change management
- Customer success stories
- About you
- Roadmap and next steps

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About Redgate

End-to-end Database DevOps

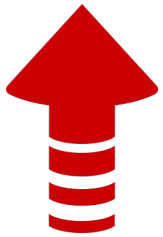
Market leader with 200,000+ people using our tools

92%

of the Fortune 100 use our tools

Cross database solutions

Over a million databases monitored



650+

Product releases during 2024

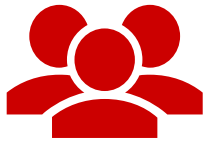
Community Support

12m people a year use our educational resources

Eight offices worldwide

Global coverage

About Redgate Flyway



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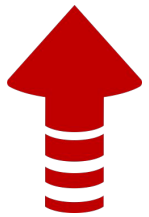
Full-time development teams

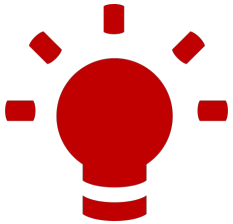
7

Seven offices worldwide



54

Product releases last year



29

New features released last year

25

Years of market-leading database technology invested in Flyway

50+

Database types supported

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The challenge

Today’s challenges for data-driven organizations

Demand for data-driven decisions: data needs to get to decision makers, faster

Competitive advantage: pressure to launch new applications and deliver value, faster

Risk of data breaches, data loss and downtime: costs are high for organizations

Even more data: exponential growth, especially with AI integration in business processes

Different needs: the complexity of maintaining legacy systems alongside greenfield projects

“The future of data architecture isn’t just about technology – it’s about enabling business agility, innovation and sustained competitive advantage.”

Elliott Cordo, Beyond the Monolith: Building Evolutionary Data Architectures for the Future

Source: Elliott Cordo, Forbes Council Member, “Beyond the Monolith: Building Evolutionary Data Architectures for the Future.” Forbes.com, April 2025

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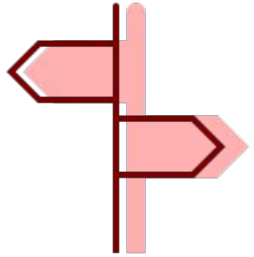
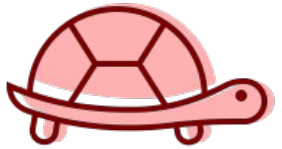
Database Change Management pitfalls

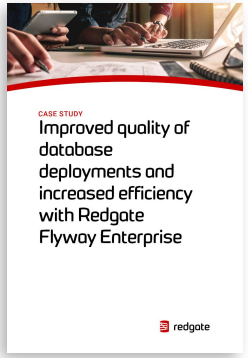
Too much risk.
Time-consuming to fix.



Lack of standardization,
leading to problems

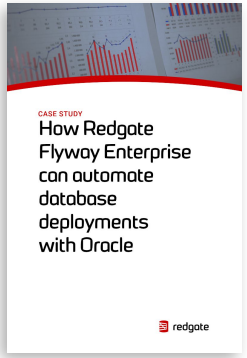


Database is a
bottleneck for delivery



"We can now do releases much smoother, quicker, in a more controlled way. Freeing up developer's time to do the real development."
Head of Data,
Emergency Rescue charity

"As the team grew it became harder to keep things consistent. Trying to keep everything in sync was one of the biggest challenges we faced."
GR Director,
Global pharmaceutical



"We were tired of waiting for database deployments, that was the main driver. We'd have to schedule out a week and it was just terrible."
Data Science Team,
US Credit Union

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“On average, it takes 3.5 hours to deploy a database. Slow databases impede software performance and increase time to market.”

IDC InfoBrief, Simplifying Complexity and Delivering Business Value: Making Database DevOps Work in the Real World[1]

[1]Source: IDC InfoBrief, sponsored by Redgate, *Simplifying Complexity and Delivering Business Value: Making Database DevOps Work in the Real World*, doc #EUR252966324, February 2025.

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“We were tired of waiting for database deployments. We’d have to schedule a week out and it was just terrible.”
Data Science Manager, US credit union case study

The risks when database changes go wrong.

Poor performing software. Dents customer experience.

"The cost of poor software quality in the US has grown to at least $2.41 trillion."

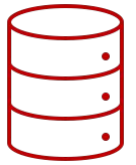
Cost of Poor Software Quality in the US, CISQ

Risk of security breaches, data loss and downtime.

"25% of downtime is caused by the database.

The average cost of downtime from enterprises every year is $16.2M, giving a $4.05M cost for downtime from suboptimal database practices."

The ROI of Database DevOps



Delayed time to market. Less time for innovation.

"Products six months late to market earn 33% less profit over five years."

Stephen Fontanella, The Business Value of Frequent Deployments

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The risks when database changes go wrong

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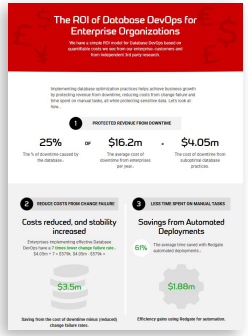
Cost of Poor Software Quality in the US, CISQ



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Stephen Fontanella,
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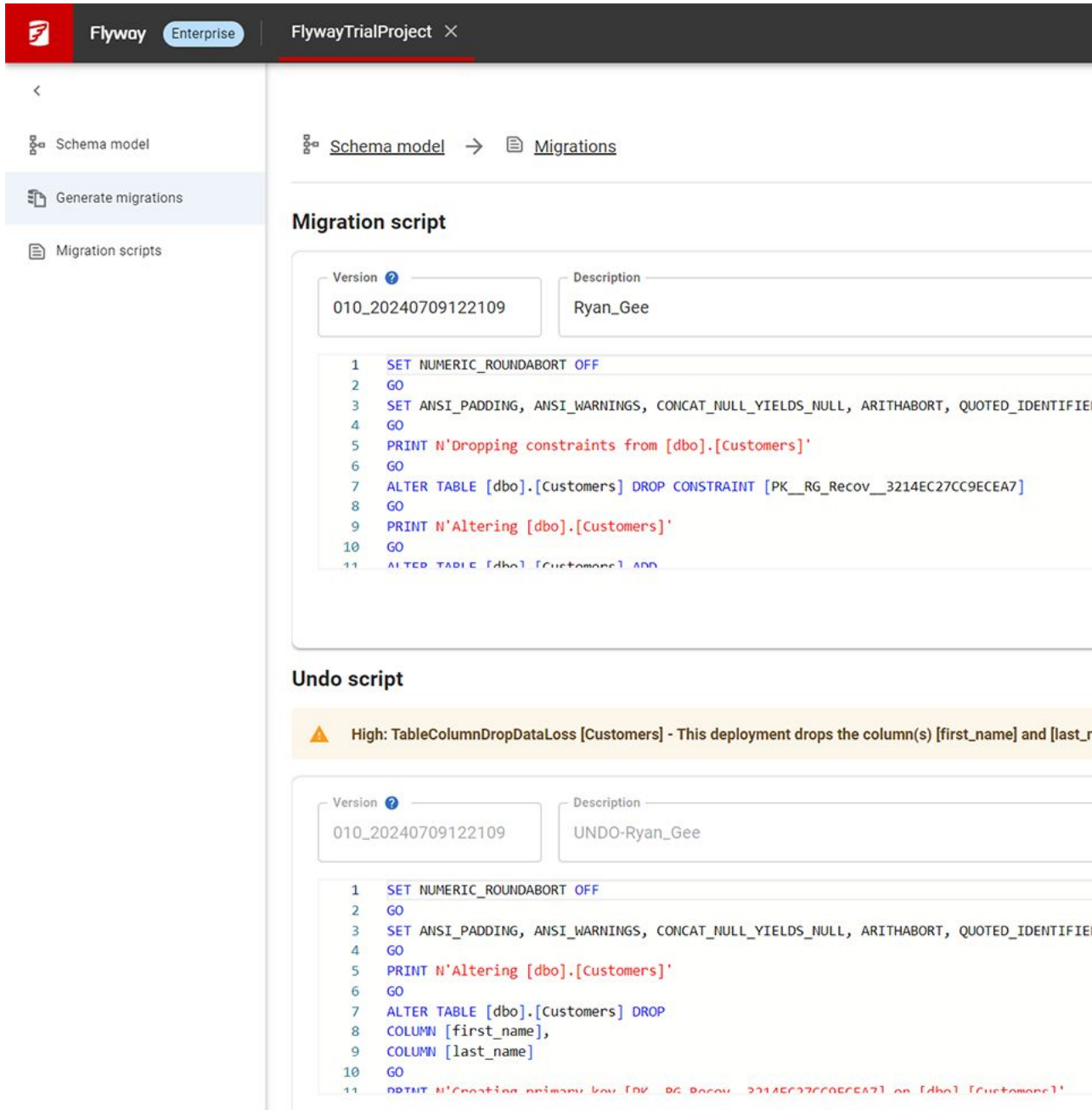
The solution

“A new feature request would have taken 5 days, but now with Flyway we’ve reduced that to 1 day and less than 2 hours of hands-on work. Those are massive time savings.”

Director of the Data Team, Global Pharmaceutical case study



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Deploy with confidence.

"It just all flows through, so developers deliver faster and they're more confident."

Data Science Manager, US Credit Union case study

- With robust database change management, you can speed up software delivery while keeping business-critical data safe.

Source: US Credit Union case study with Redgate Flyway Enterprise

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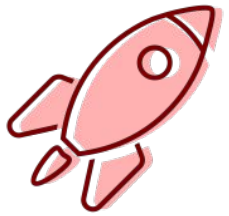
The impact of robust database change management



Deploy with confidence

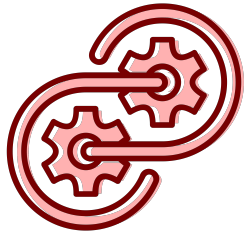
“The advantage is peace of mind. I no longer have to troubleshoot or check what’s different between test and production. All of that uncertainty goes away.”

Global Pharmaceutical case study

De-risk and standardize database delivery

“We can now do releases much smoother, quicker, in a more controlled way. Freeing up developer’s time to do the real development, rather than the actual deployment.”

Head of Data, Emergency Rescue Charity case study



Unify teams and technologies

“Flyway Enterprise can also auto-generate migration and undo scripts for SQL Server, Postgres, Oracle, and MySQL. This removes an element of human error while also introducing standardization of scripts and higher team productivity into the deployment process.”

Chris Yates, How Redgate Flyway Can Boost Your DevOps Journey

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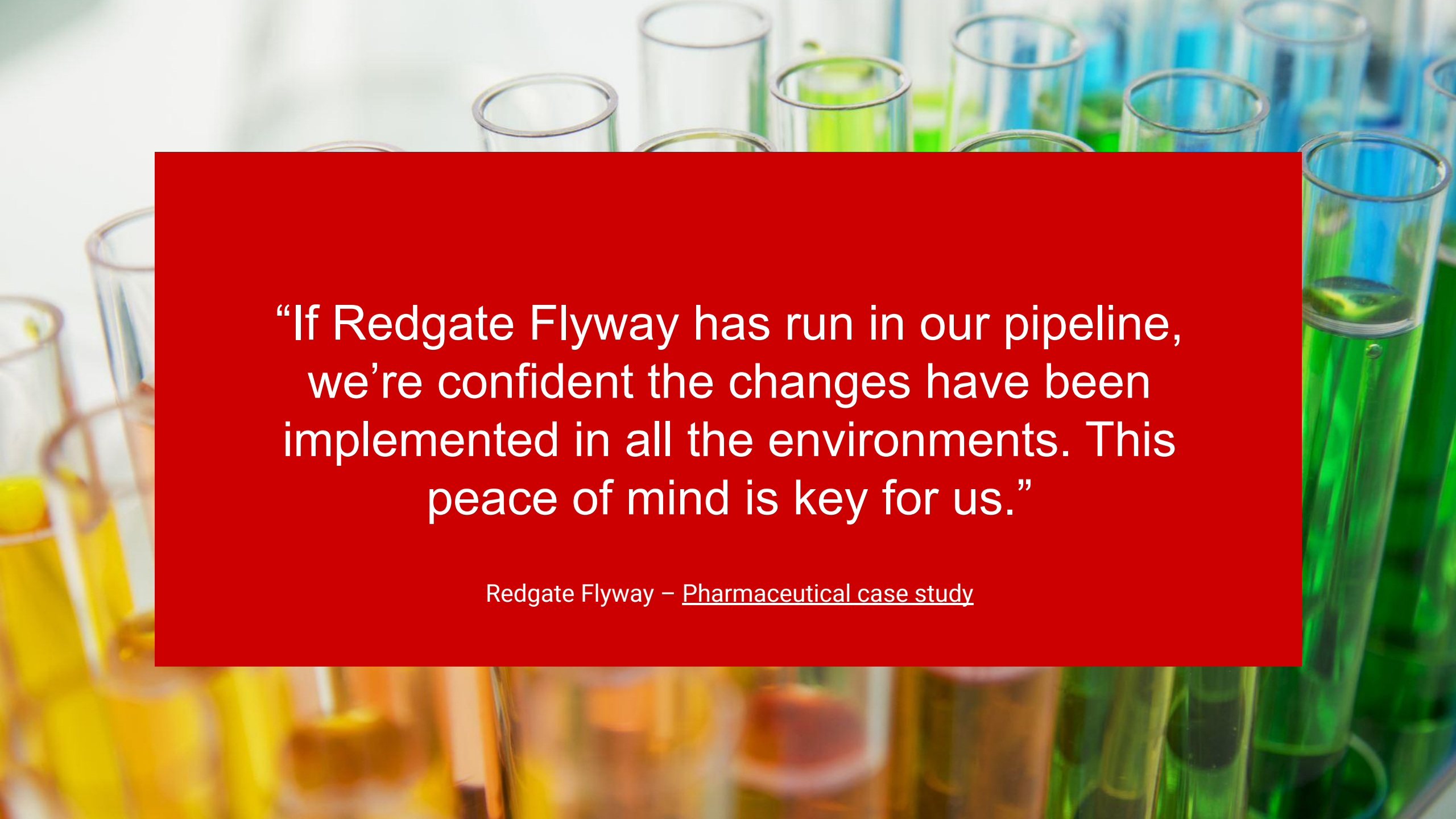

“If Redgate Flyway has run in our pipeline, we’re confident the changes have been implemented in all the environments. This peace of mind is key for us.”

Redgate Flyway – Pharmaceutical case study

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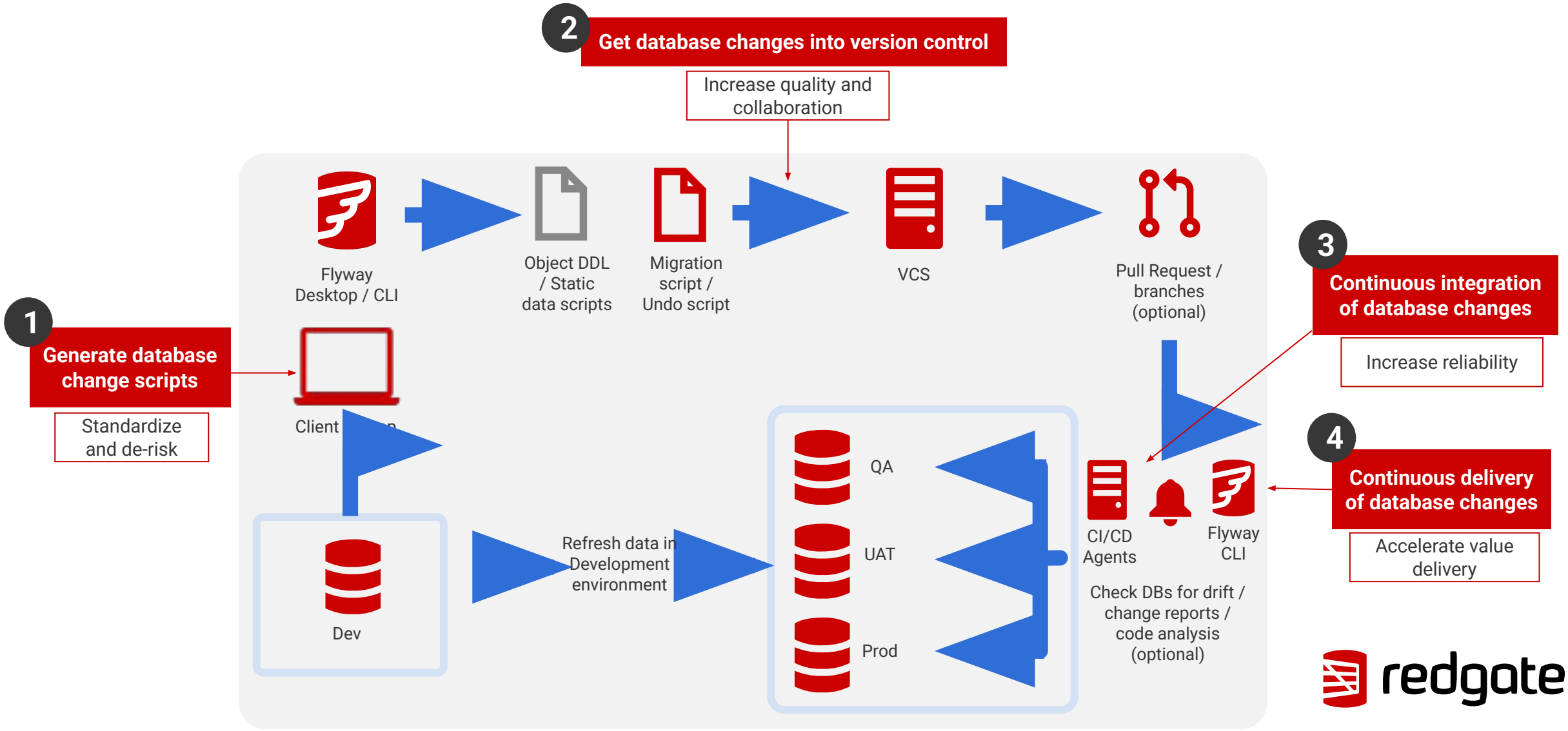
Head of Data, Emergency Rescue Charity case study

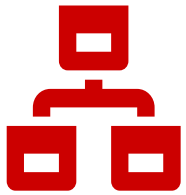
Workflow with Redgate Flyway Enterprise



Why choose Redgate Flyway

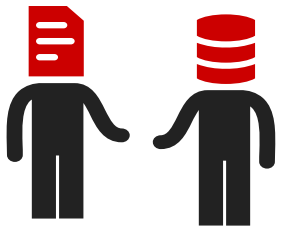
Faster, more reliable deployments

- Generate deployment scripts
- Object-level versioning
- Automate database testing as part of a CI/CD pipeline



De-risk and standardize database delivery

- Consistent, stable database change management process across 50+ DBMS
- Advanced capabilities for the most popular DBMS: SQL Server, Postgres, Oracle and MySQL
- Includes drift detection, custom code analysis and Undo script generation



Meets teams where they're at

- Market-leading flexibility of robust deployment approaches to evolve to your needs
- Workflow integrations enable fast time to value
- Integrates with popular CI and release tools to slot in with existing processes

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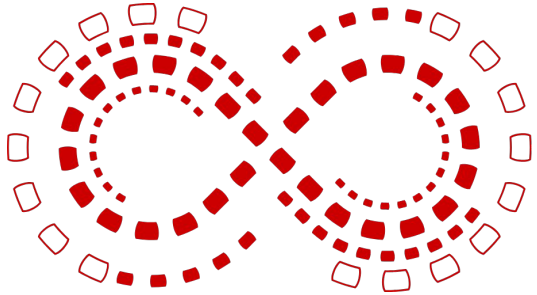
Redgate Flyway's world class comparison engine



Experience best-in-class technology for the ultimate stability and scalability

Enterprise-grade technology

Built on Redgate's comparison technology, trusted by thousands of engineering teams since 2000. Flyway offers the reliability and scalability required for modern enterprise systems.

Risk-reducing automation

Generates reliable migration scripts and eliminates manual scripting and diffing.

Consistency across environments

Ensures database change scripts are repeatable and predictable – minimizing risk and eliminating surprises.

Precision in schema change detection

Detects and presents changes across extensive database objects – tables, views, stored procedures for SQL Server, Oracle, PostgreSQL and MySQL.

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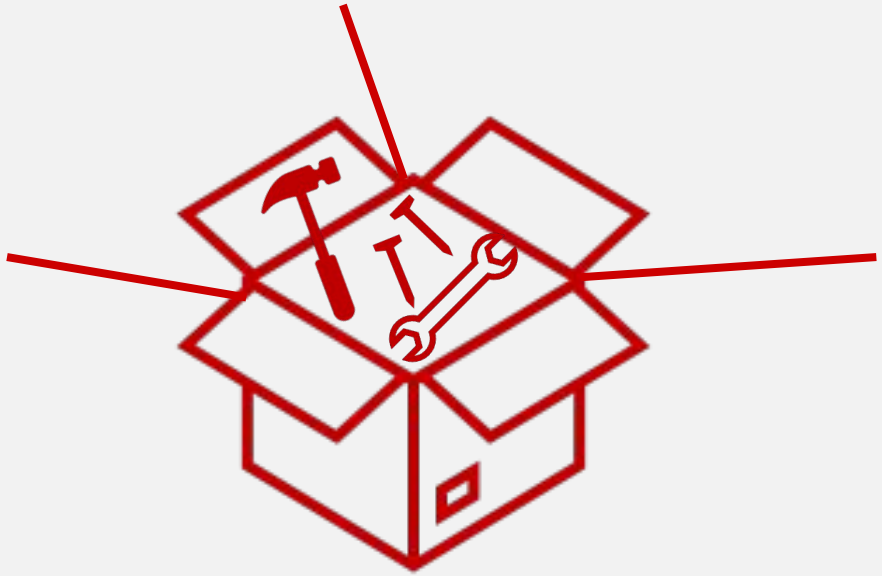
Market-leading flexibility in one solution

Deployment and workflow options can evolve with your database needs

Workflow options:
- Backups as baselines
- No-shadow database
- Automatic shadow database

Deployment approach:
- State-based
- Migrations-based
- Automate where you need it



CLI or GUI:
- CLI
- Automated CLI dev workflow
- GUI

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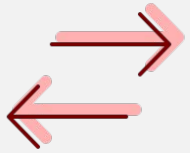
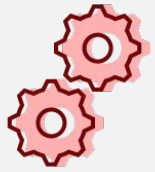
Meets teams where they're at: 3 ways



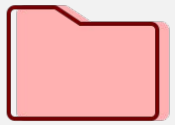
State-based:
Easy to implement for easy-to-infer changes

Migrations-based:
Ultimate control to handle more complex changes



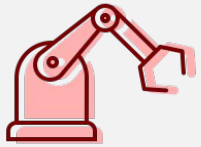
Manual or automated:
Flyway supports both

Deployment approach



Backups as baselines:
Save time, reduce complexity. Restoring a backup to provide a baseline

No-shadow database:
Removes complexity and cost of requiring a shadow DB to generate migrations.

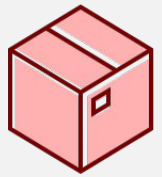


Automatic shadow database:
Simplifies set-up of a shadow database

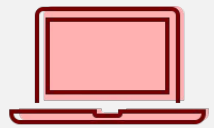
Workflow options

```
flyway
migrate
```

CLI:
Automate tasks through the command line for seamless delivery



Docker:
Use the Flyway CLI in Docker to automate tasks



GUI:
Use Flyway Desktop to generate scripts and manage deployments

Use what works best for you and your team

CLI or GUI

Use your existing tech stack

GitHub

Azure DevOps

harness

GitLab

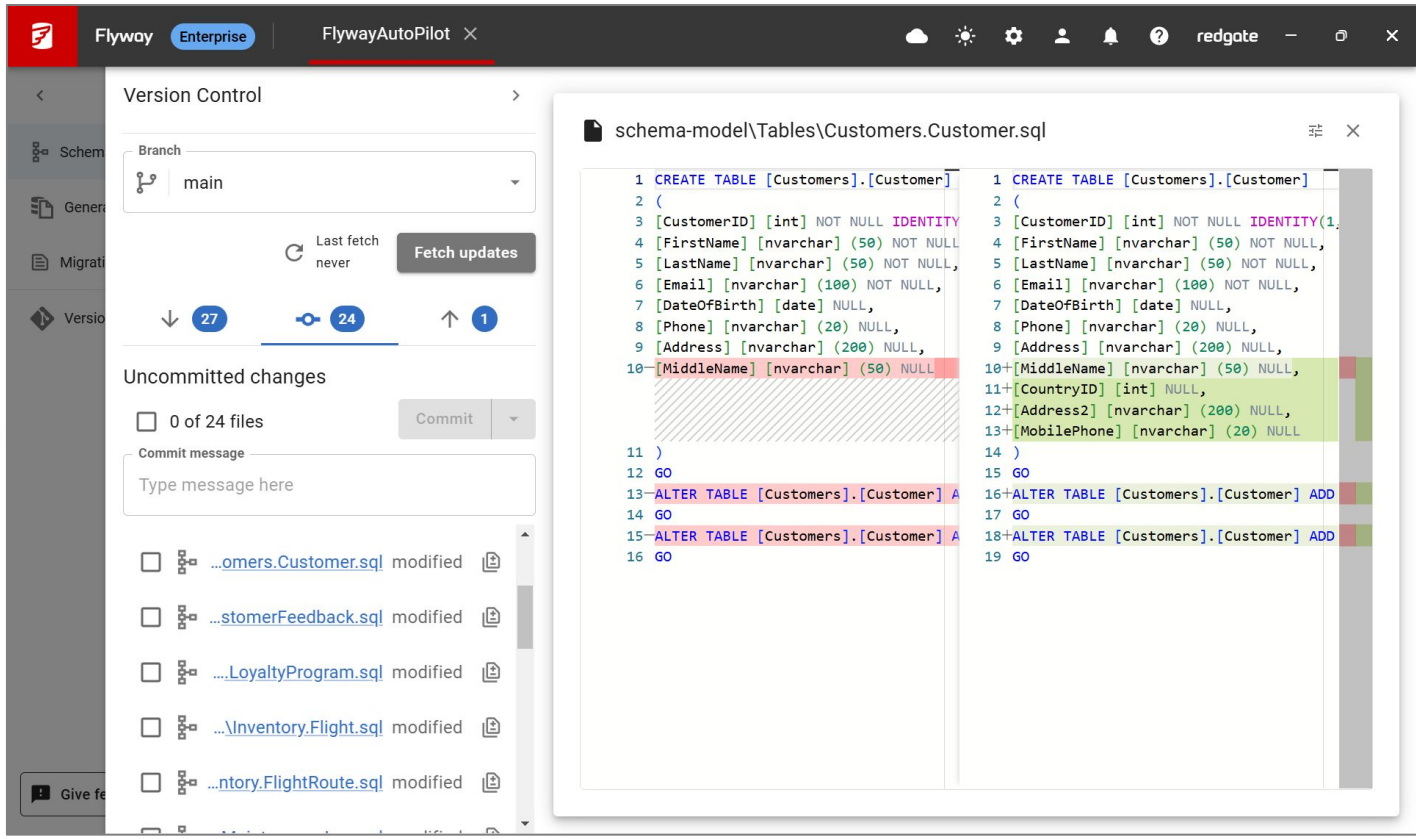
Octopus Deploy

TeamCity

git

docker

Jenkins



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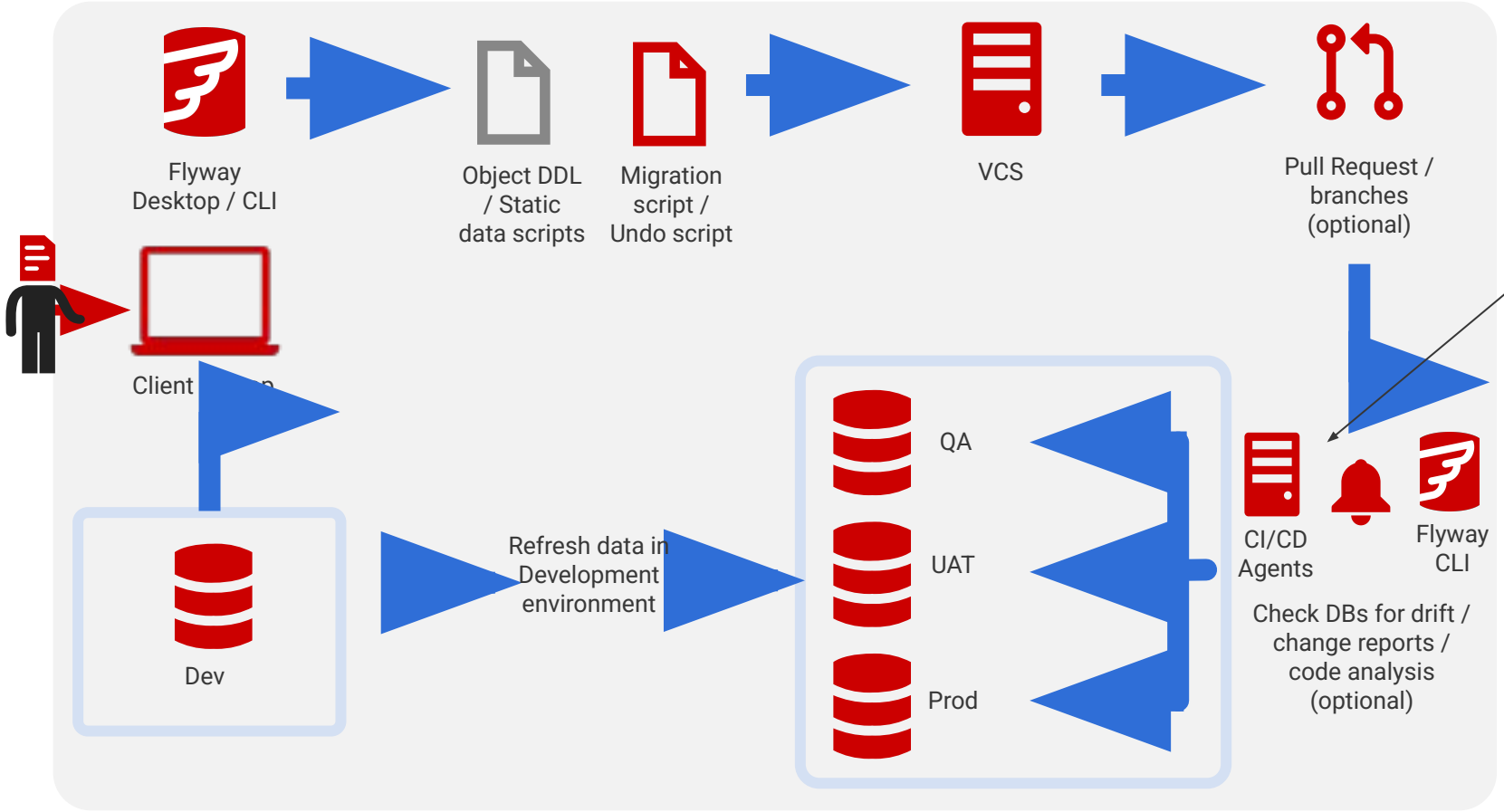
Seamless integration with CI/CD pipelines



Bringing CI/CD to the database

With Flyway you can apply continuous integration and delivery to your database changes in the same way as you do for application code.

Flyway plugs into popular CI/CD systems, including:

- Azure DevOps
- AWS CodePipeline
- BitBucket
- GitHub Actions
- GitLab
- Harness
- Jenkins
- TeamCity
- Octopus Deploy

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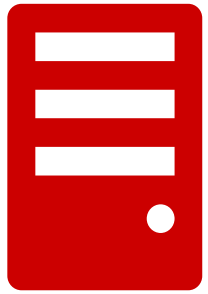
Cloud, hybrid and on-prem support

Whether you’re migrating to the cloud or optimizing cloud usage, Flyway supports your cloud strategy with full support for Amazon RDS, Microsoft SQL Azure, Google Cloud SQL, Heroku & more.



If you're working with multiple database engines as you migrate and modernize your data platform, whether it is on-premises, hybrid, or cloud-first, Flyway provides a consistent solution for effectively managing database changes and change governance at any scale.

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The history of Flyway