Empowering PostgreSQL Teams with Redgate´s End to End Database Solutions

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

750+

Product releases during 2023

Community Support

12m people a year use our educational resources

Growth goal

$150m ARR by 2026

SAMSUNG

BMW

Microsoft

VISA

msc

RBC

Disney

absa

HEINEKEN

AstraZeneca

HSBC

DHL

BANK OF AMERICA

Coca-Cola

IBM

Trusted by 92% of the Fortune 100

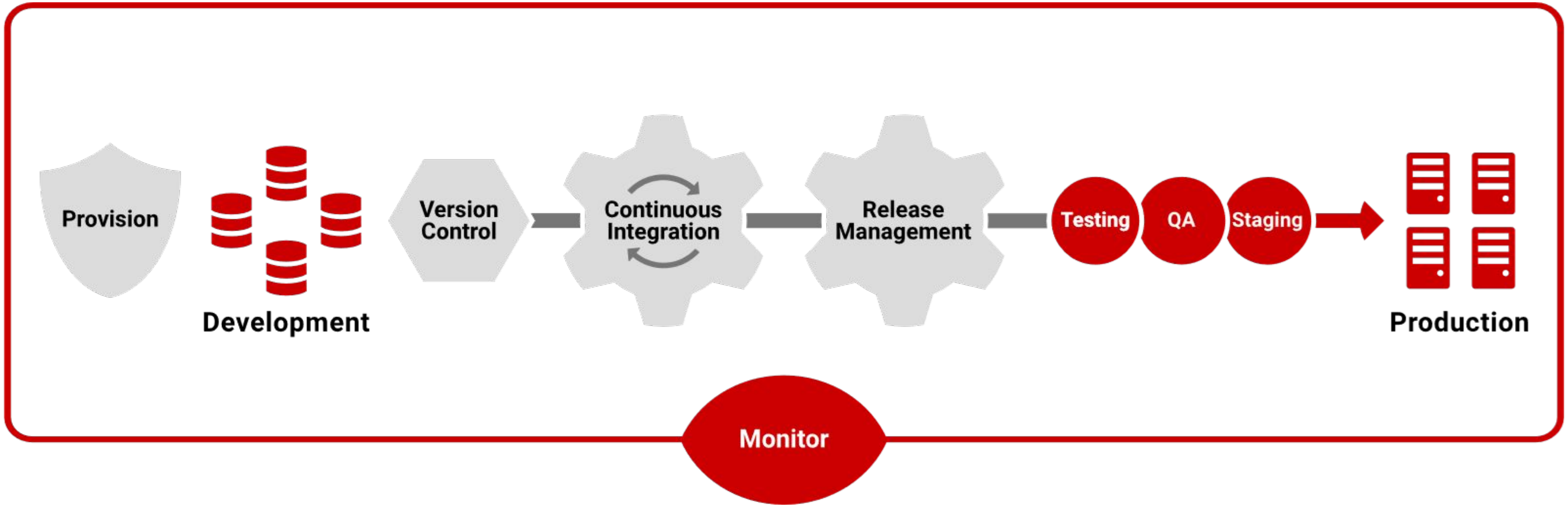
Core challenges

Improve Efficiency

Enable Innovation

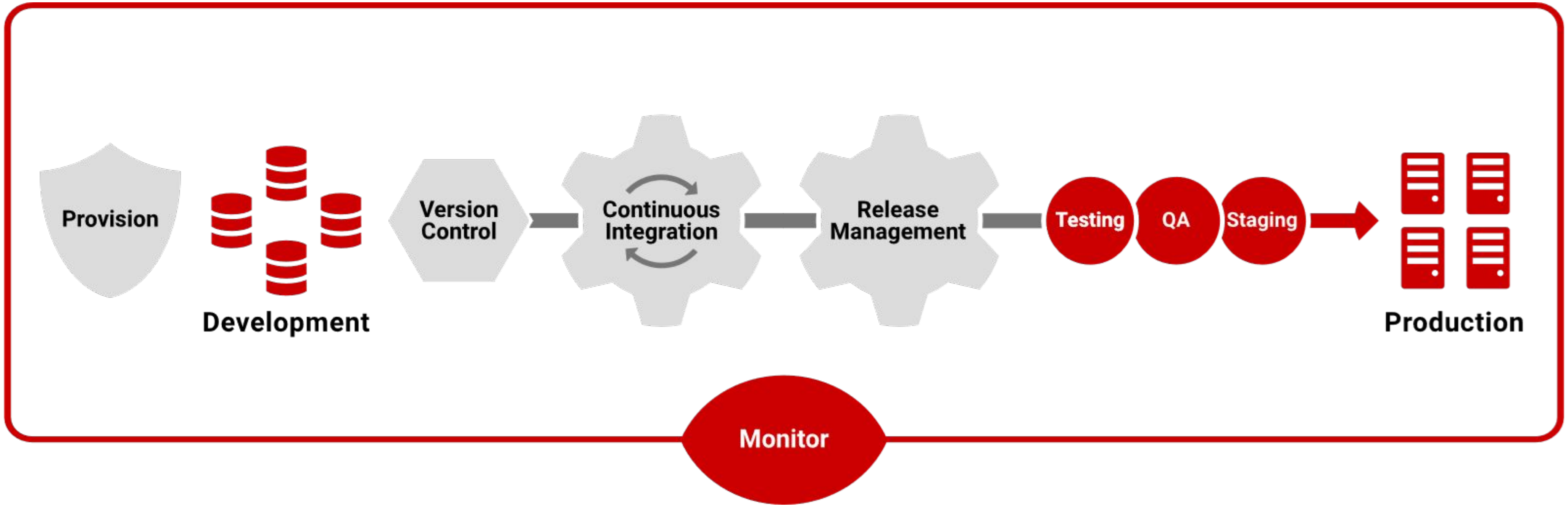
Ensure Compliance

What does End-to-end Database DevOps look like?


Provision
Development
Version Control
Continuous Integration
Release Management
Testing
QA
Staging
Production
Monitor

Reliably get value from multiple platforms, faster

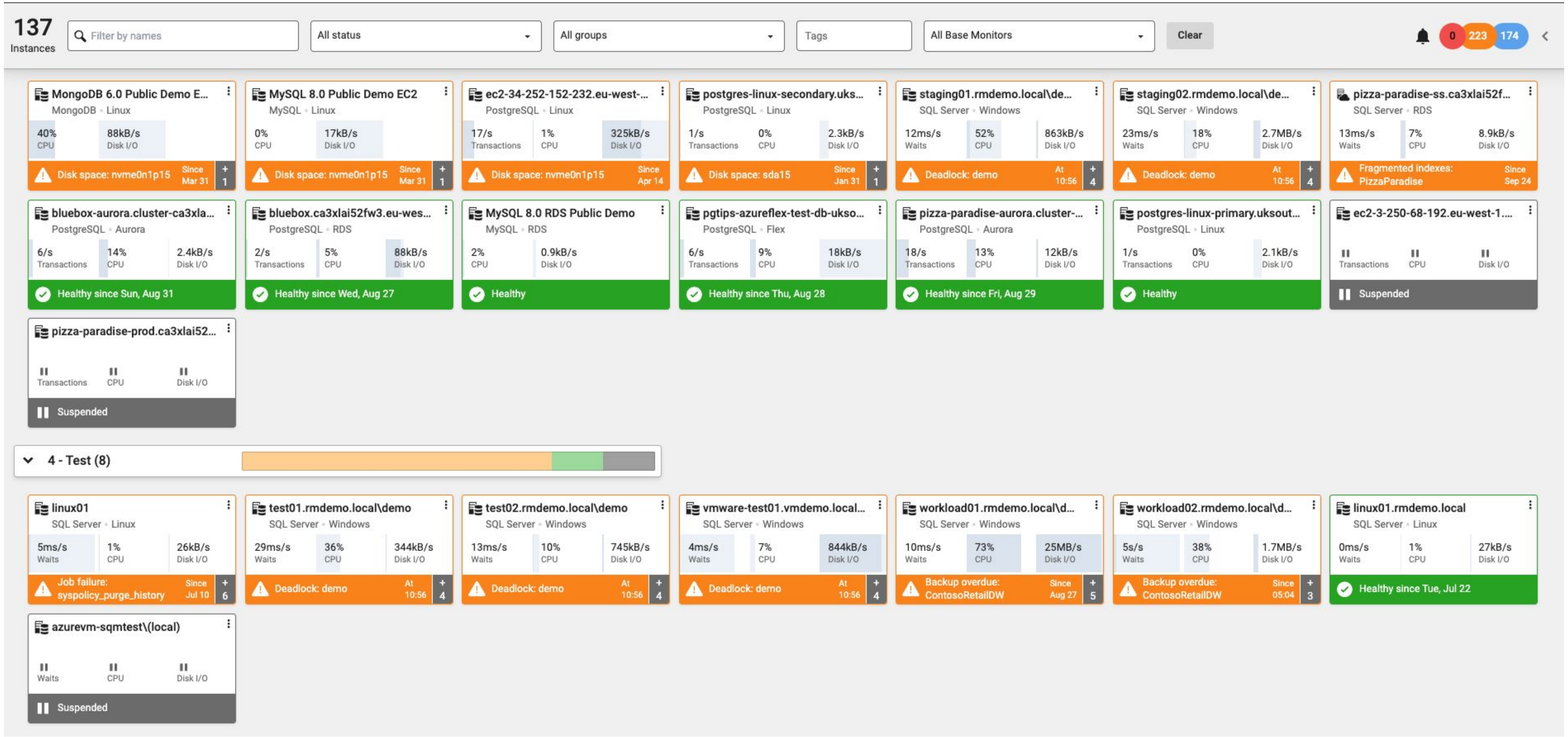
What does End-to-end Database DevOps look like?


Provision
Development
Version Control
Continuous Integration
Release Management
Testing
QA
Staging
Production
Monitor

Increase database **visibility** and **monitor** in a single pane of glass

Monitor

Optimize **performance**, ensure **security**, and enhance **visibility** across the database estate



137 Instances

Filter by names

All status

All groups

Tags

All Base Monitors

Clear

0 223 174

MongoDB 6.0 Public Demo E...	MongoDB · Linux	40% CPU	88kB/s Disk I/O		Disk space: nvme0n1p15 Since Mar 31 + 1
MySQL 8.0 Public Demo EC2	MySQL · Linux	0% CPU	17kB/s Disk I/O		Disk space: nvme0n1p15 Since Mar 31 + 1
ec2-34-252-152-232.eu-west-...	PostgreSQL · Linux	17/s Transactions	1% CPU	325kB/s Disk I/O	Disk space: nvme0n1p15 Since Apr 14
postgres-linux-secondary.uks...	PostgreSQL · Linux	1/s Transactions	0% CPU	2.3kB/s Disk I/O	Disk space: sda15 Since Jan 31 + 1
staging01.rmdemo.local\de...	SQL Server · Windows	12ms/s Waits	52% CPU	863kB/s Disk I/O	Deadlock: demo At 10:56 + 4
staging02.rmdemo.local\de...	SQL Server · Windows	23ms/s Waits	18% CPU	2.7MB/s Disk I/O	Deadlock: demo At 10:56 + 4
pizza-paradise-ss.ca3xlai52f...	SQL Server · RDS	13ms/s Waits	7% CPU	8.9kB/s Disk I/O	Fragmented indexes: PizzaParadise Since Sep 24
bluebox-aurora.cluster-ca3xla...	PostgreSQL · Aurora	6/s Transactions	14% CPU	2.4kB/s Disk I/O	Healthy since Sun, Aug 31
bluebox.ca3xlai52fw3.eu-wes...	PostgreSQL · RDS	2/s Transactions	5% CPU	88kB/s Disk I/O	Healthy since Wed, Aug 27
MySQL 8.0 RDS Public Demo	MySQL · RDS	2% CPU	0.9kB/s Disk I/O		Healthy
pgtips-azureflex-test-db-ukso...	PostgreSQL · Flex	6/s Transactions	9% CPU	18kB/s Disk I/O	Healthy since Thu, Aug 28
pizza-paradise-aurora.cluster-...	PostgreSQL · Aurora	18/s Transactions	13% CPU	12kB/s Disk I/O	Healthy since Fri, Aug 29
postgres-linux-primary.uksout...	PostgreSQL · Linux	1/s Transactions	0% CPU	2.1kB/s Disk I/O	Healthy
ec2-3-250-68-192.eu-west-1....		❚❚ Transactions	❚❚ CPU	❚❚ Disk I/O	Suspended
pizza-paradise-prod.ca3xlai52...		❚❚ Transactions	❚❚ CPU	❚❚ Disk I/O	Suspended

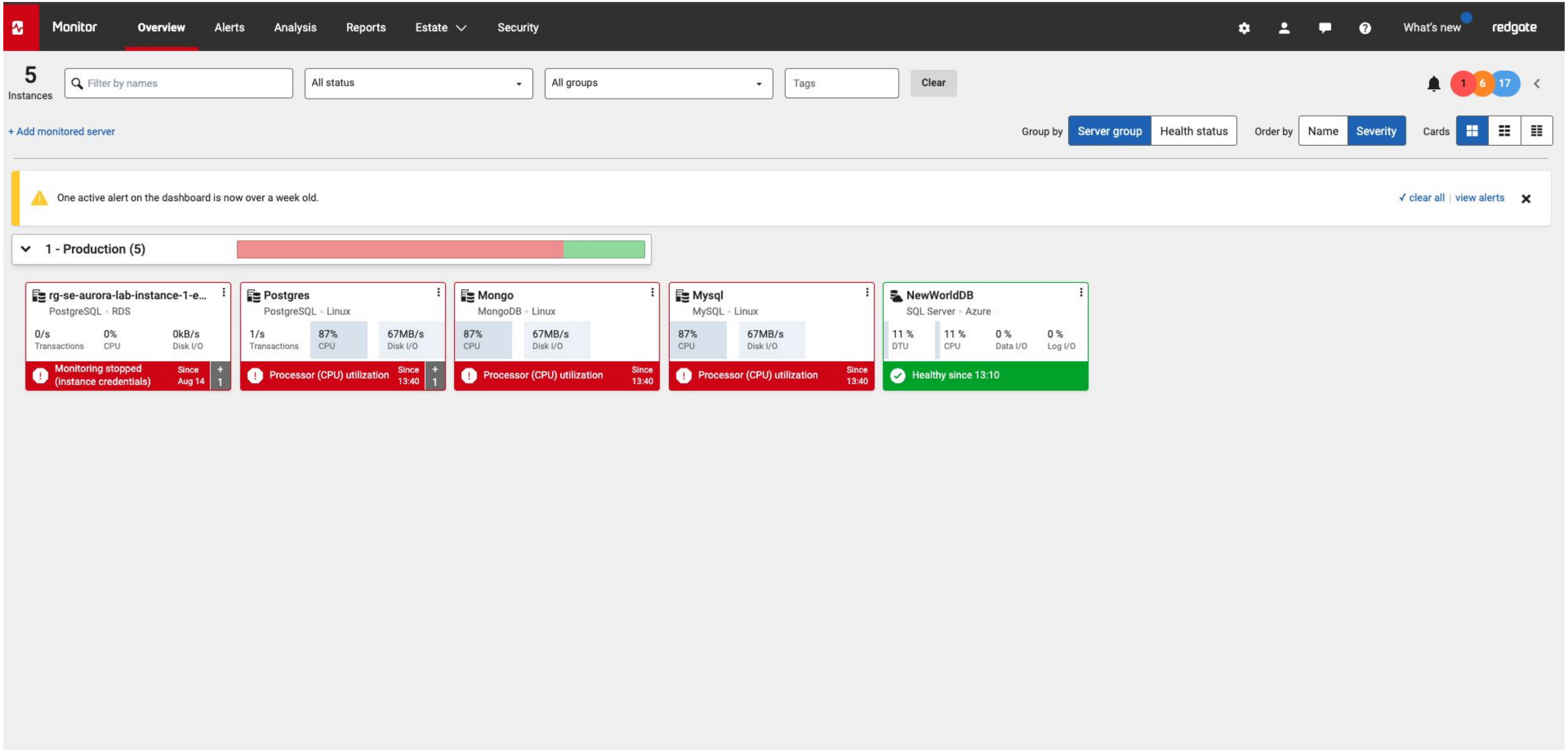
4 - Test (8)

linux01	SQL Server · Linux	5ms/s Waits	1% CPU	26kB/s Disk I/O	Job failure: syspolicy_purge_history Since Jul 10 + 6
test01.rmdemo.local\demo	SQL Server · Windows	29ms/s Waits	36% CPU	344kB/s Disk I/O	Deadlock: demo At 10:56 + 4
test02.rmdemo.local\demo	SQL Server · Windows	13ms/s Waits	10% CPU	745kB/s Disk I/O	Deadlock: demo At 10:56 + 4
vmware-test01.vmdemo.local...	SQL Server · Windows	4ms/s Waits	7% CPU	844kB/s Disk I/O	Deadlock: demo At 10:56 + 4
workload01.rmdemo.local\d...	SQL Server · Windows	10ms/s Waits	73% CPU	25MB/s Disk I/O	Backup overdue: ContosoRetailDW Since Aug 27 + 5
workload02.rmdemo.local\d...	SQL Server · Windows	5s/s Waits	38% CPU	1.7MB/s Disk I/O	Backup overdue: ContosoRetailDW Since 05:04 + 3
linux01.rmdemo.local	SQL Server · Linux	0ms/s Waits	1% CPU	27kB/s Disk I/O	Healthy since Tue, Jul 22
azurevm-sqmtest\(local)		❚❚ Waits	❚❚ CPU	❚❚ Disk I/O	Suspended

ORACLE

Monitor

Optimize **performance**, ensure **security**, and enhance **visibility** across the database estate


Monitor
Overview
Alerts
Analysis
Reports
Estate
Security
What's new
redgate
5
Instances
Filter by names
All status
All groups
Tags
Clear
1
6
17
+ Add monitored server
Group by
Server group
Health status
Order by
Name
Severity
Cards
✓ clear all
view alerts
1 - Production (5)

One active alert on the dashboard is now over a week old.

rg-se-aurora-lab-instance-1-e...
PostgreSQL · RDS
0/s Transactions · 0% CPU · 0kB/s Disk I/O
Monitoring stopped (instance credentials) · Since Aug 14 · + 1

Postgres
PostgreSQL · Linux
1/s Transactions · 87% CPU · 67MB/s Disk I/O
Processor (CPU) utilization · Since 13:40 · + 1

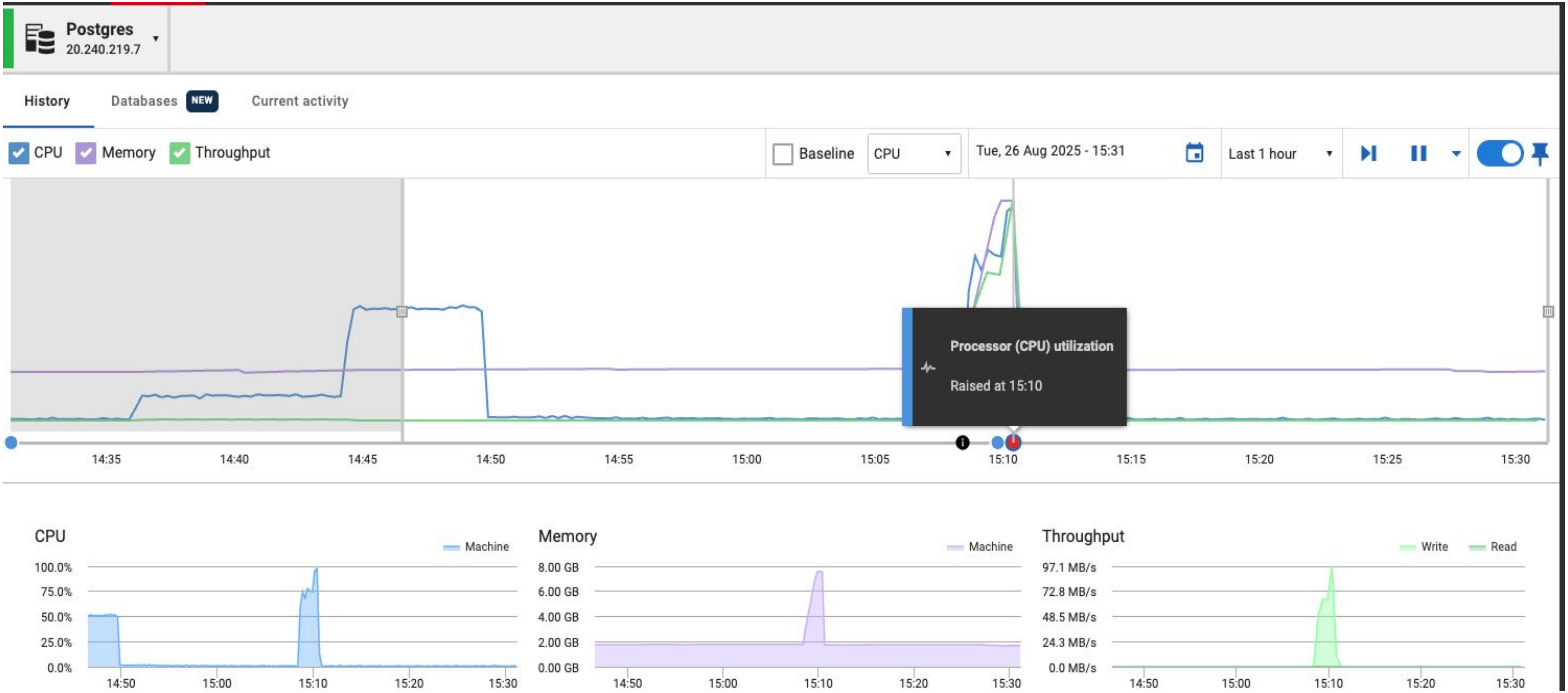
Mongo
MongoDB · Linux
87% CPU · 67MB/s Disk I/O
Processor (CPU) utilization · Since 13:40

Mysql
MySQL · Linux
87% CPU · 67MB/s Disk I/O
Processor (CPU) utilization · Since 13:40

NewWorldDB
SQL Server · Azure
11 % DTU · 11 % CPU · 0 % Data I/O · 0 % Log I/O
Healthy since 13:10

Monitor

Optimize **performance**, ensure **security**, and enhance **visibility** across the database estate



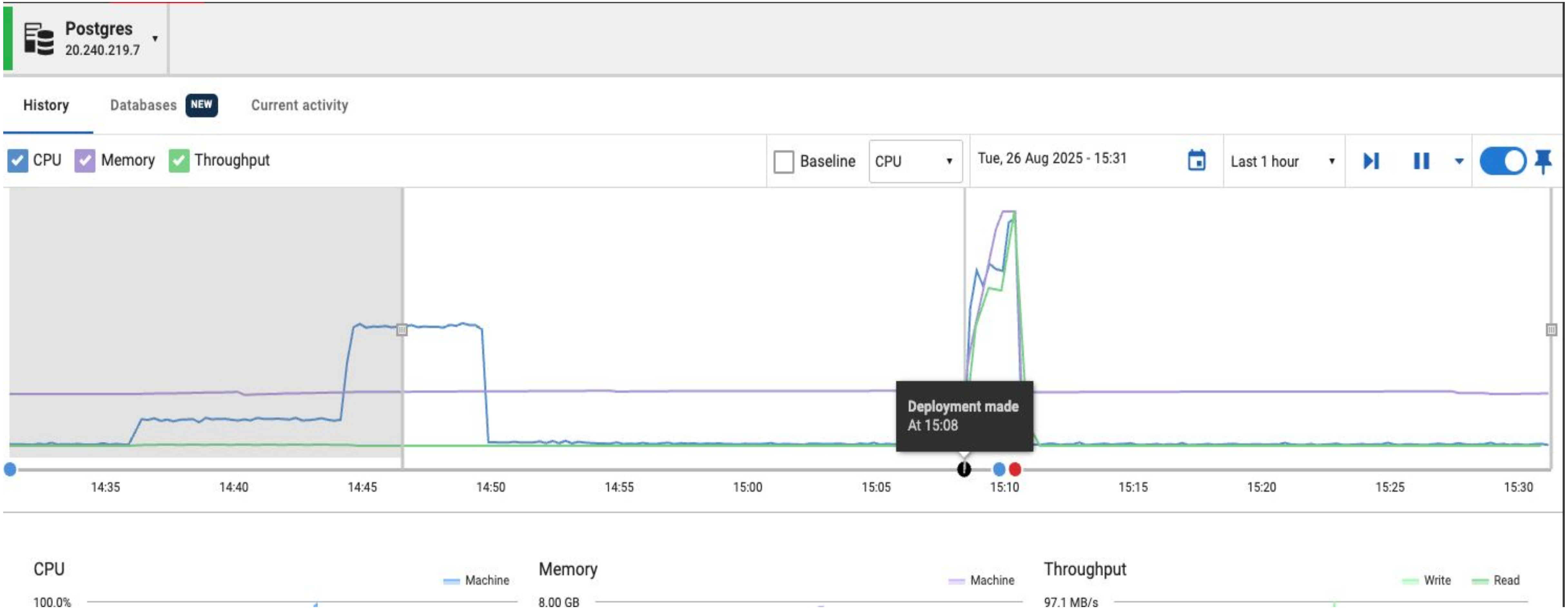
Processor (CPU) utilization

Raised at 15:10

Postgres
20.240.219.7
History
Databases NEW
Current activity
☑ CPU
☑ Memory
☑ Throughput
☐ Baseline
CPU
Tue, 26 Aug 2025 - 15:31
Last 1 hour
14:35
14:40
14:45
14:50
14:55
15:00
15:05
15:10
15:15
15:20
15:25
15:30
CPU
Machine
100.0%
75.0%
50.0%
25.0%
0.0%
14:50
15:00
15:10
15:20
15:30
Memory
Machine
8.00 GB
6.00 GB
4.00 GB
2.00 GB
0.00 GB
14:50
15:00
15:10
15:20
15:30
Throughput
Write
Read
97.1 MB/s
72.8 MB/s
48.5 MB/s
24.3 MB/s
0.0 MB/s
14:50
15:00
15:10
15:20
15:30

Monitor

Optimize **performance**, ensure **security**, and enhance **visibility** across the database estate



Postgres
20.240.219.7

☑ CPU ☑ Memory ☑ Throughput

☐ Baseline

CPU

Tue, 26 Aug 2025 - 15:31

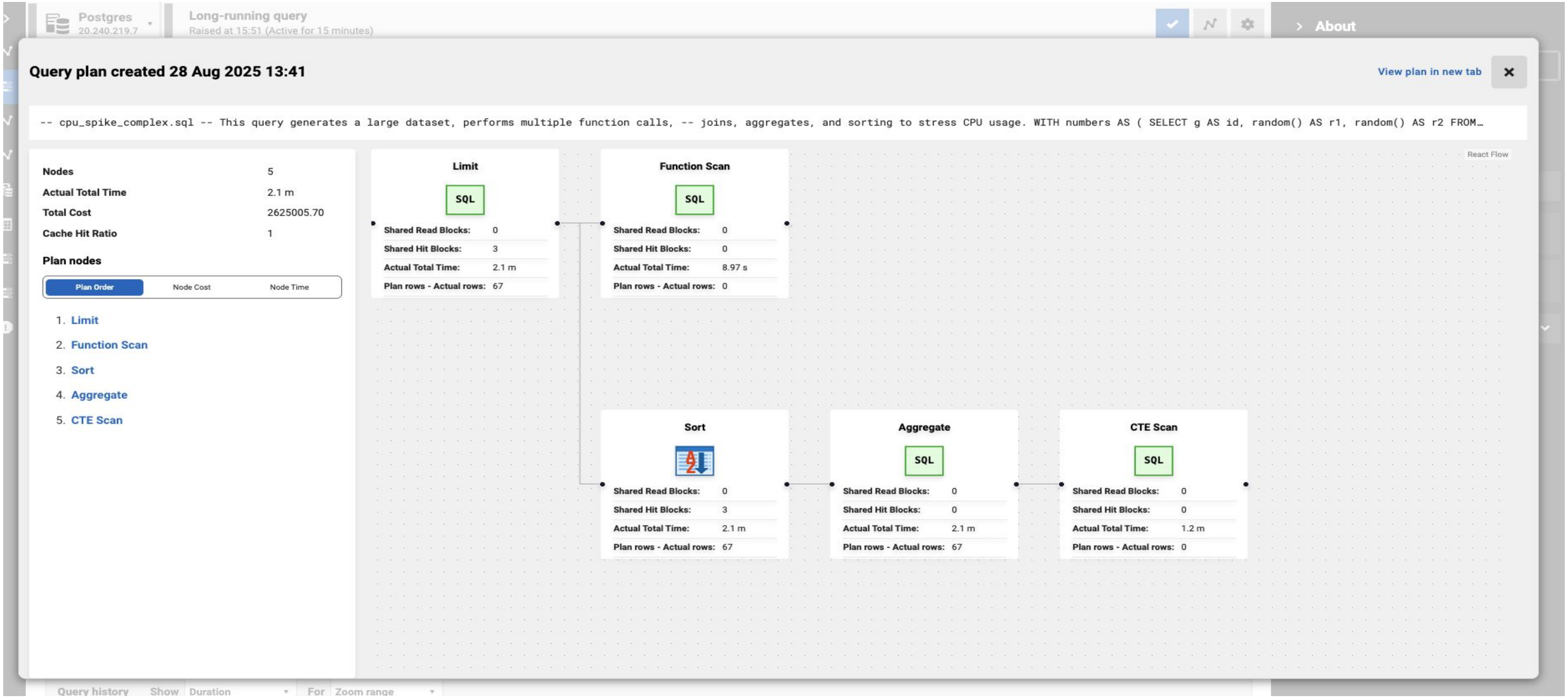
Last 1 hour

Deployment made
At 15:08

History
Databases
NEW
Current activity
14:35
14:40
14:45
14:50
14:55
15:00
15:05
15:10
15:15
15:20
15:25
15:30
CPU
Machine
100.0%
Memory
Machine
8.00 GB
Throughput
Write
Read
97.1 MB/s

Monitor

Optimize **performance**, ensure **security**, and enhance **visibility** across the database estate



Postgres
20.240.219.7
Long-running query
Raised at 15:51 (Active for 15 minutes)
About
View plan in new tab
React Flow
Query history
Show
Duration
For
Zoom range

Query plan created 28 Aug 2025 13:41

```
-- cpu_spike_complex.sql -- This query generates a large dataset, performs multiple function calls, -- joins, aggregates, and sorting to stress CPU usage. WITH numbers AS ( SELECT g AS id, random() AS r1, random() AS r2 FROM…
```

Nodes	5
Actual Total Time	2.1 m
Total Cost	2625005.70
Cache Hit Ratio	1

Plan nodes

Plan Order | Node Cost | Node Time

1. Limit
2. Function Scan
3. Sort
4. Aggregate
5. CTE Scan

Limit

Shared Read Blocks:	0
Shared Hit Blocks:	3
Actual Total Time:	2.1 m
Plan rows - Actual rows:	67

Function Scan

Shared Read Blocks:	0
Shared Hit Blocks:	0
Actual Total Time:	8.97 s
Plan rows - Actual rows:	0

Sort

Shared Read Blocks:	0
Shared Hit Blocks:	3
Actual Total Time:	2.1 m
Plan rows - Actual rows:	67

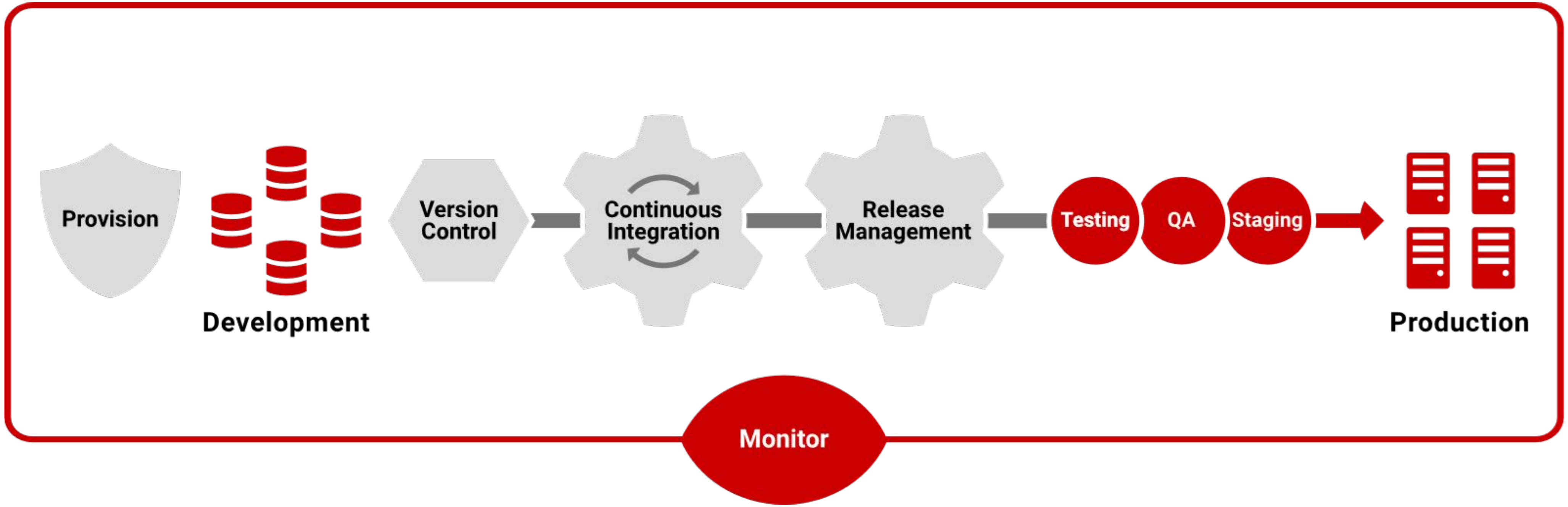
Aggregate

Shared Read Blocks:	0
Shared Hit Blocks:	0
Actual Total Time:	2.1 m
Plan rows - Actual rows:	67

CTE Scan

Shared Read Blocks:	0
Shared Hit Blocks:	0
Actual Total Time:	1.2 m
Plan rows - Actual rows:	0

What does End-to-end Database DevOps look like?


Provision
Development
Version Control
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Release Management
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Quickly **Provision** compliant non-production environments

Key test data challenges organizations face

Exposed PII

60% of developers still use production data, putting sensitive data at risk

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

Failed releases

34% said 'test data comparable to production' was the key challenge to ensuring quality of solutions

2024 World Quality Report,
page 46

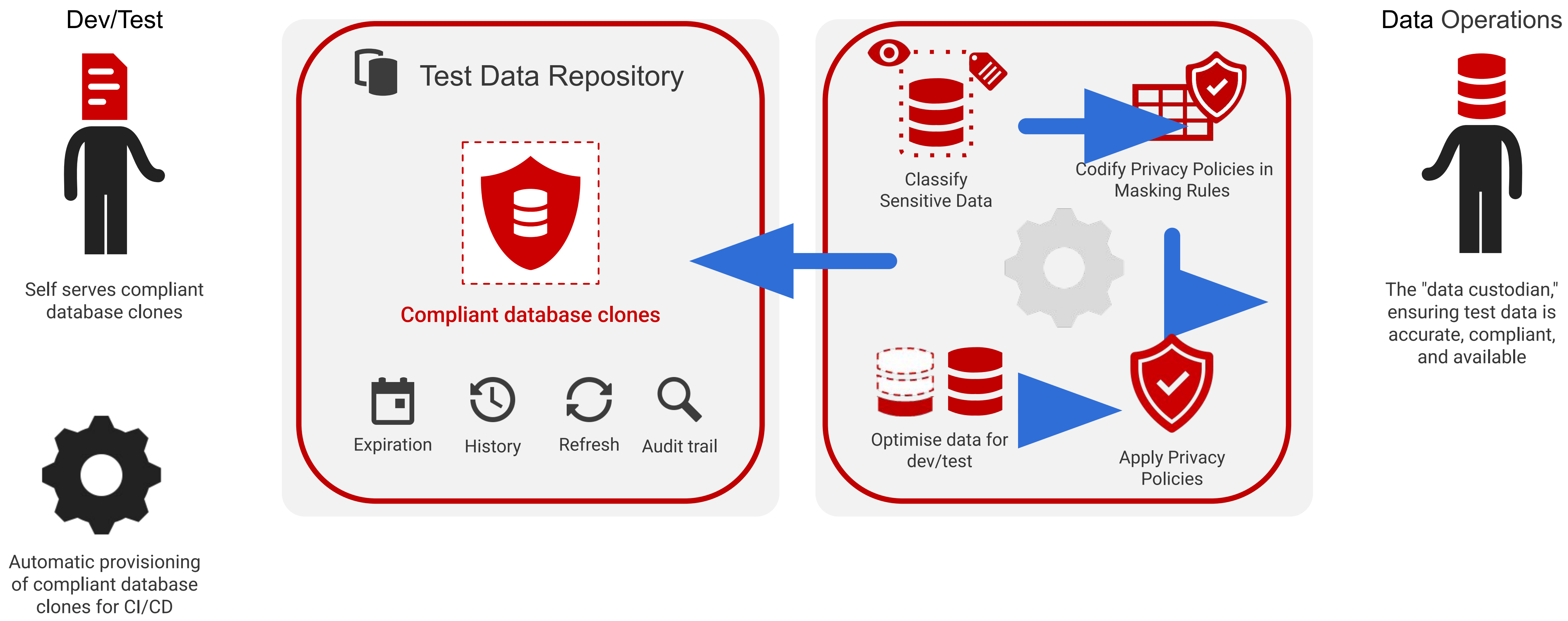
Reduced efficiency

23% of organizations provision test data monthly, with 20% only refreshing every quarter

54% are using a full-size backup of production

Redgate State of Database Landscape Report 2025

The Redgate Test Data Manager Process



Dev/Test

Self serves compliant database clones

Automatic provisioning of compliant database clones for CI/CD

Test Data Repository

Compliant database clones

Expiration
History
Refresh
Audit trail

Classify Sensitive Data
Codify Privacy Policies in Masking Rules
Optimise data for dev/test
Apply Privacy Policies

Data Operations

The "data custodian," ensuring test data is accurate, compliant, and available

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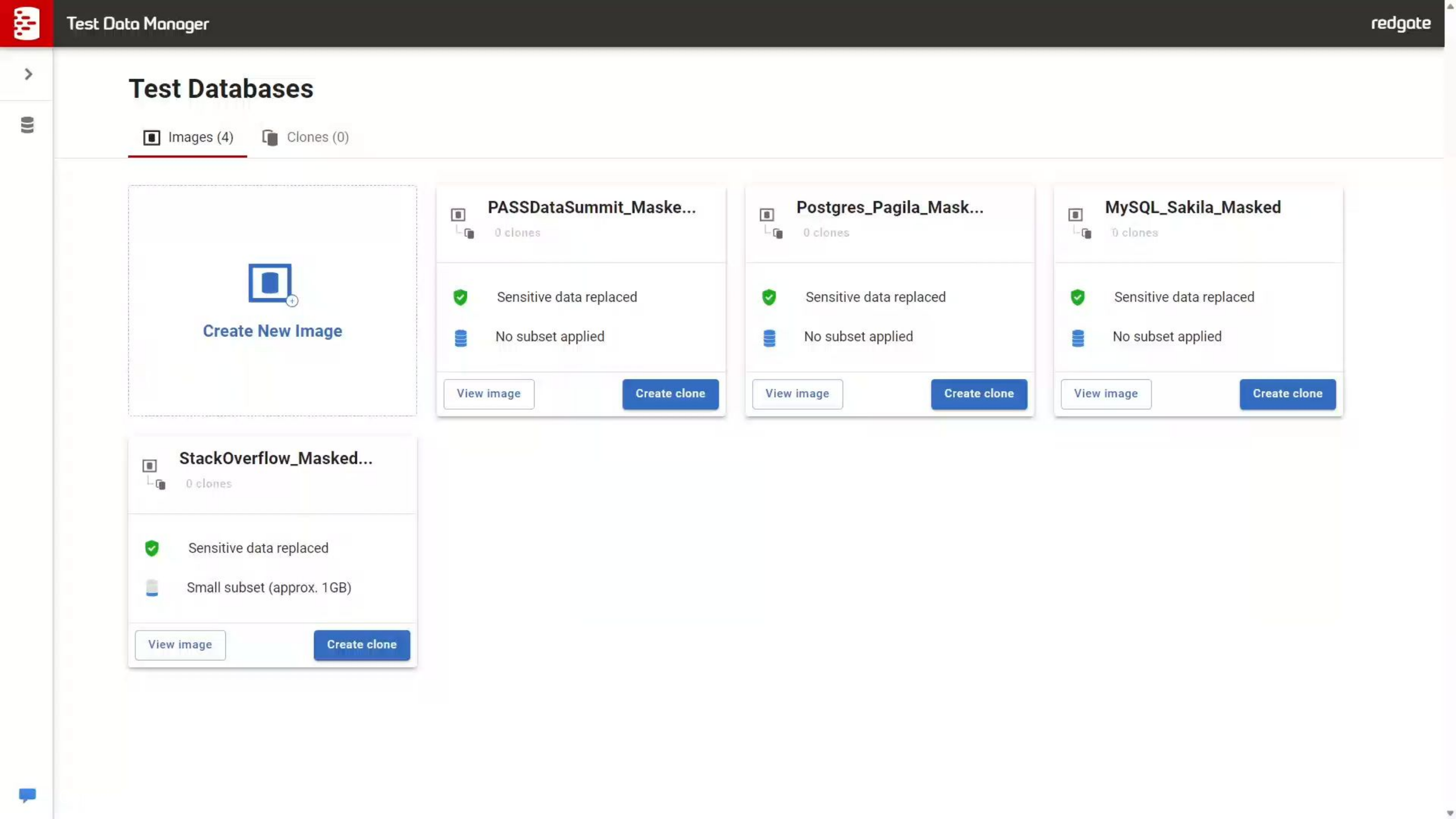

Test Data Manager
redgate
Images (4)
Clones (0)
Create New Image
View image
Create clone

Test Databases

PASSDataSummit_Maske...
0 clones
Sensitive data replaced
No subset applied

Postgres_Pagila_Mask...
0 clones
Sensitive data replaced
No subset applied

MySQL_Sakila_Masked
0 clones
Sensitive data replaced
No subset applied

StackOverflow_Masked...
0 clones
Sensitive data replaced
Small subset (approx. 1GB)

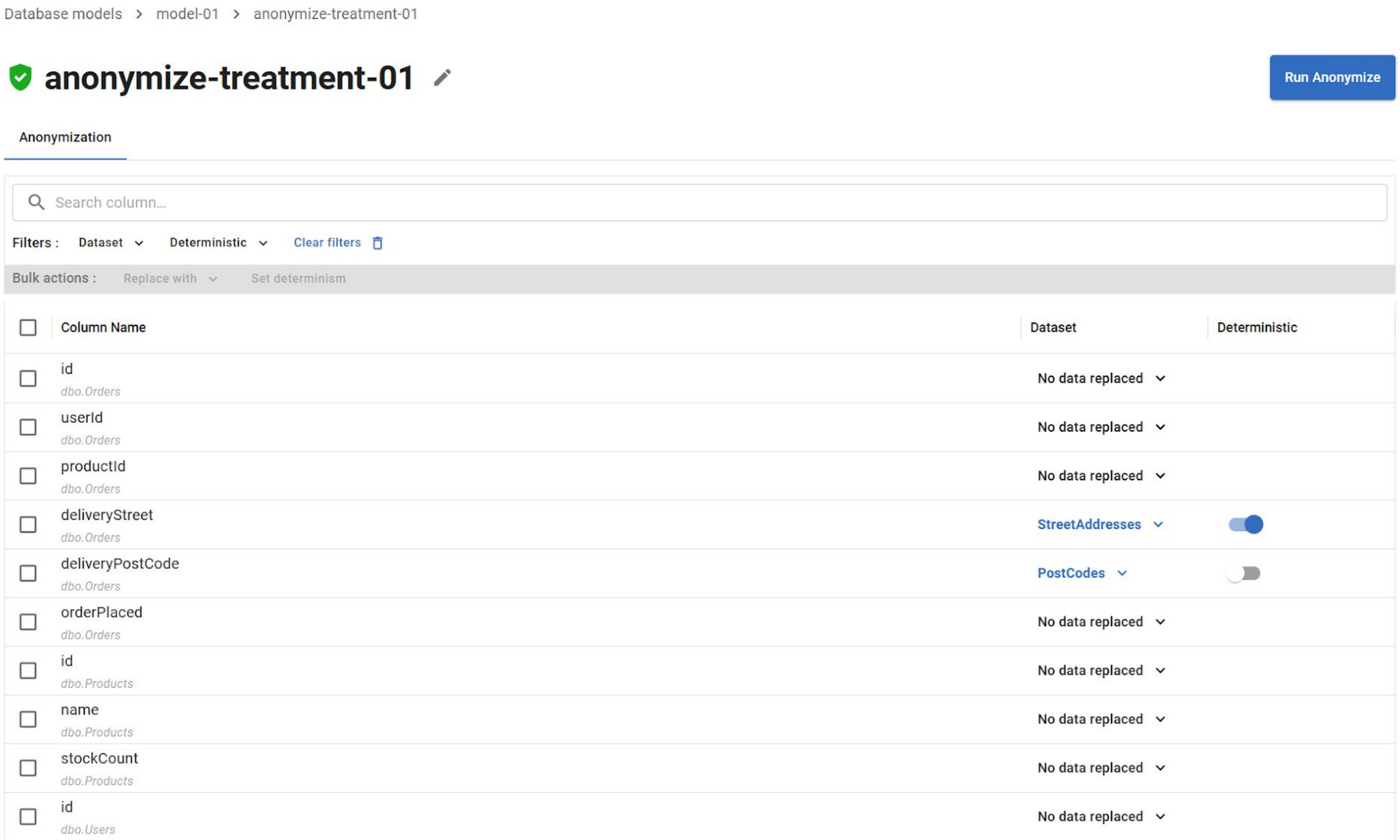
With the flexibility to fit your workflow

A single user interface for simplicity

Easily view and manage sensitive data classifications, suggested masking sets, and subsetting preferences with the centralized graphical user interface (GUI).

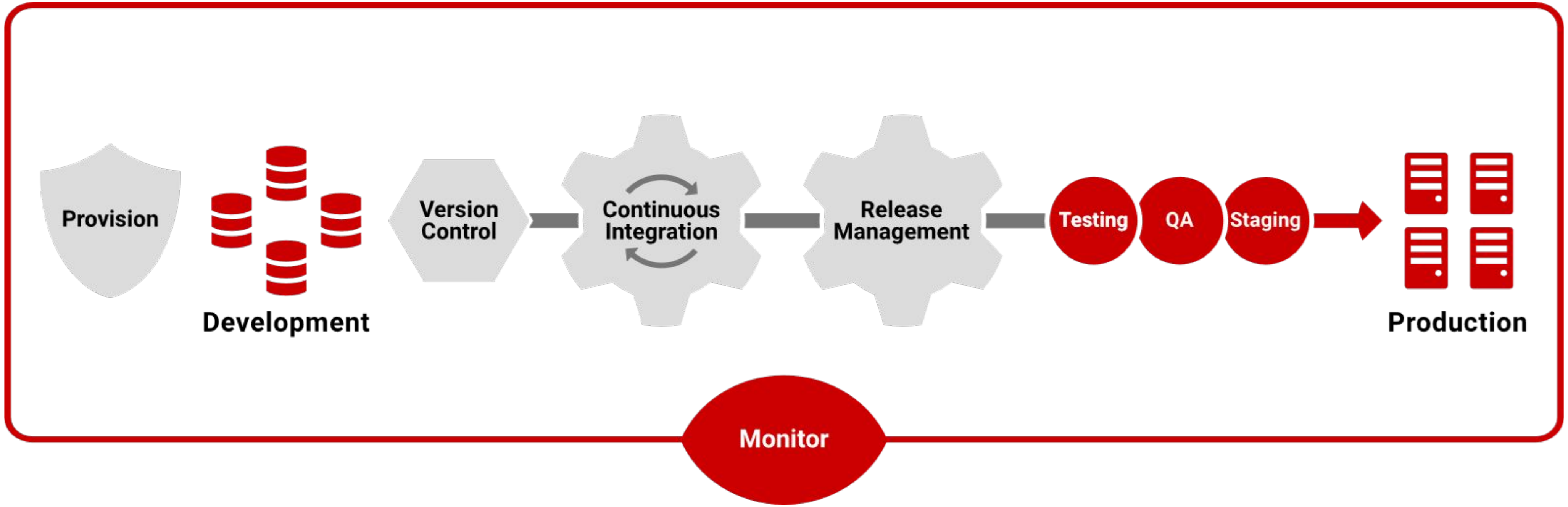
Automate processes with the command line interface

Automate data treatment processes and the delivery of high-quality test data as part of your CI/CD pipelines or workflows.


Database models › model-01 › anonymize-treatment-01
anonymize-treatment-01
Run Anonymize
Anonymization
Search column...
Filters : Dataset Deterministic Clear filters
Bulk actions : Replace with Set determinism

☐	Column Name	Dataset	Deterministic
☐	id *dbo.Orders*	No data replaced	
☐	userId *dbo.Orders*	No data replaced	
☐	productId *dbo.Orders*	No data replaced	
☐	deliveryStreet *dbo.Orders*	StreetAddresses	●
☐	deliveryPostCode *dbo.Orders*	PostCodes	○
☐	orderPlaced *dbo.Orders*	No data replaced	
☐	id *dbo.Products*	No data replaced	
☐	name *dbo.Products*	No data replaced	
☐	stockCount *dbo.Products*	No data replaced	
☐	id *dbo.Users*	No data replaced	

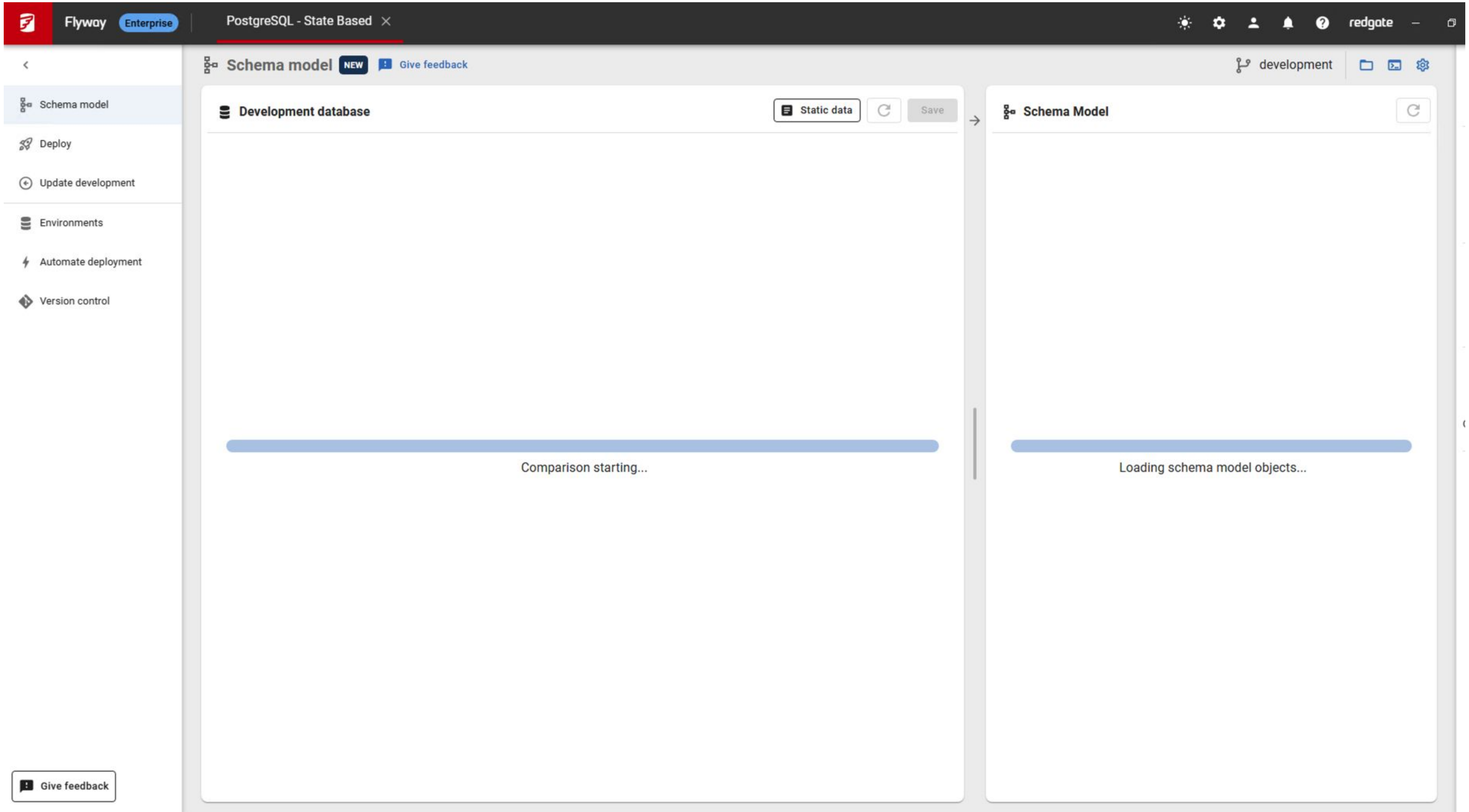
What does End-to-end Database DevOps look like?


Provision
Development
Version Control
Continuous Integration
Release Management
Testing
QA
Staging
Production
Monitor

Version Control your database, anytime, anywhere

Automate

Effortlessly track database changes with a single source of **truth** and increase **reliability** of deployments


Flyway
Enterprise
PostgreSQL - State Based
redgate
Schema model
NEW
Give feedback
development
Schema model
Deploy
Update development
Environments
Automate deployment
Version control
Development database
Static data
Save
Schema Model
Give feedback

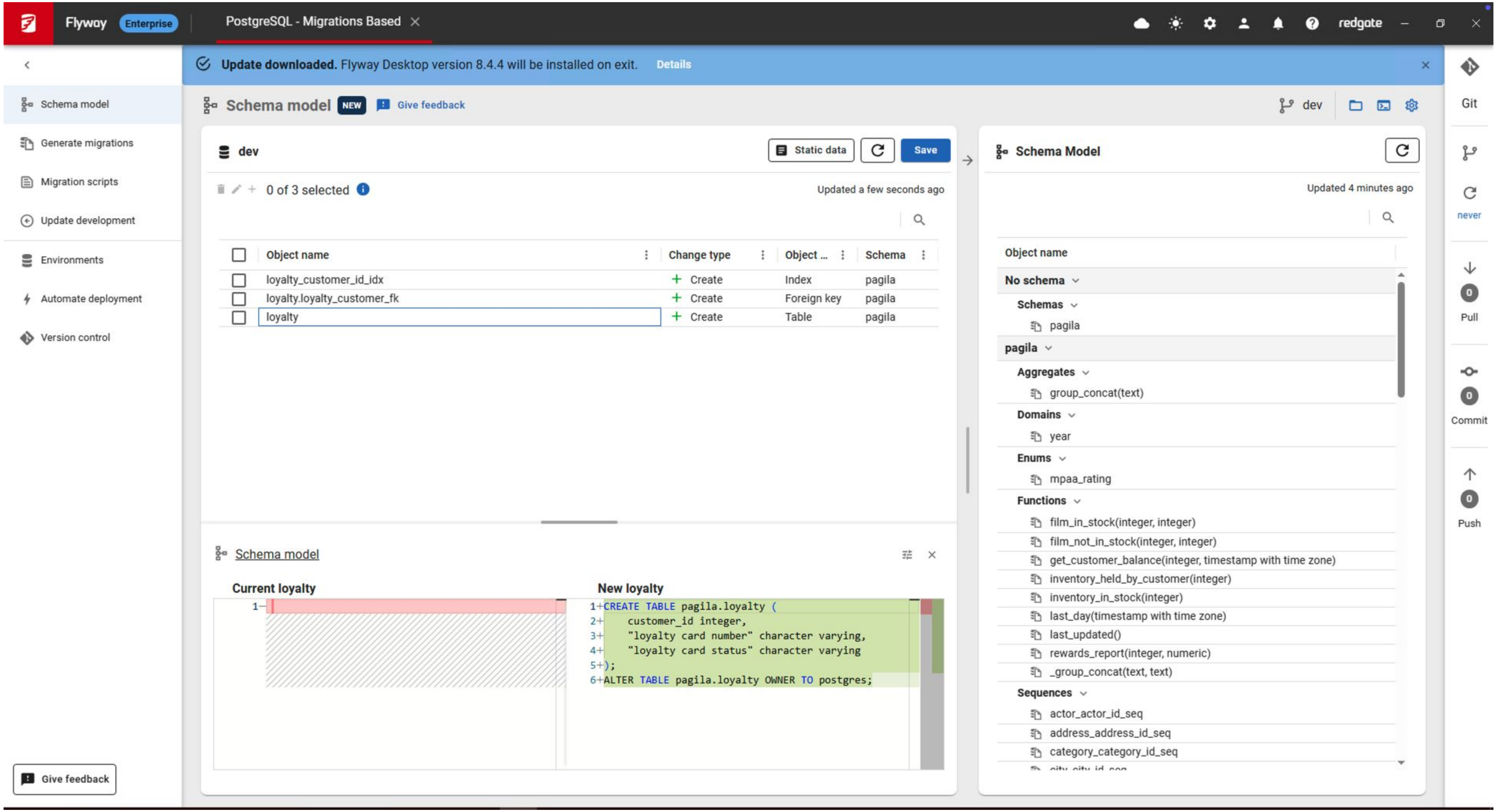
Comparison starting...

Loading schema model objects...

ORACLE

Automate

Effortlessly track database changes with a single source of **truth** and increase **reliability** of deployments


Flyway
Enterprise
PostgreSQL - Migrations Based
redgate
Schema model
Generate migrations
Migration scripts
Update development
Environments
Automate deployment
Version control
Give feedback
Schema model
NEW
Give feedback
dev
Git
never
Pull
Commit
Push
Static data
Save
Schema Model

Update downloaded. Flyway Desktop version 8.4.4 will be installed on exit. Details

dev

0 of 3 selected

Updated a few seconds ago

☐	Object name	Change type	Object ...	Schema
☐	loyalty_customer_id_idx	+ Create	Index	pagila
☐	loyalty.loyalty_customer_fk	+ Create	Foreign key	pagila
☐	loyalty	+ Create	Table	pagila

Schema model

Current loyalty

New loyalty

```
CREATE TABLE pagila.loyalty (
    customer_id integer,
    "loyalty card number" character varying,
    "loyalty card status" character varying
);
ALTER TABLE pagila.loyalty OWNER TO postgres;
```

Schema Model

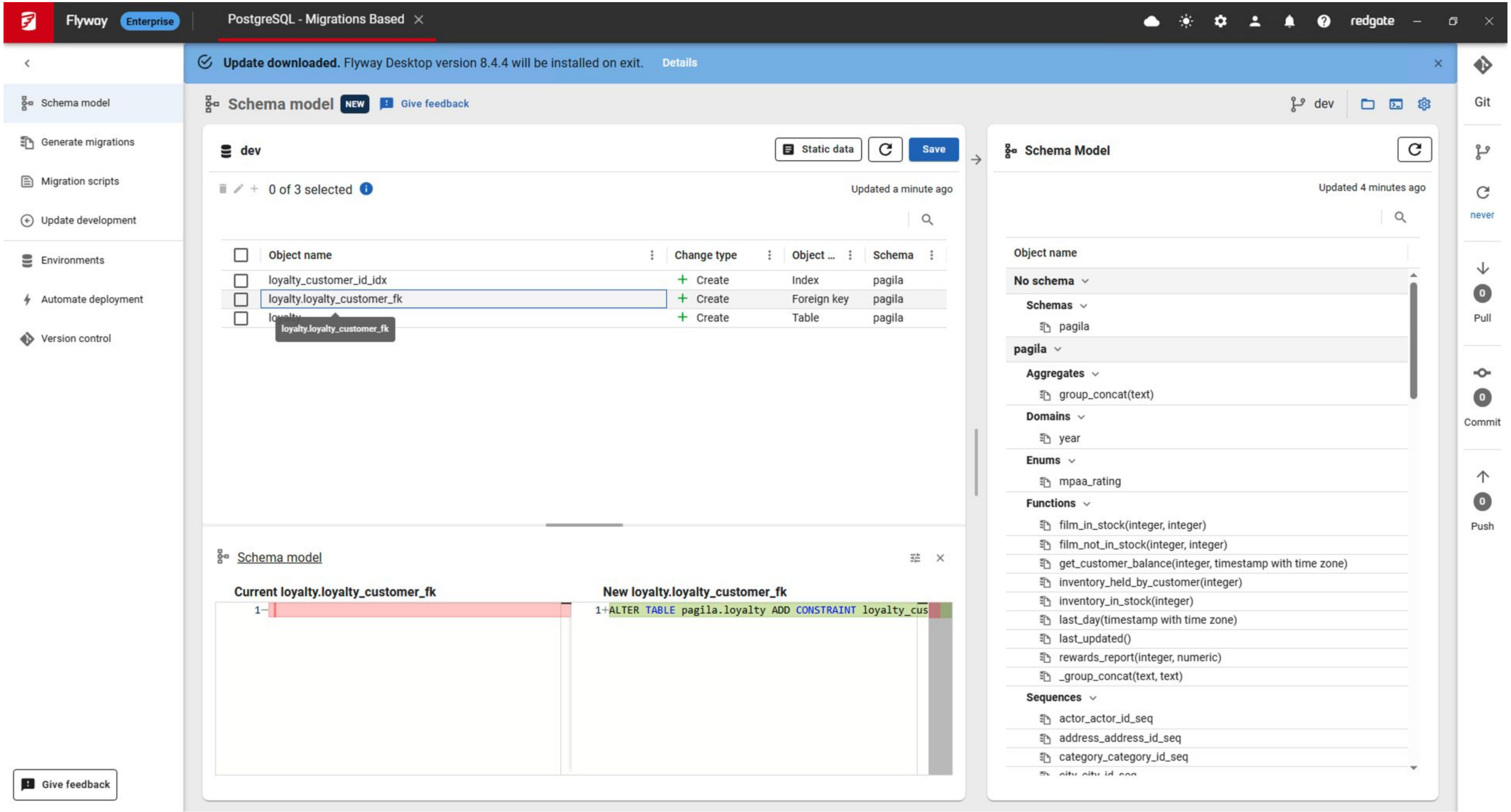
Updated 4 minutes ago

Object name

- **No schema**
  - **Schemas**
    - pagila
- **pagila**
  - **Aggregates**
    - group_concat(text)
  - **Domains**
    - year
  - **Enums**
    - mpaa_rating
  - **Functions**
    - film_in_stock(integer, integer)
    - film_not_in_stock(integer, integer)
    - get_customer_balance(integer, timestamp with time zone)
    - inventory_held_by_customer(integer)
    - inventory_in_stock(integer)
    - last_day(timestamp with time zone)
    - last_updated()
    - rewards_report(integer, numeric)
    - _group_concat(text, text)
  - **Sequences**
    - actor_actor_id_seq
    - address_address_id_seq
    - category_category_id_seq

Automate

Effortlessly track database changes with a single source of **truth** and increase **reliability** of deployments


Flyway
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Schema model
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Give feedback
Schema model
NEW
Give feedback
dev
Git
never
0
Pull
0
Commit
0
Push
Static data
Save

Update downloaded. Flyway Desktop version 8.4.4 will be installed on exit. Details

dev

0 of 3 selected

Updated a minute ago

☐	Object name	Change type	Object ...	Schema
☐	loyalty_customer_id_idx	+ Create	Index	pagila
☐	loyalty.loyalty_customer_fk	+ Create	Foreign key	pagila
☐	loyalty	+ Create	Table	pagila

loyalty.loyalty_customer_fk

Schema model

Current loyalty.loyalty_customer_fk

New loyalty.loyalty_customer_fk

```
1-
```

```
1+ALTER TABLE pagila.loyalty ADD CONSTRAINT loyalty_cus
```

Schema Model

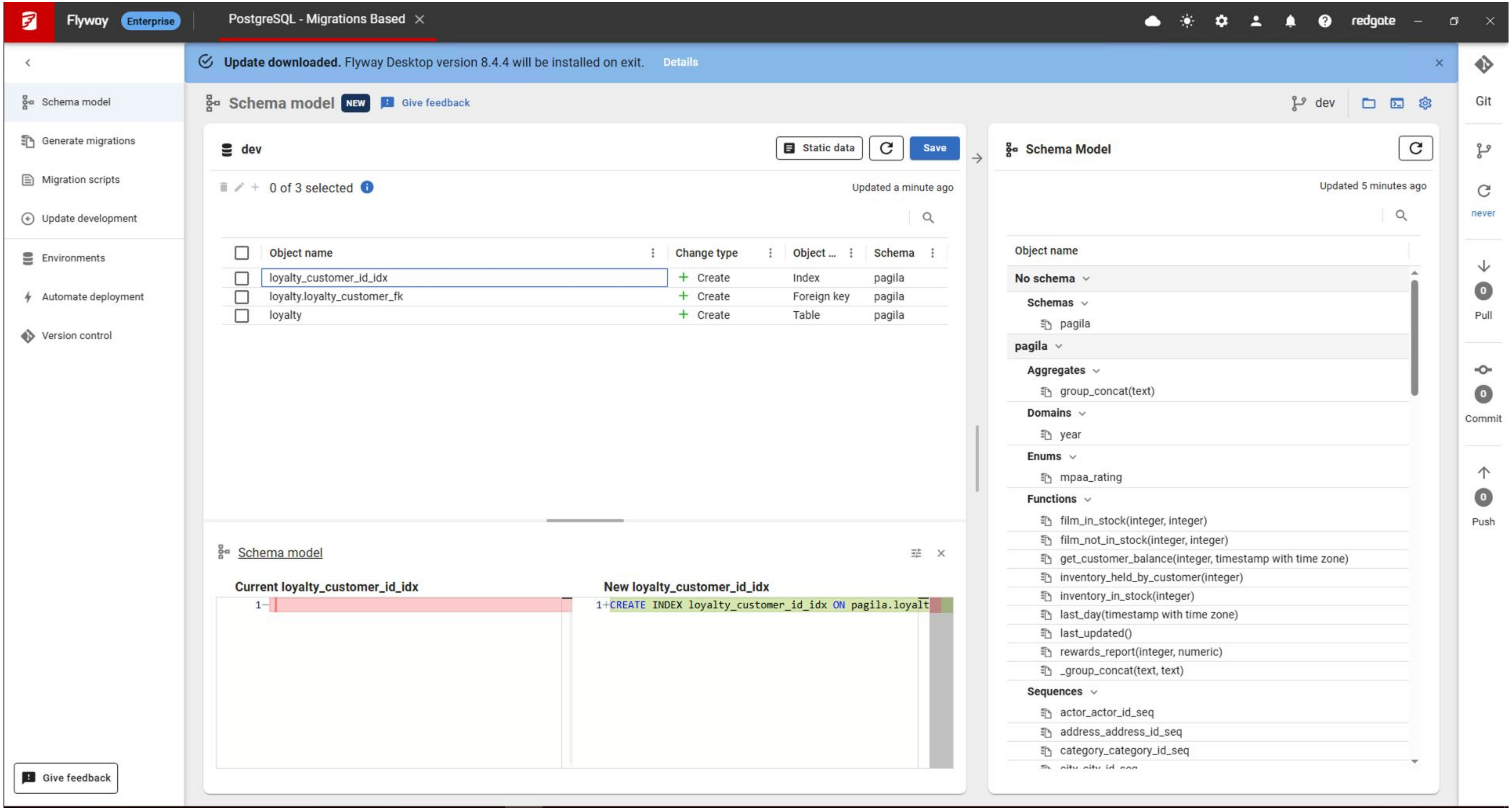
Updated 4 minutes ago

Object name

- No schema
  - Schemas
    - pagila
- pagila
  - Aggregates
    - group_concat(text)
  - Domains
    - year
  - Enums
    - mpaa_rating
  - Functions
    - film_in_stock(integer, integer)
    - film_not_in_stock(integer, integer)
    - get_customer_balance(integer, timestamp with time zone)
    - inventory_held_by_customer(integer)
    - inventory_in_stock(integer)
    - last_day(timestamp with time zone)
    - last_updated()
    - rewards_report(integer, numeric)
    - _group_concat(text, text)
  - Sequences
    - actor_actor_id_seq
    - address_address_id_seq
    - category_category_id_seq

Automate

Effortlessly track database changes with a single source of **truth** and increase **reliability** of deployments


Flyway
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Schema model
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Git
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Pull
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Static data
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dev

Update downloaded. Flyway Desktop version 8.4.4 will be installed on exit. Details

Schema model NEW Give feedback

dev

0 of 3 selected

Updated a minute ago

☐	Object name	Change type	Object ...	Schema
☐	loyalty_customer_id_idx	+ Create	Index	pagila
☐	loyalty.loyalty_customer_fk	+ Create	Foreign key	pagila
☐	loyalty	+ Create	Table	pagila

Schema model

Current loyalty_customer_id_idx

New loyalty_customer_id_idx

```
1+CREATE INDEX loyalty_customer_id_idx ON pagila.loyalt
```

Schema Model

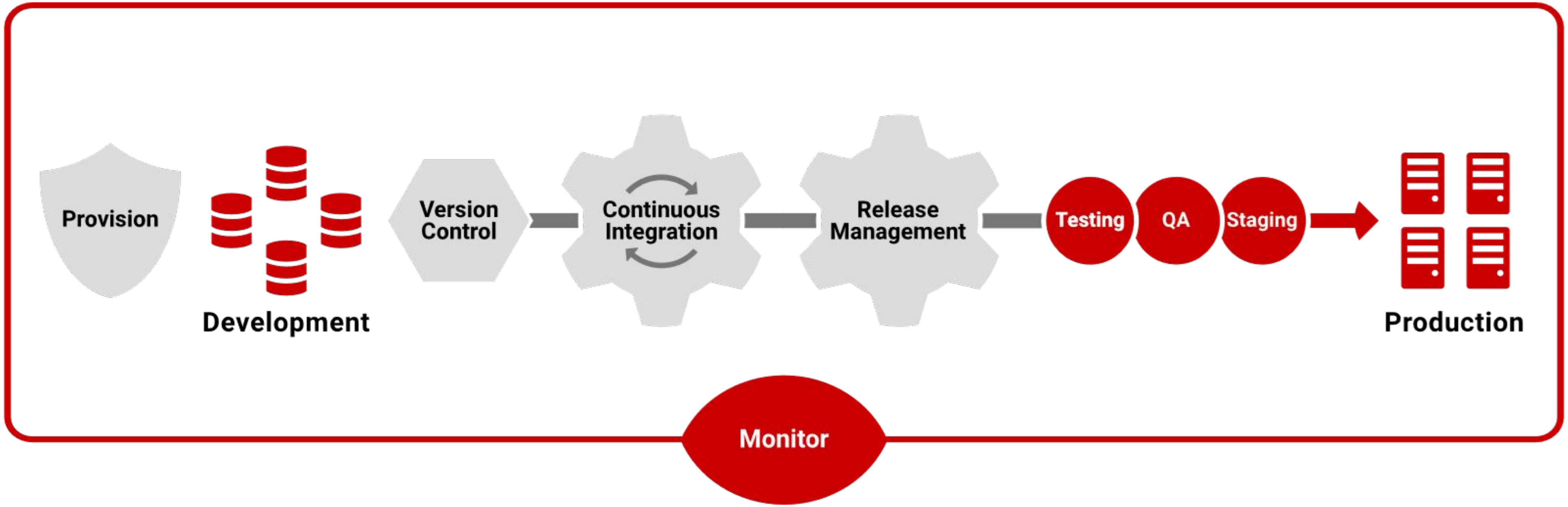
Updated 5 minutes ago

Object name

No schema
- Schemas
  - pagila

pagila
- Aggregates
  - group_concat(text)
- Domains
  - year
- Enums
  - mpaa_rating
- Functions
  - film_in_stock(integer, integer)
  - film_not_in_stock(integer, integer)
  - get_customer_balance(integer, timestamp with time zone)
  - inventory_held_by_customer(integer)
  - inventory_in_stock(integer)
  - last_day(timestamp with time zone)
  - last_updated()
  - rewards_report(integer, numeric)
  - _group_concat(text, text)
- Sequences
  - actor_actor_id_seq
  - address_address_id_seq
  - category_category_id_seq

What does End-to-end Database DevOps look like?


Provision
Development
Version Control
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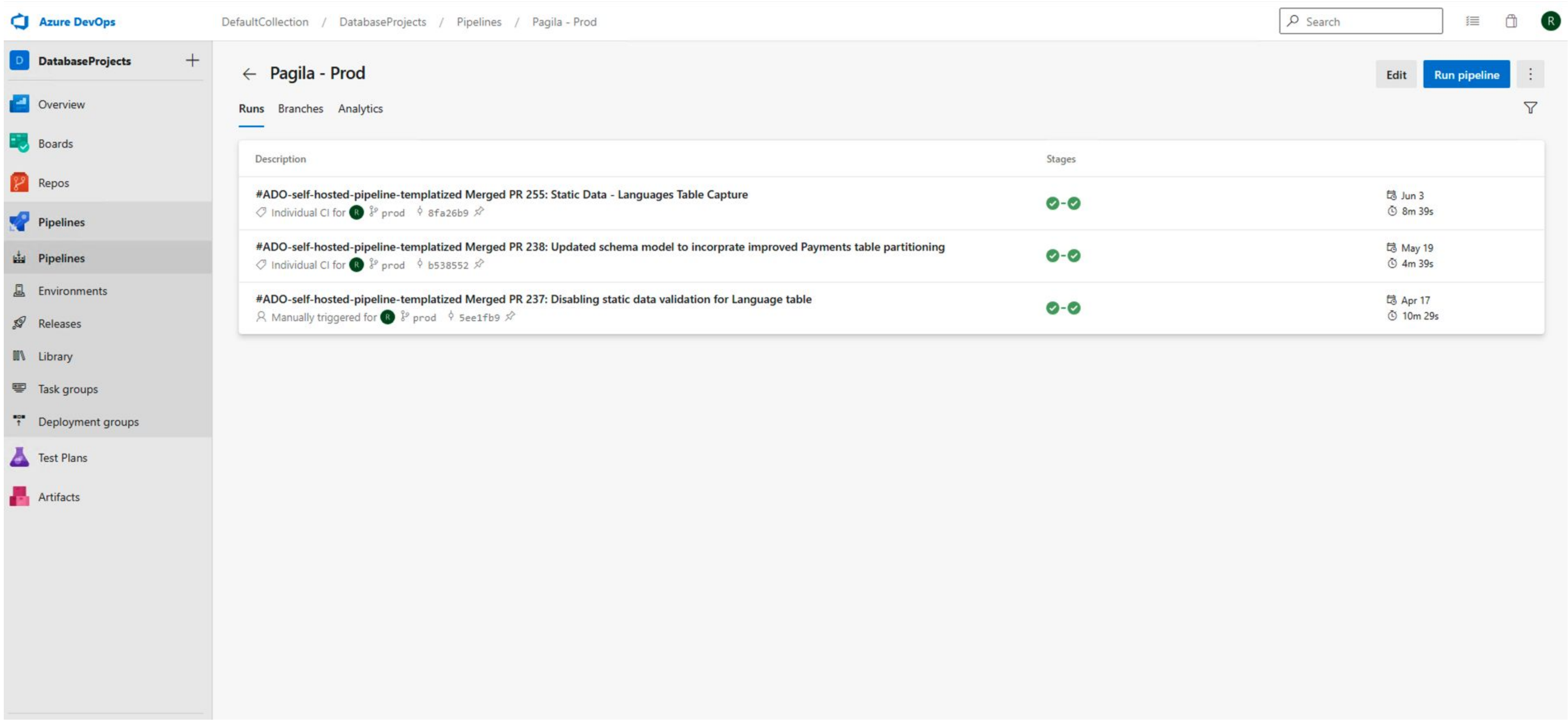
Automate database **continuous integration and delivery** and release better quality code **faster**

Automate

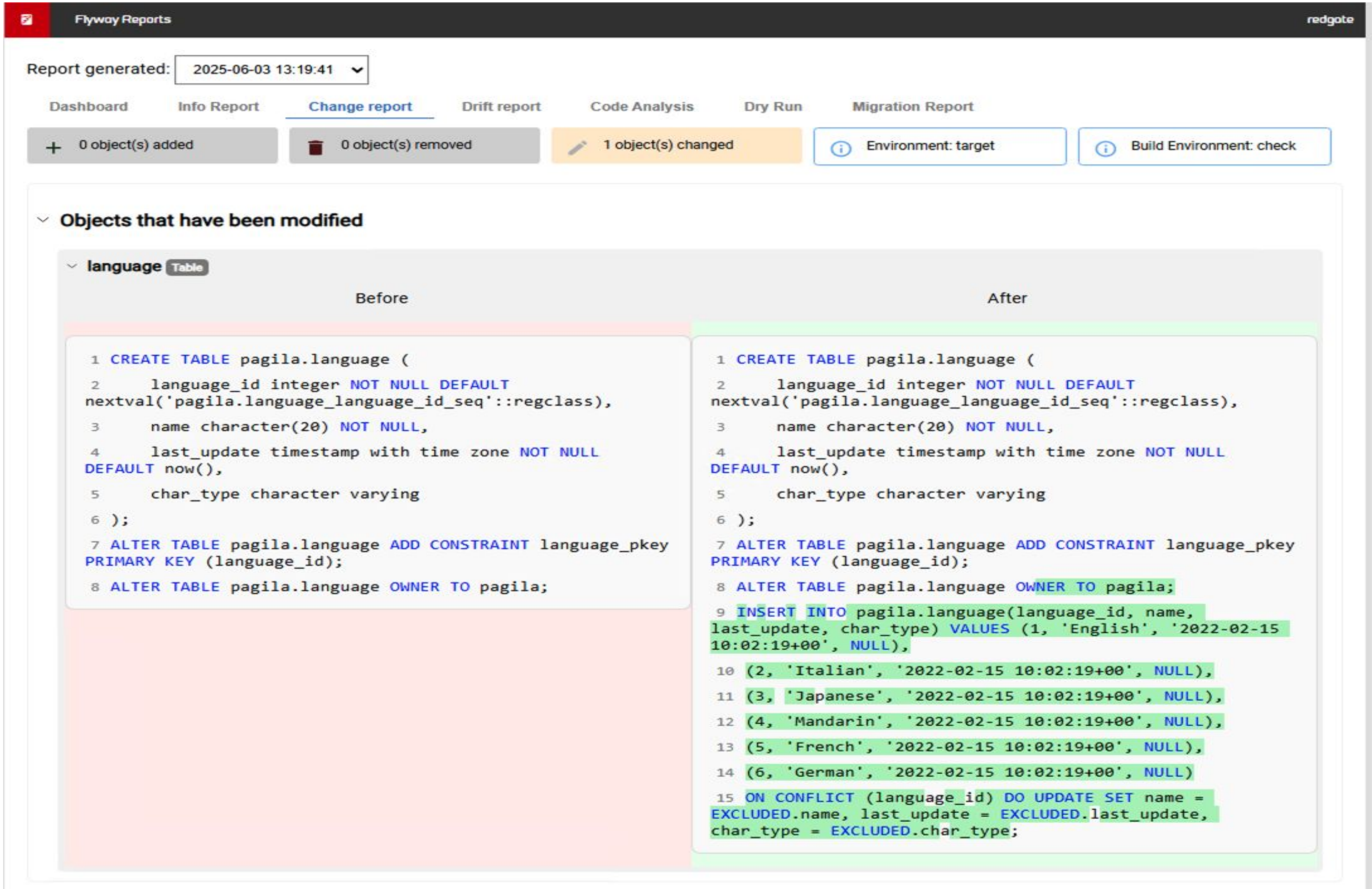
Automate pre-merge tests, quality checks, database unit and integration tests to **detect issues earlier**


Azure DevOps
DefaultCollection / DatabaseProjects / Pipelines / Pagila - Prod
Search
R
DatabaseProjects
Overview
Boards
Repos
Pipelines
Pipelines
Environments
Releases
Library
Task groups
Deployment groups
Test Plans
Artifacts
Pagila - Prod
Edit
Run pipeline
Runs
Branches
Analytics

Description	Stages	
#ADO-self-hosted-pipeline-templatized Merged PR 255: Static Data - Languages Table Capture Individual CI for R prod 8fa26b9	✓-✓	Jun 3 8m 39s
#ADO-self-hosted-pipeline-templatized Merged PR 238: Updated schema model to incorprate improved Payments table partitioning Individual CI for R prod b538552	✓-✓	May 19 4m 39s
#ADO-self-hosted-pipeline-templatized Merged PR 237: Disabling static data validation for Language table Manually triggered for R prod 5ee1fb9	✓-✓	Apr 17 10m 29s

Automate

Automate pre-merge tests, quality checks, database unit and integration tests to **detect issues earlier**



Report generated: 2025-06-03 13:19:41

+ 0 object(s) added

0 object(s) removed

1 object(s) changed

Environment: target

Build Environment: check

Objects that have been modified

language Table

Before

```
CREATE TABLE pagila.language (
    language_id integer NOT NULL DEFAULT nextval('pagila.language_language_id_seq'::regclass),
    name character(20) NOT NULL,
    last_update timestamp with time zone NOT NULL DEFAULT now(),
    char_type character varying
);
ALTER TABLE pagila.language ADD CONSTRAINT language_pkey PRIMARY KEY (language_id);
ALTER TABLE pagila.language OWNER TO pagila;
```

After

```
CREATE TABLE pagila.language (
    language_id integer NOT NULL DEFAULT nextval('pagila.language_language_id_seq'::regclass),
    name character(20) NOT NULL,
    last_update timestamp with time zone NOT NULL DEFAULT now(),
    char_type character varying
);
ALTER TABLE pagila.language ADD CONSTRAINT language_pkey PRIMARY KEY (language_id);
ALTER TABLE pagila.language OWNER TO pagila;
INSERT INTO pagila.language(language_id, name, last_update, char_type) VALUES (1, 'English', '2022-02-15 10:02:19+00', NULL),
(2, 'Italian', '2022-02-15 10:02:19+00', NULL),
(3, 'Japanese', '2022-02-15 10:02:19+00', NULL),
(4, 'Mandarin', '2022-02-15 10:02:19+00', NULL),
(5, 'French', '2022-02-15 10:02:19+00', NULL),
(6, 'German', '2022-02-15 10:02:19+00', NULL)
ON CONFLICT (language_id) DO UPDATE SET name = EXCLUDED.name, last_update = EXCLUDED.last_update, char_type = EXCLUDED.char_type;
```

ORACLE

Automate

Automate pre-merge tests, quality checks, database unit and integration tests to **detect issues earlier**

Adoption has never been simpler

Integrate with your existing development and release tools

Flyway Enterprise integrates with all common CI and release tools, including GitHub, Azure DevOps, Jenkins, TeamCity, and many more.

Redgate helps organizations reliably solve the **complex** challenges of database management across the DevOps lifecycle on **any** database, **anywhere**.

Double the productivity in each sprint cycle

83% less time spent on database deployments

30% cut in post-deployment errors

Thank you

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