Anthem

Database Automation Sparks Substantial Development Boost

DBmaestro
DevOps for Database

When Anthem wanted to automate their database releases, they turned to DBmeastro. DBmaestro's DevOps for Databases platform provided a comprehensive set of tools for automating their entire database CI/CD processes and optimizing their release pipeline. As a result, Anthem drastically decreased change and release times by 75%.

Anthem's move to an agile development environment, alongside adopting best practices and CI/CD tools such as JIRA, Jenkins and git which focused mainly on code development, turned the database into a critical development bottleneck. Lacking database automation tools. At the beginning, Anthem tried installing manual practices that introduced inaccuracies, code drifts, and release issues into their ecosystem. Hundreds of hours were being wasted on error detection and remediation, with feature development and innovation being compromised.

Anthem®

" *We needed to be able to control changes made to the database and promote those changes in an easy and controlled way.* "

Tim McKean, Data Architect, Anthem

The Company

Based in Indianapolis, Anthem is one of the biggest health insurance service providers and the largest for-profit managed health care company in the Blue Cross Shield Association today. The company is currently ranked 33rd on the Fortune 500 list.

The company currently employs around 63,900 professionals. Oracle is the database of choice for 16 different environments that are being used in-house. Besides the technical requirements, Anthem Inc. is also expected to be HIPAA compliant at all times.

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The Challenge

Anthem's database release processes were inaccurate, and were not being executed properly. Changes were placed into their production environment either too early, or were missed entirely, causing releases to fail validation on release night. As Anthem switched over to an agile development ecosystem, the time it was taking to manually create and deploy scripts due to lack of automation tools was growing exponentially. This was extremely critical due to the sensitive data that was being processed and the zero margin for error. Anthem needed a way to streamline the process and ensure error-free releases.

There were three main issues:

Code drifts and other issues caused by early code changes or missed fixes which were causing frequent release issues that were hampering operations and product stability.

DBAs were spending too much time on manual script creation and manually tracking changes using tools such as Excel spreadsheets. As a result it was incredibly difficult to execute smooth rollbacks without issues and problems.

Developers could not check out objects consistently before making code changes, nor could they tag changes to make them show up in JIRA stories for seamless monitoring.

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The Solution

After manual script creation and tracking Jira requests on spreadsheets yielded poor results, and after a review process of the available tools on the market, Anthem developers started using DBmaestro's repository along with the SQL Developer to check in and check out objects. Deployment was blazing fast due to the plug-and-play nature of the solution, which was backed up with strong support. Of particular use was the seamless DBmaestro-JIRA integration, which was the solution to one of Anthem's core problems.

Besides the smooth installation and deployment, Anthem was able to use the documentation to learn more about DBmaestro and train it's staff accordingly. The Configuration Managers, DevOps and DBA teams even got a remote training session.

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Automated End-to-End Process with DBmaestro

1. Coding Changes
Developer updates changes directly in database with enforced Check-in/out process
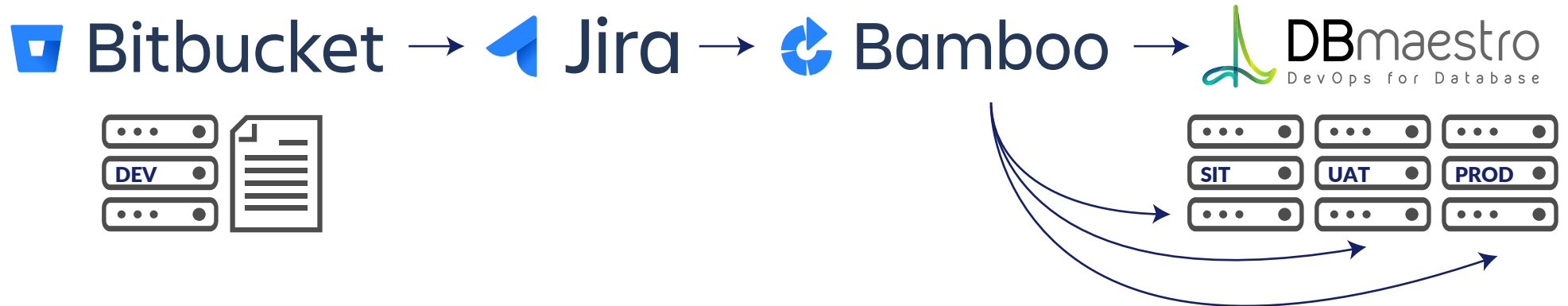
2. DBmaestro Build
Generates script based on schema differences between DEV and RS SQL Scripts committed to Bitbucket

3. Status
Developer changes status of Jira ticket to 'Done'

4. Bamboo
Is triggered and coordinates steps in the packaging and deployment process

Bitbucket → Jira → Bamboo → DBmaestro DevOps for Database

DEV

SIT   UAT   PROD

5. Package and PreCheck
DBmaestro examines scripts for Policy, Syntax and Impact Analysis

6. Package Deployment
PreChecked packages are deployed to Validated environments

7. Controlled Promotion
Packages delivered to controlled environments are safe and repeatable

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The Results

Now, Anthem can have numerous development teams working on the same project, while DBmaestro's database automation and governance tools allow them to swiftly meet their goals. A lot of valuable time is being saved. As per Anthem, supporting a change used to take around 4 hours on average before implementing DBmaestro. This time is now down to just 1 hour, something that has helped accelerate development dramatically.

With 30 to 60 hours being saved per week, ROI dramatically increases. The savings in the DBA position alone reach over $100,000 annually for a single application. This is before we consider saved developer and IT team working hours, which can add hundreds of thousands of dollars more.

Furthermore, Anthem can now expand its abilities beyond the original goals. Finally, rollbacks scripts can be built at will, and the testing and rollback processes have become standard and routine.

The biggest gain Anthem saw was in their ability to view object history. Where in the past, they had to delve into scripts inside the code repository in order to see what an object looked like in prior versions, today they can easily look at the history of any object and compare the different versions inside SQL Developer.

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> *We received excellent support from the DBmaestro staff as we went through the deployment. They stayed on the phone with us as we did the initial deploy to our server and helped us establish our first instance.*

Tim McKean, Data Architect, Anthem

Anthem's Bottom Line:

DBmaestro's comprehensive database management and automation solution has helped us optimize our delivery pipeline, while allowing us to focus on adding more features to our product and pioneering innovation.

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