Two Developers, One Mission: Make a Test Database That Doesn’t Suck

If you've ever been frustrated by a test database filled with nonsense, duplicates, sensitive information, or YOLO-style restored production backups, this session is for you.

Join Peter Kruis and Tonie Huizer, two energetic data enthusiasts, on an epic (and slightly chaotic) quest to build test databases that are safe, realistic, and actually useful for development and testing. With decades of combined experience, they’ll take you on a journey through the wild world of test data, showing just how bad it can get, and how good it can be.

Through engaging role play, real-world examples, and live demo’s, they’ll expose the dangers of shady test environments and share smarter, safer ways to manage test data. Audience participation is encouraged; because (bad) test databases are a team sport!

You’ll leave entertained, but more importantly, you’ll leave with tools and strategies to stop your test database from being the weakest link in your development chain.

Because let’s face it: your test database shouldn’t suck.

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17 and 18 April 2026, Ouddorp, The Netherlands

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URGENT: Performance Issue in usp_SendPeriodDiscountEmails – Needs Fix TODAY

RetroPixels
To Peter Kruis
Cc BOSS

RetroPixels IT

Good morning,

We've identified a **critical performance issue** with the stored procedure `usp_SendPeriodDiscountEmails`. Execution currently takes around **20 seconds**, which is too long for queuing discount emails.

This is **urgent** — the discount codes need to be sent **TODAY**. Please prioritize optimizing this stored procedure.

Here are the parameters being used:

```
EXEC [dbo].[usp_SendPeriodDiscountEmails]
     @From = '2025-09-01',
     @To = '2025-10-01',
     @DiscountCode = N'123',
     @Status = 'PAID',
     @CountryCode = 'NL',
     @MinimumTotalGrand = 100,
     @ProductId = 21;
GO
```

Please ensure this is reviewed, optimized, and re-tested as soon as possible so the emailing process can proceed without further delay.

Thanks,
RetroPixels IT Team

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IT DEPENDS

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FW: URGENT: Performance Issue in usp_SendPeriodDiscountEmails – Needs Fix TODAY

Reply | Reply All | Forward

RetroPixels
To Peter Kruis; BOSS

wo 8/10/2025 13:56

Stupid discount action - [TODO: Replace subject in PRD]
Outlook item

Hello,

How can this happen?! We got complaints for our customers that they got an email like attached. We tracked the source of this email and seen it coming from your SMTP server. What happened! This will costs us customers!

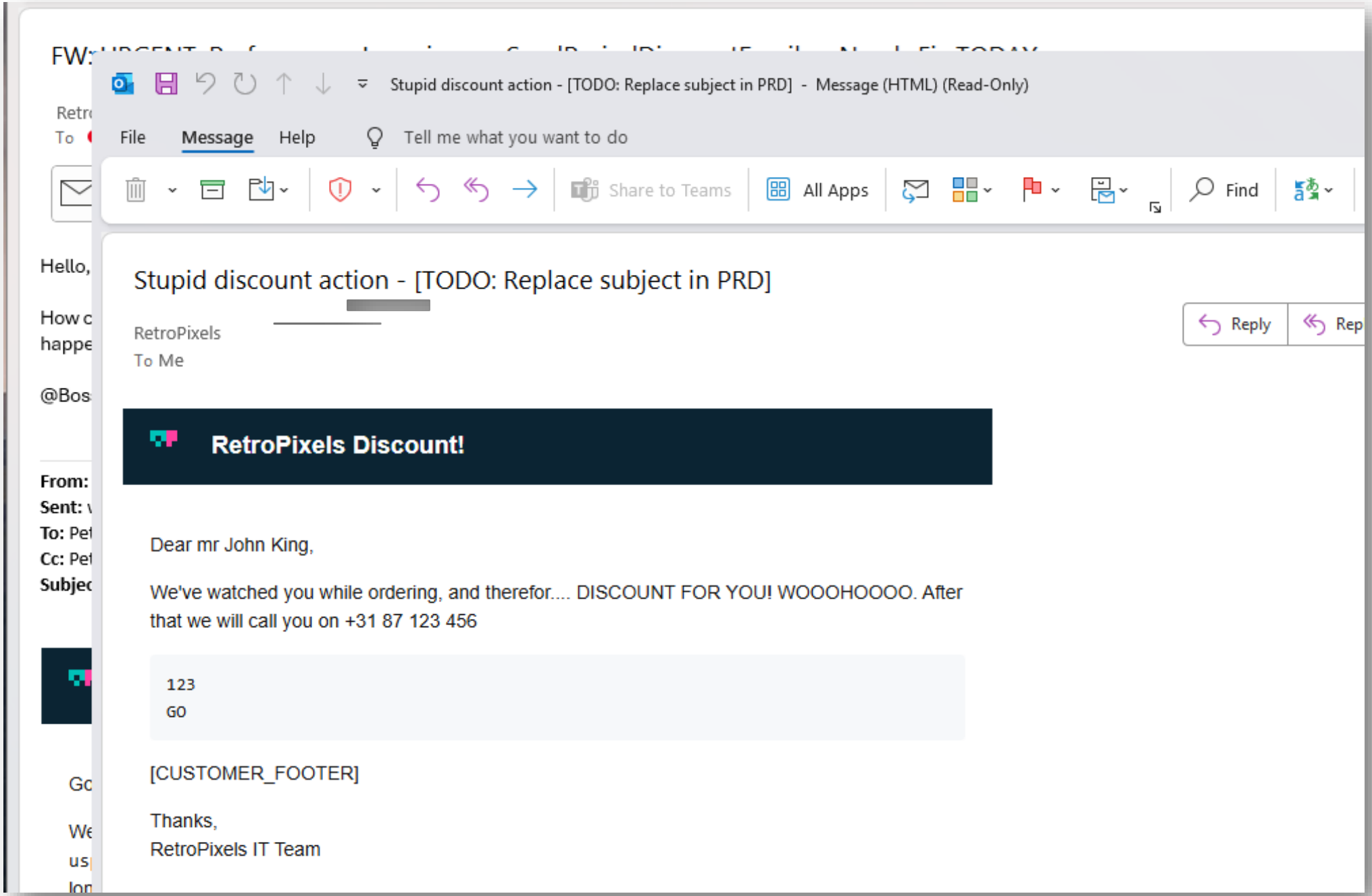
@Boss, how are we going to solve this financially?

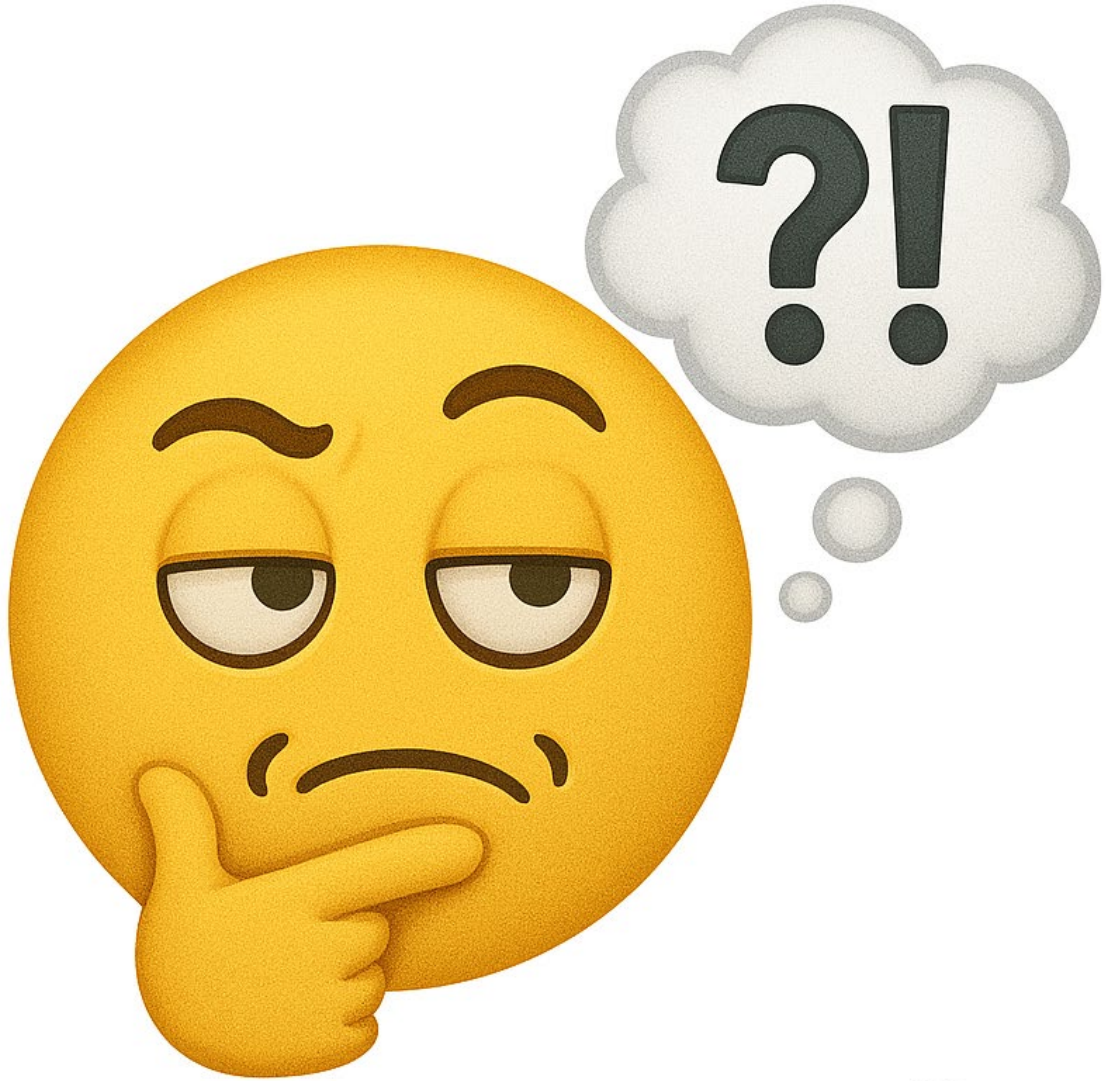
From: Peter Kruis <peter.kruis@monin-it.be>
Sent: woensdag 1 oktober 2025 12:22
To: Peter Kruis <peter.kruis@monin-it.be>
Cc: Peter Kruis <peter.kruis@monin-it.be>
Subject: URGENT: Performance Issue in usp_SendPeriodDiscountEmails – Needs Fix TODAY

RetroPixels IT

Good morning,

We've identified a **critical performance issue** with the stored procedure `usp_SendPeriodDiscountEmails`. Execution currently takes around **20 seconds**, which is too


Stupid discount action - [TODO: Replace subject in PRD] - Message (HTML) (Read-Only)
File
Message
Help
Tell me what you want to do
Share to Teams
All Apps
Find
Stupid discount action - [TODO: Replace subject in PRD]
RetroPixels
To Me
Reply
RetroPixels Discount!
Dear mr John King,
We've watched you while ordering, and therefor.... DISCOUNT FOR YOU! WOOOHOOOO. After that we will call you on +31 87 123 456
123
GO
[CUSTOMER_FOOTER]
Thanks,
RetroPixels IT Team



FAMILIAR?!

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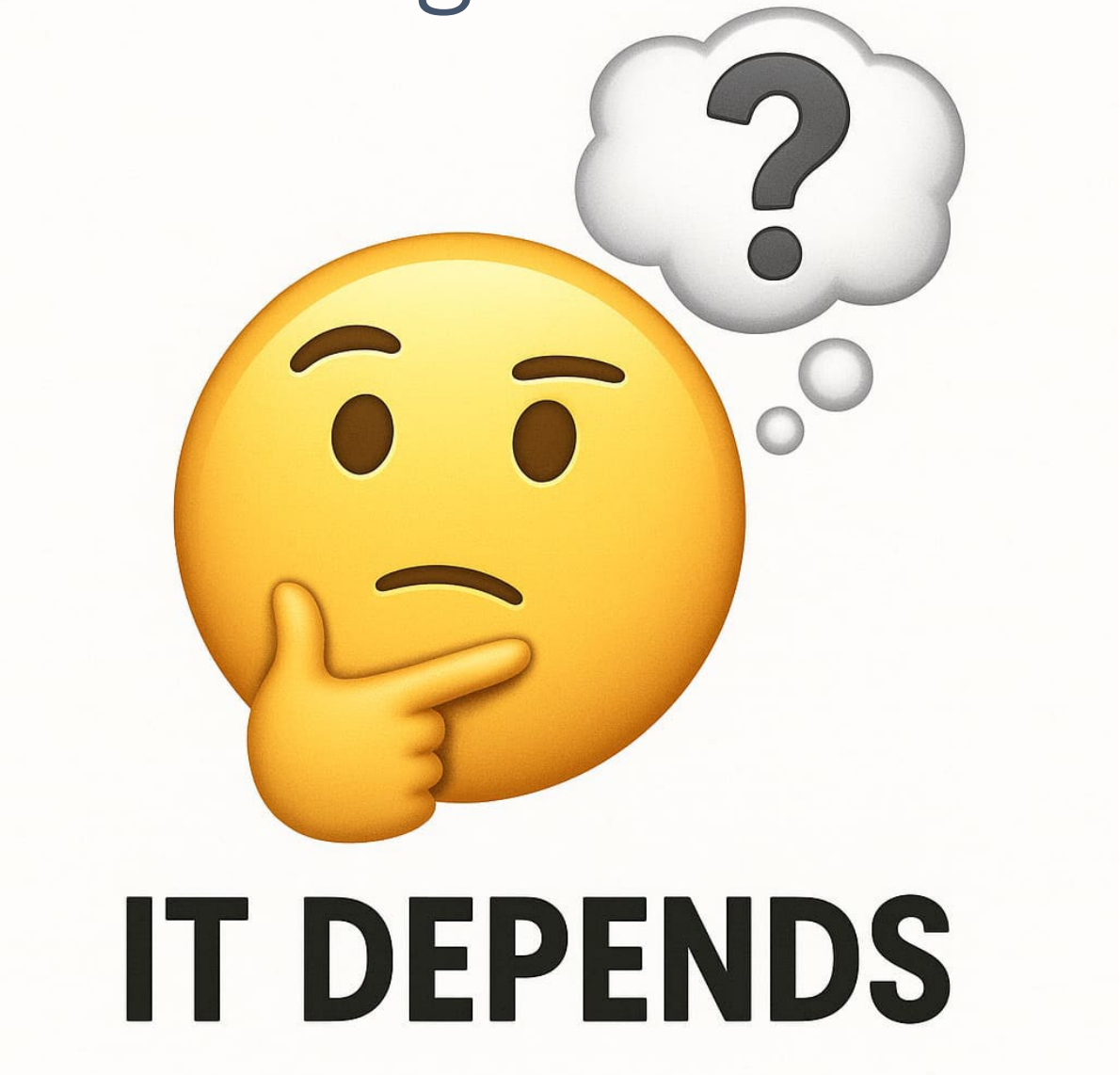
What makes a good test database?



- Developers
- QA/Testers
- Performance/Load engineer
- Support engineer
- DBAs

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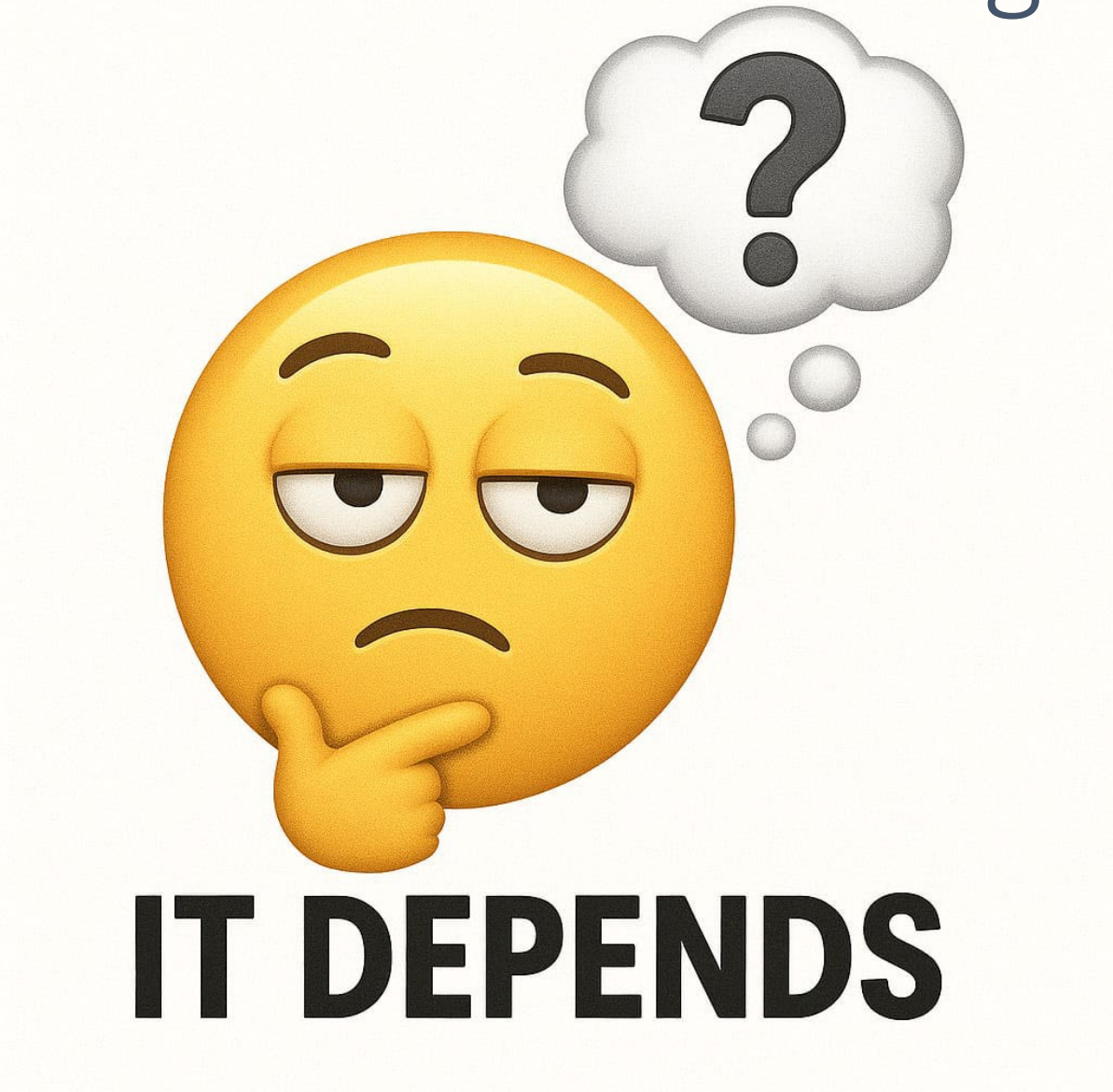
What are the challenges?



Common challenges

Challenge	Developer	QA/Tester	Performance/ Load engineer	Support Engineer	DBA
Data masking & privacy	✓	✓	✓	✓	✓
Size vs Performance	△	△	✓	△	✓
Applications Settings	✓	✓	△	✓	
Co-workers 😉	✓	✓	✓	✓	✓
Reset, refresh & versioning	✓	✓	✓	✓	✓

⚠️ Data masking & privacy

54% of organizations say they've already had a **breach or data theft involving sensitive data in non-production**; 86% admit they allow compliance exceptions in those environments; 91% are concerned about the expanding exposure footprint.

71% of enterprises copy real production data into development and testing environments, which are typically less protected and monitored; 41% have no clear approach for handling PII in those environments.

Sources:
https://www.red-gate.com/blog/database-devops/the-risks-and-rewards-of-using-production-data-for-testing
https://www.datanami.com/this-just-in/delphix-2024-data-compliance-report-highlights-growing-risks-in-non-production-environments/

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💡 Data masking & privacy

1. Classify (sensitive) data

Free Solutions	Paid Solutions
SQL Server Data Discovery & Classification	Redgate SQL Data Catalog Redgate Test Data Manager
DBATools.io	Delphix Test Data Management
	Microsoft Purview

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DEMO Data masking & privacy

💡 Data masking & privacy

2. Mask data

Free Solutions	**Paid Solutions**
Custom scripting	Redgate Data Masker Redgate Test Data Manager
DBATools.io	Delphix Test Data Management

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DEMO Data masking & privacy

⚠️ Size vs Performance

- Big Database stretch **backup/restore windows**
- Full-size copies **inflate storage & infra costs**
- **Unnecessary** heavy datasets **slows down** builds/tests
- Sometime a **partial** database is not enough

Sources:
https://learn.microsoft.com/en-us/sql/relational-databases/backup-restore/full-database-backups-sql-server?view=sql-server-ver17
https://martinfowler.com/articles/continuousIntegration.html

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💡 Subsetting

Free Solutions	Paid Solutions
Custom scripting	Redgate Test Data Manager
Jailer	DATPROF Subset
	Delphix Test Data Management

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Data virtualization

Free Solutions	Paid Solutions
Custom scripting	Redgate Clone
SQL Server Docker container with read-only image layer	Windocks
dbaclone	(Pure)Storage snapshot

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DEMO Subsetting

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⚠️ Application settings

- **Inconsistency**: settings diverge per **environment**
- Secret **leakage**: SMTP/API keys/payment/etc end up in **backups & clones**
- Unsafe **endpoints**: tests hit **real services** (just like we demo'd)

Application settings

Free Solutions	Paid Solutions
Custom scripting	Redgate Data Masker Redgate Test Data Manager
DBATools.io	Delphix Test Data Management
Relocating settings	

Relocation settings

- **Separated (settings) database**
- Application config files
- Migration / update script, after provision

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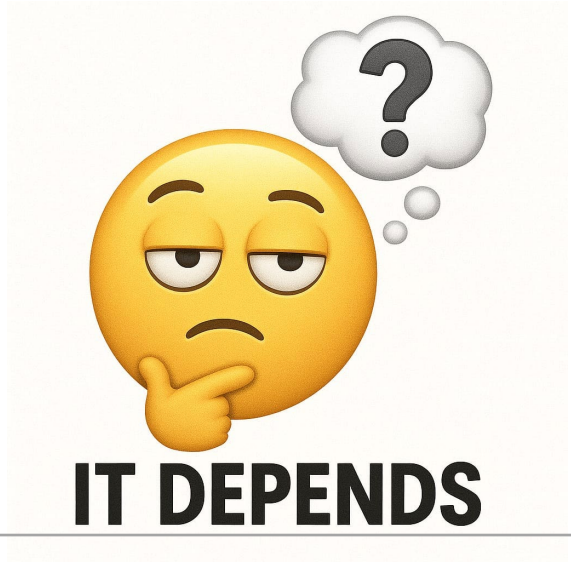
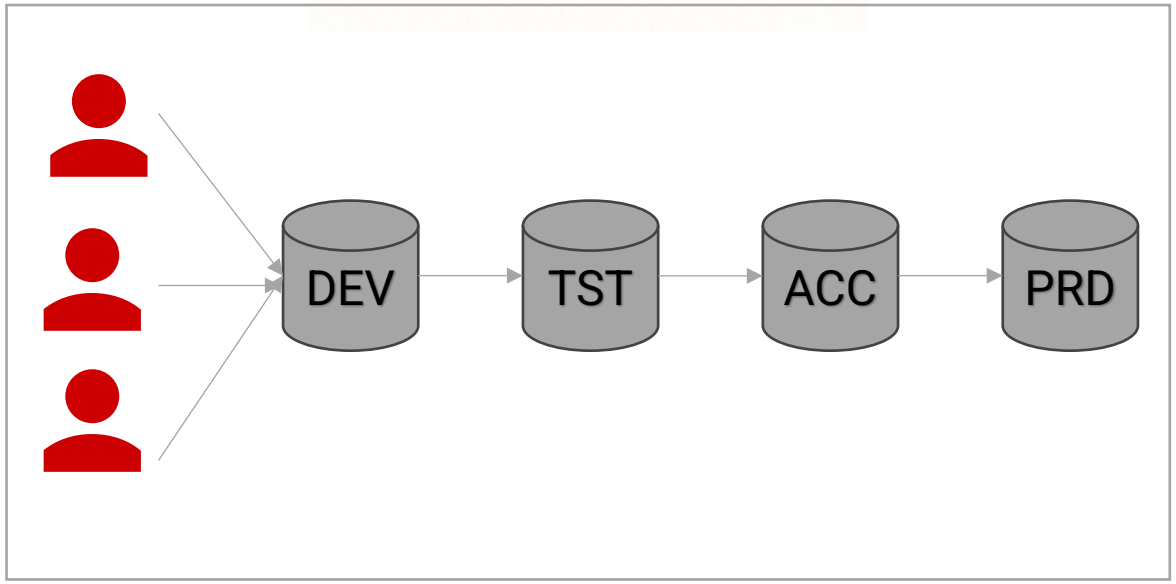
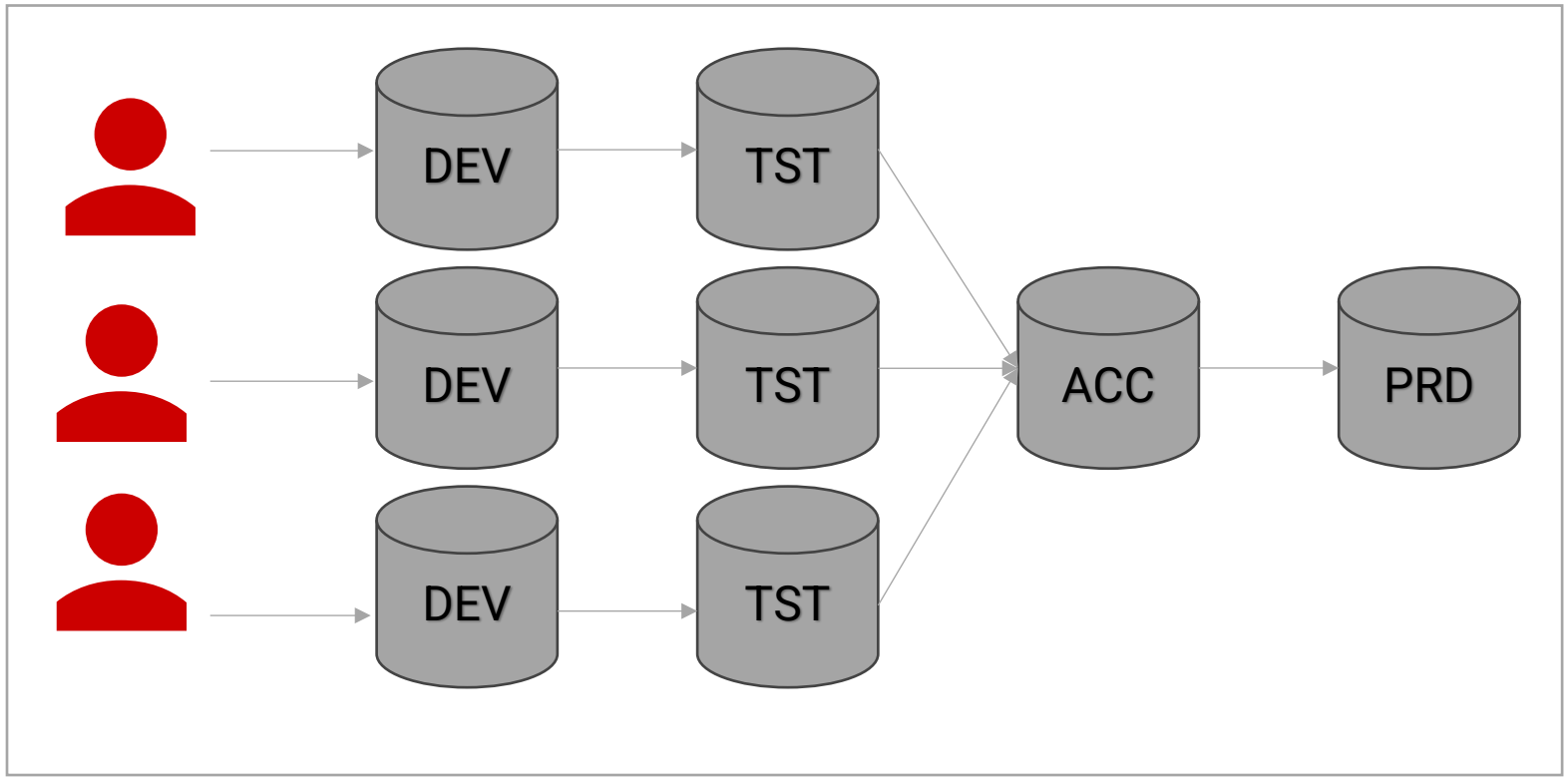
⚠️ Co-workers?





Dedicated environment



⚠ Reset & Refresh

- **Test fails,** data corrupt: **new** database **needed**
- **No** or little **knowledge** of the process, but **fresh databases** are **needed**
- The **test** is **done,** who **cleans** up my **mess?**

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Automation

- Use **PowerShell**, but only that lives in **Git**
  - In a **separated** repo
- Use **pipelines**, but first…
  - Start **local**
  - Use verbose **logging**
  - Create **multiple** scripts

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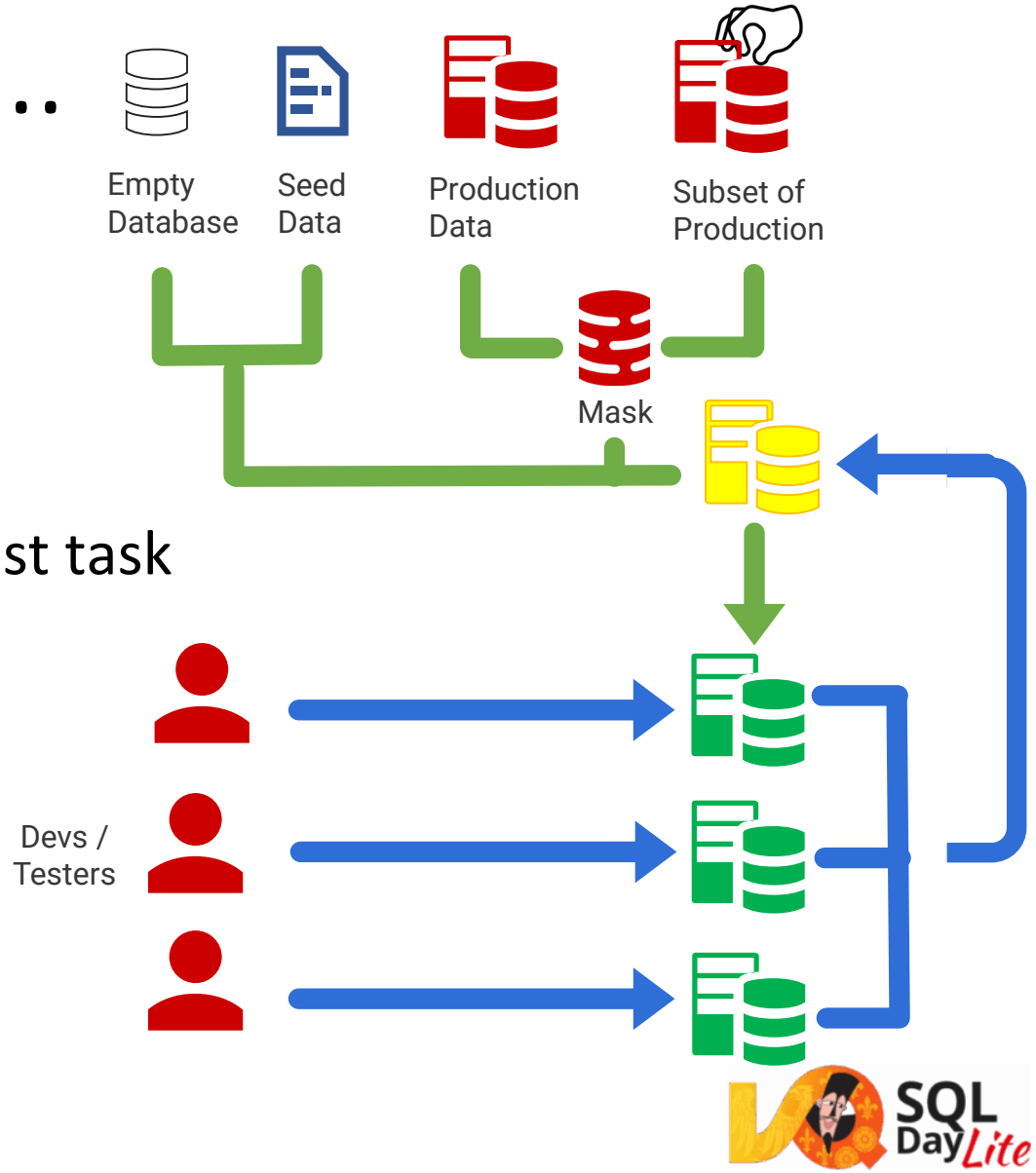
So, how to create the test DB that doesn't suck…

- Choose a data set
  - Classify and mask this (when needed)
- Create a golden image
- Spin up copies of this image or every dev/test task
- Automate it
  - The creation
  - The disposal
  - The image reference



Session Feedback 💖 Questions ⁉️