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WHY ARE DBAS SO GRUMPY ALL THE TIME ?

NORDIC PGDAY
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Loxodata

WHO

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- DBA PostgreSQL for more than 10 years (and also Oracle and SQL Server)
- @l_avrot

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Company built on 3 essential pillars

PostgreSQL DevOps Cloud

Why are DBAs so grumpy all the time ?

- Messing up from the beginning
- Worst developper's practices
- Ops can mess up too!

THE DESIGN

Remove potential interferences

- Don't tell people about your project
- Don't tell "ops" about your project
- Keep your DBA busy (with production)

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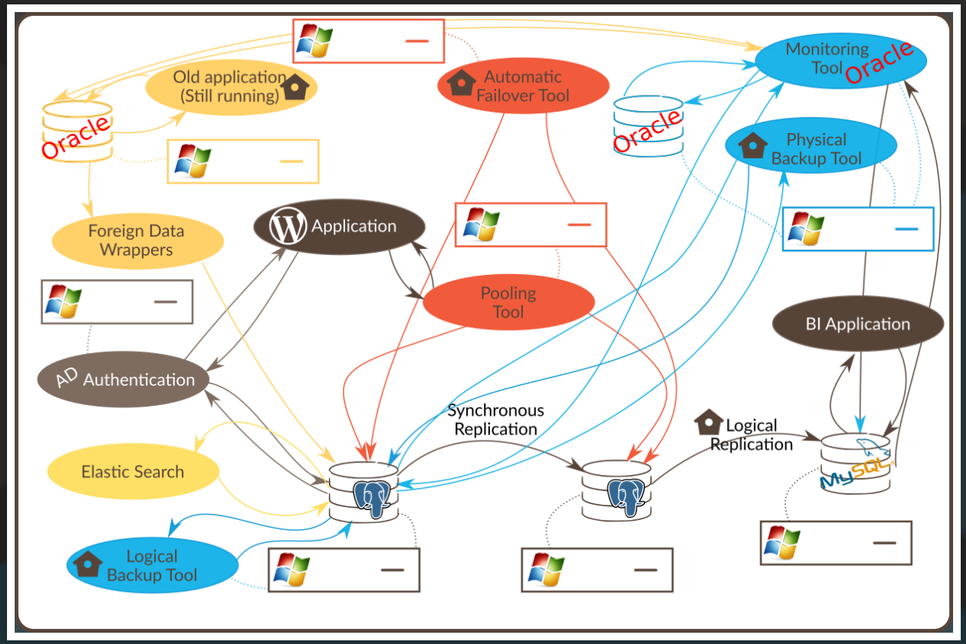
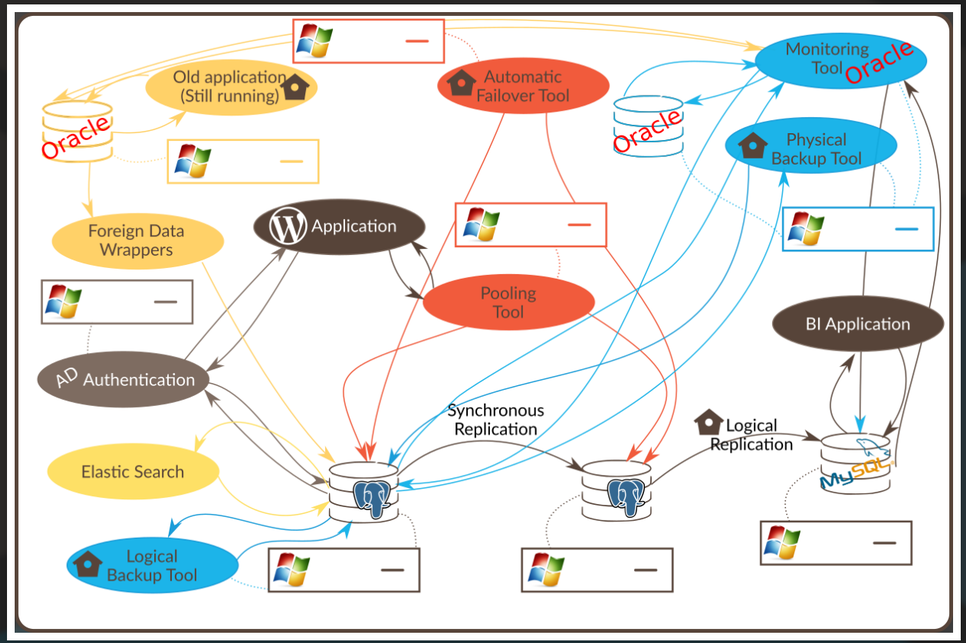
The more complex, the more fun!

- Replication (multimaster, synchronous, logical...)
- Authentication (AD, LDAP)
- External data sources (Datalinks, FDW, ETL...)



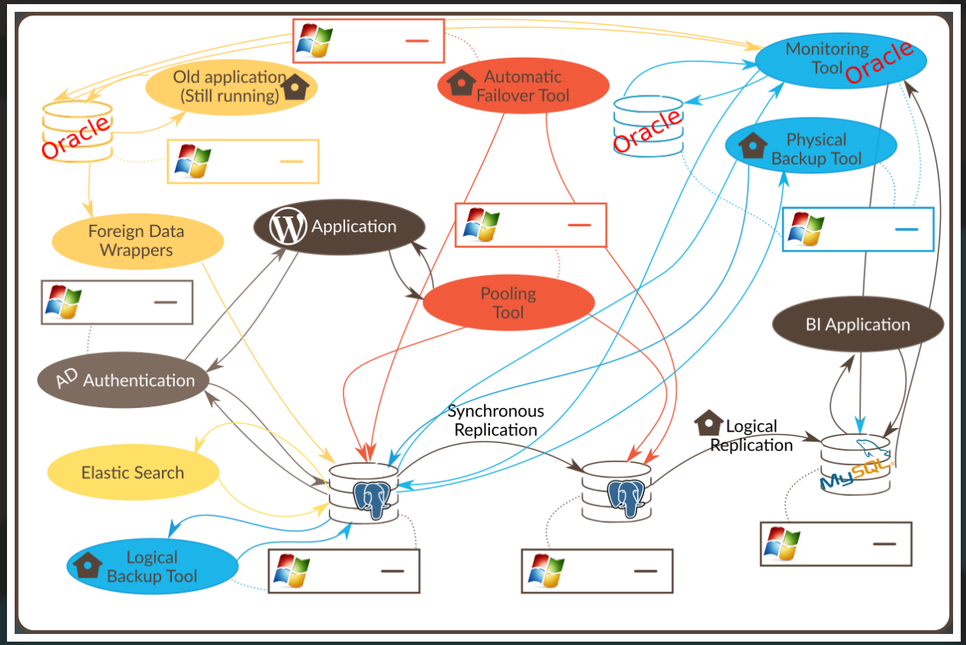
Complexity by example

- A simple website
- Shows the company canteen menu each day



Complexity by example

- Adding external authentication
- Adding synchronous replication
- Adding "0 administration architecture"
- Adding Backup and Monitoring tools



Complexity by example

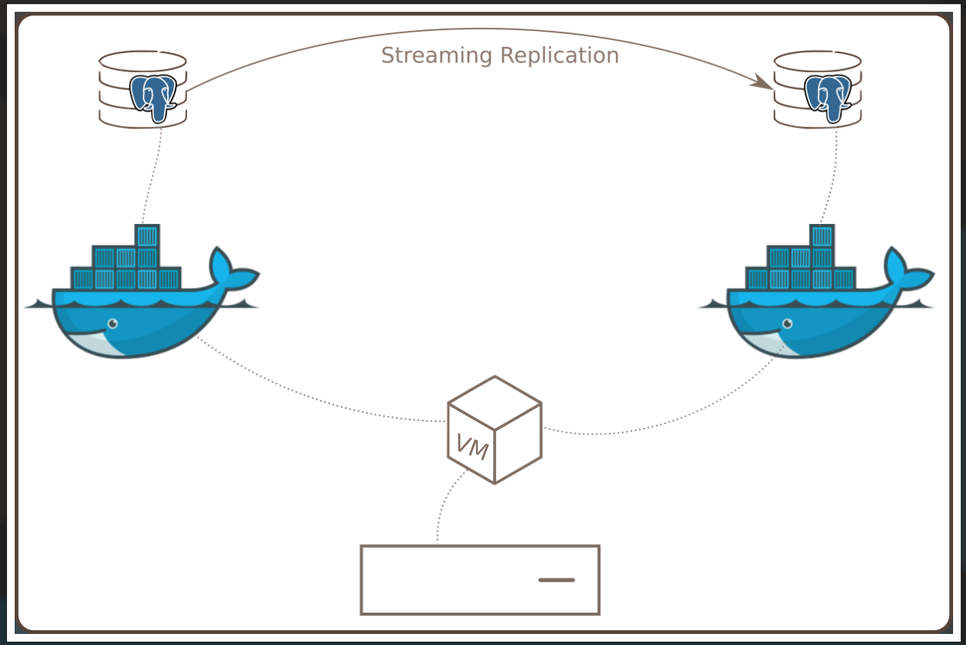
- Adding Elastic search for full text search
- Adding data from old application
- Adding logical replication for BI App

Cost reduction

- Mutualization
- 50+ instances running on the same server
- One database per instance

Docker is the new black

- Does everything!
- Composing ? What for ?
- Backing up ? What for ?



"Bad" docker by example

- 2 dockers on same VM
- 1 PostgreSQL instance per container
- With streaming replication : call it hight availability!

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APPLICATION DEVELOPMENT

ORMs

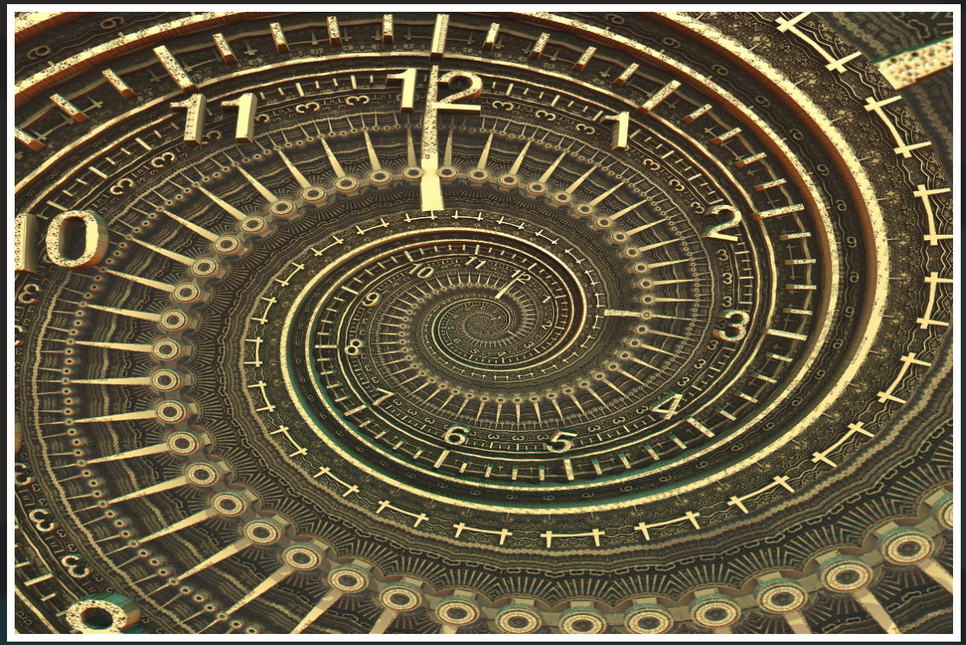
- Let your ORM choose which model you need
- Activate indexing

Model

- 1st Normal Form
- Drop constraints, your app can handle it!
- Don't normalize : call it denormalization!

Be trendy : try schemaless!

- Easier, faster, lighter!
- Mongo can do it!
- Store a lot : call it Big Data!
- You can fake a model too: Entity, Attribute, Value



Time series

- Store current and archive data on same table
- No partitioning, of course!
- No purge ever : you need all your data!

Joins

- Grab list of ids from first table
- Loop on it and query on the second table
- If it's slow, blame the database!

Transactions, commits, locks and so on

- Open transactions and leave it open
- Ask for explicit commit and never commit
- Postgres can't manage correct locks : use explicit locks!

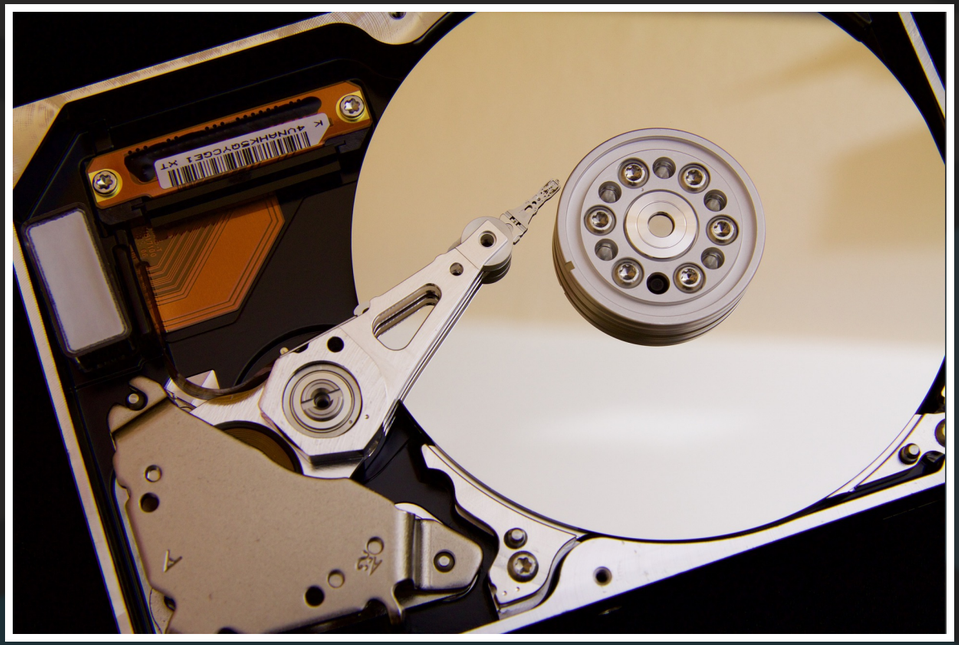
OPS

Backups

- Don't need (replication, disk miroring, VM snapshots)
- Only logical
- Home made!
- No testing required

Monitoring

- Graphs are for weaklings!
- Provide graphs without unit or legend
- Take one measure per day, it's quite enough!



"Cleaning" $PGDATA

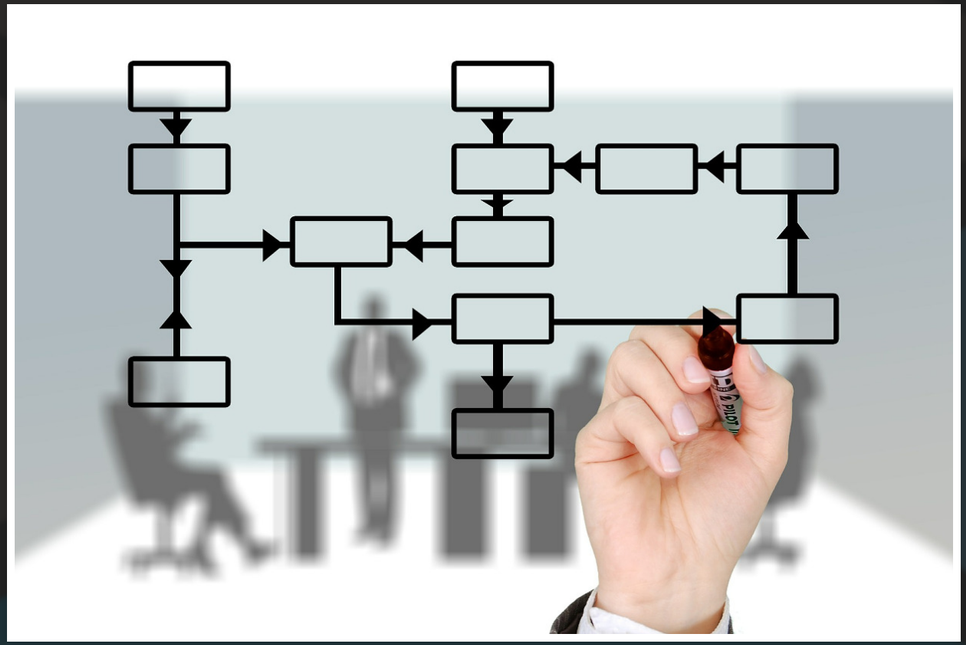
- pg_xlog/pg_wal
- pg_clog
- use pg_resetwal

RDBMS are magic!

- No DBA needed
- Nothing to understand: it's just magic!
- No maintenance needed!

Autovacuum

- Setting it off
- autovacuum_*_scale_factor=0
- autovacuum_*_threshold=100000



Hide behind ITIL!

- Strip the DBA off any permission
- One change per month, no more
- 6-months validation process for a minor update

CONCLUSION

If you're a DBA...

- Improve your communication
- Smile
- Appease others

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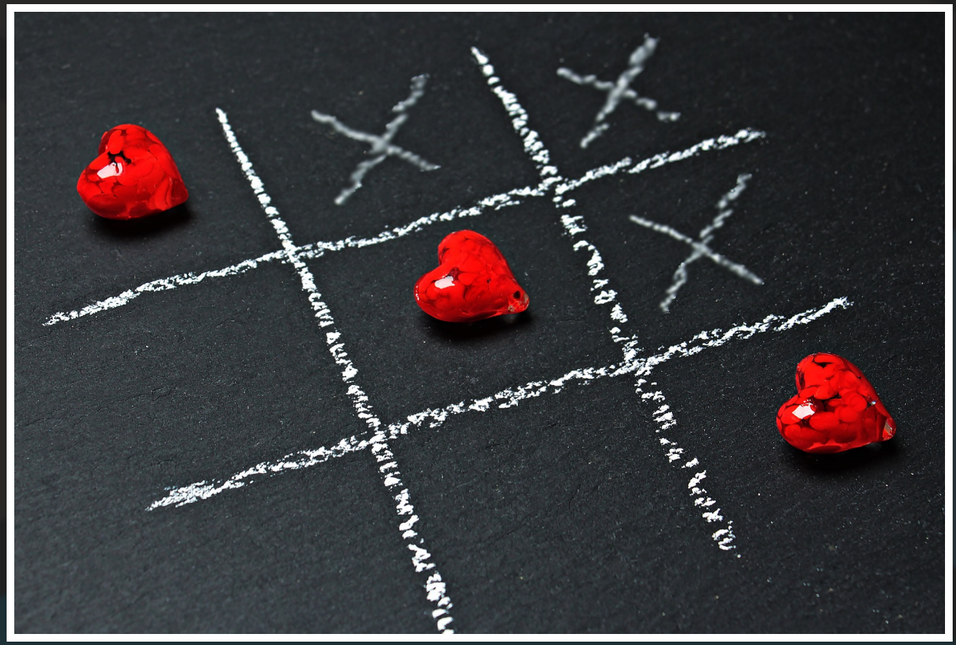
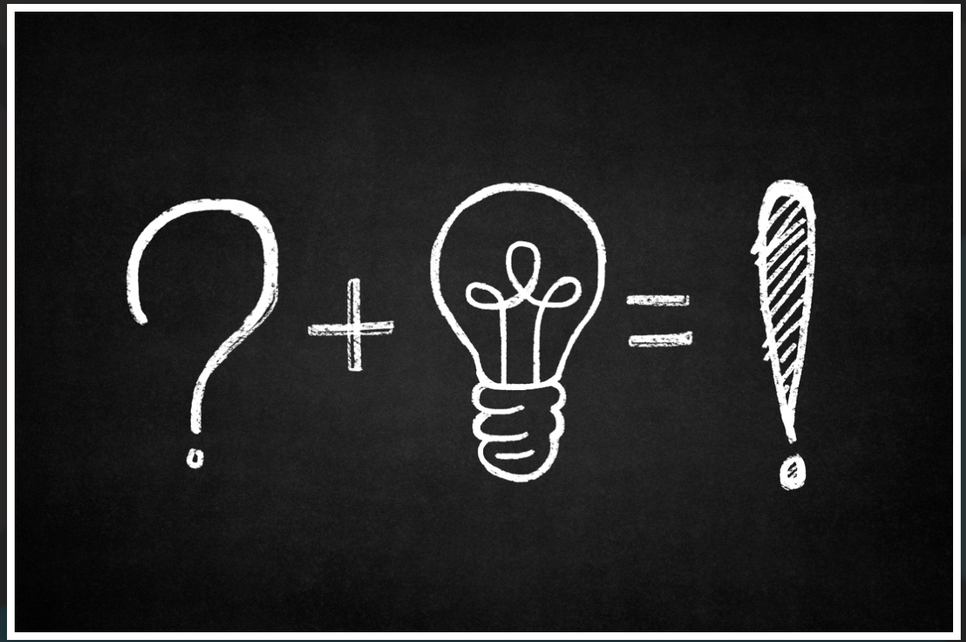
If you're not a DBA...

- Improve your communication
- Smile
- Don't let fear take control of you!



All we need is love!

- Sysadmin appreciation day : last friday of July
- Day of the Programmer : 256th day of the year
- DBA appreciation day : first friday of July



Questions ?

Thanks to Paul S Randall for the inspiration

Thanks to Freepik and Pixabay for illustrations and photos

Don't forget to leave feedback

https://2018.nordicpgday.org/feedback