ZABBIX '25
CONFERENCE
BENELUX

"*Best*" practices upgrading Zabbix

Raimond Kollman

Consultant @Xifeo ICT B.V.

Agenda

- $ whoami
- Track record Zabbix last year
- Installation & upgrade considerations
- “Zero downtime” migration incl. upgrade
- Anecdotes
- Questions?

rkollman@zabbix:~$ whoami

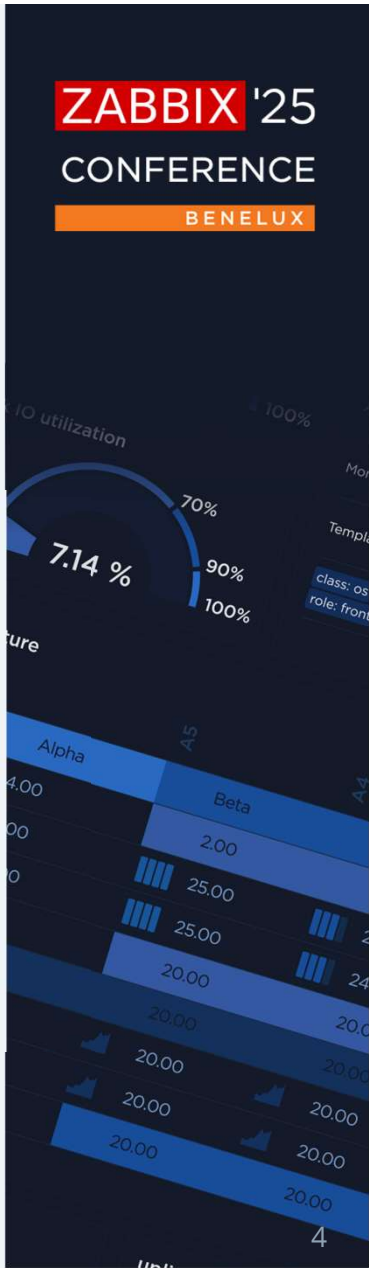
Raimond Kollman

- 25+ years open source
  - Focus on monitoring and observability
- 2022: started at Xifeo ICT B.V.
  - Zabbix partner == more focus on Zabbix ☺
  - ZCS/ZCP 6.0 and 7.0
  - ZCT 7.0 since January 2025
- Next goal: ZCE

rkollman@zabbix:~$ hobbies

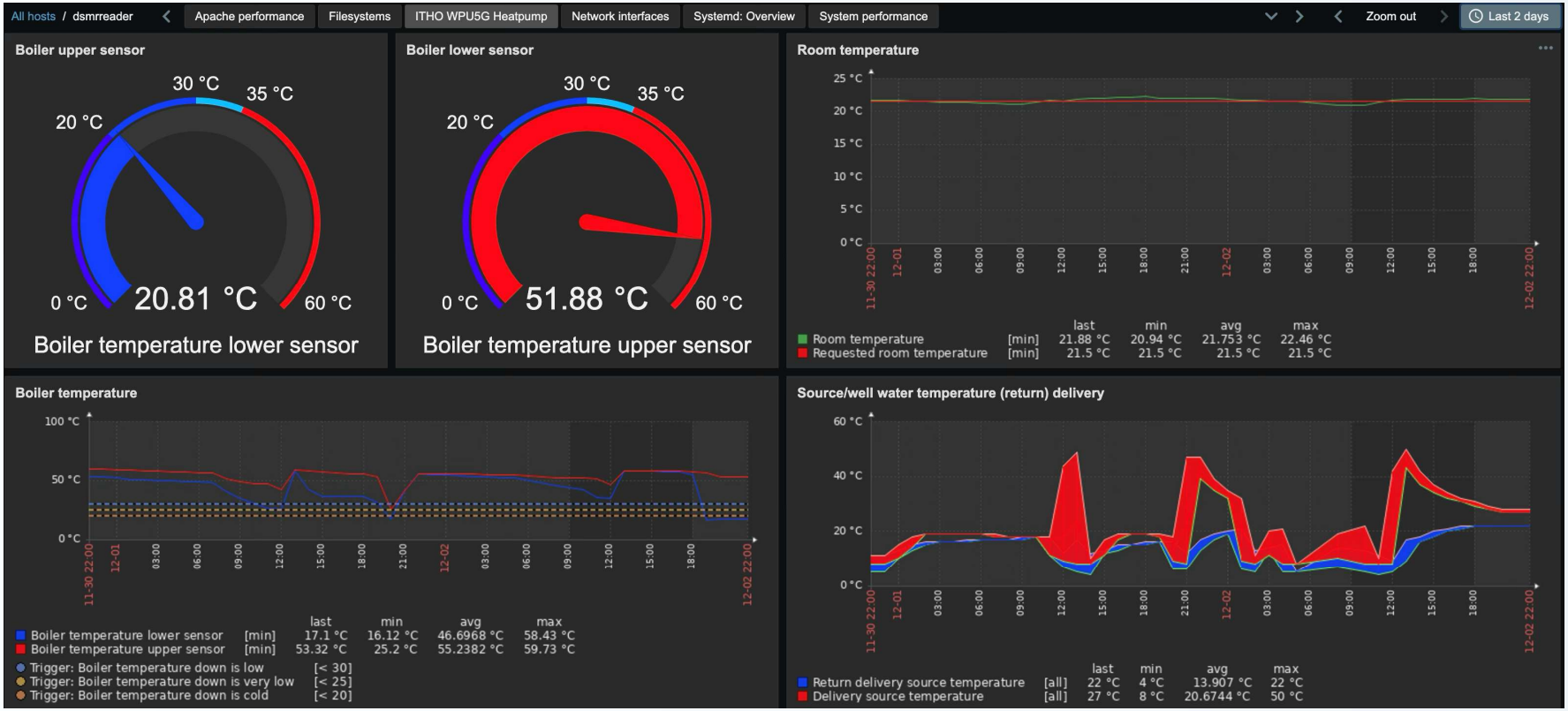
- Drone video & photography
  - Observe things from a higher perspective ☺

Full stack of drones



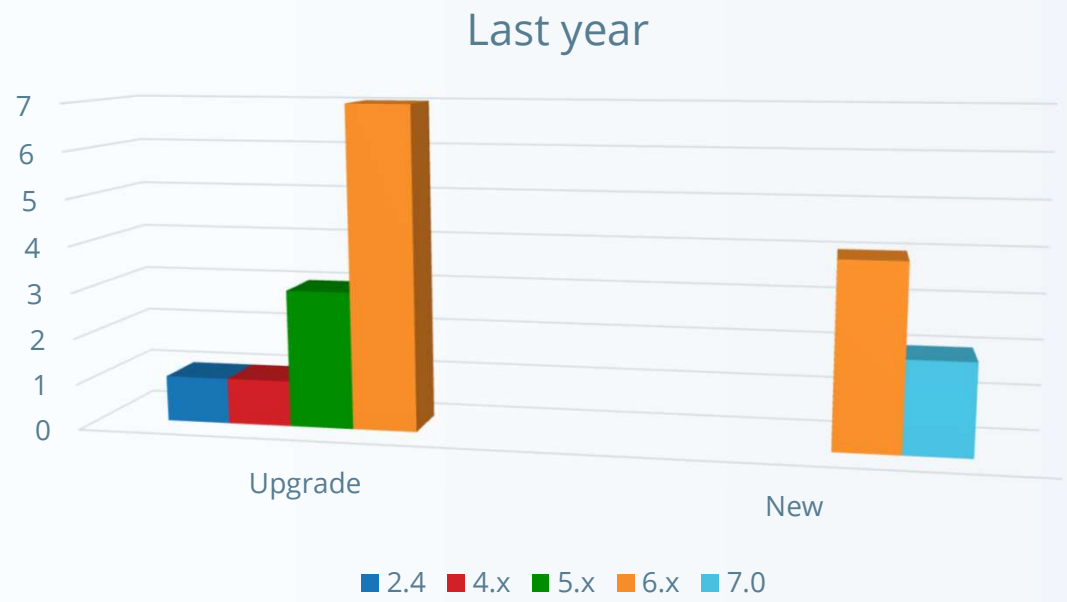
rkollman@zabbix:~$ hobbies

- Observability & home automation



My track record Zabbix last year

- New installations of Zabbix
- Upgrades of Zabbix
  - In-place & migrations (new OS/DB/Zabbix)



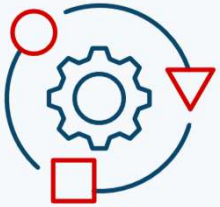
New installations

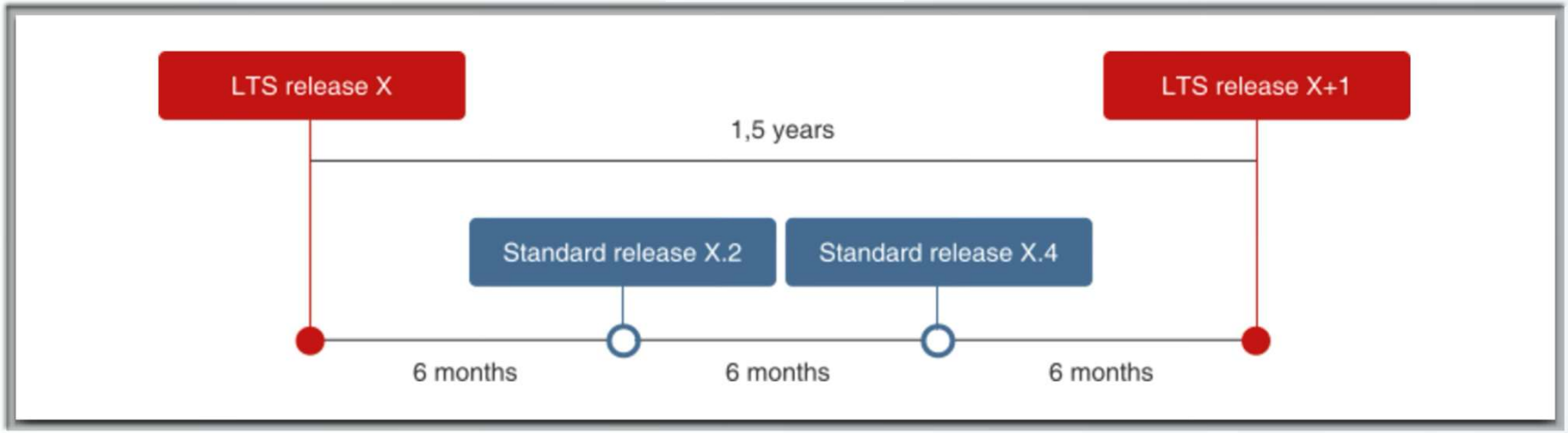
Mostly replacing other monitoring systems

- Nagios
- PRTG
- Shell-scripts combined with MRTG

Long term or standard release?

Installation consideration





My installation considerations

Database (not which one ☺)

- On Zabbix server
  - Easy connection setup between Zabbix & database
  - Secure connection between Zabbix & database
  - that's all…

- Separate server/instance
  - Specific performance tuning for databases
  - (OS) upgrades for Zabbix don't require "big bang" upgrade
  - Possibility for high available database

Zabbix server/proxy config

My best practice: keep config default

- Include your settings at the _END_ of default config
  - Include=/etc/zabbix/zabbix_server-xifeo.conf
- Always the latest default settings
  - Asynchronous pollers (Zabbix 6 -> 7)
- Clear what's specific for current system
- Easy to re-use config (restore or multiple proxies)
- Easy to use with automation

Tags

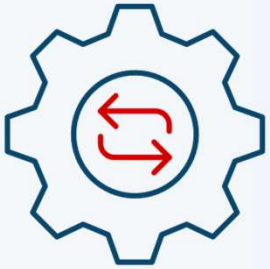
Start using tags immediately!

- Used for triggers/alerts on specific tags
- Limit specific users to relevant problems
- Maintenance periods for specific tags
- Build service monitoring
- (Global) event correlation

Upgrades

Different types of upgrades

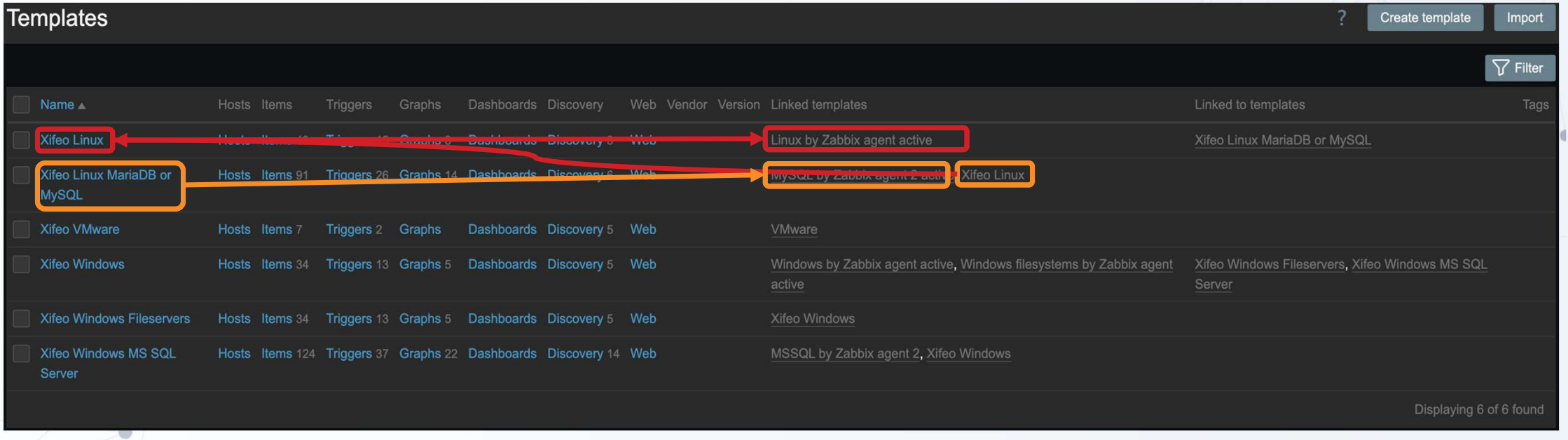
- In-place upgrades
  - “Easy” thanks to Zabbix
  - Upgrade/replace templates
- Migration (new instance/VM/server)
  - New OS & database
  - Migrating data
  - Upgrade/replace templates
  - Testing
  - Swap old -> new



Templates upgrade

Upgrading modified templates isn’t automatically

- Basic layer of nested templates
  - Based on OS
  - Databases/webservers/specific services
- Nesting: upgrade of base template easy
  - Nested templates with specific macro-settings/items & triggers untouched
  - Testing new thresholds/items easy



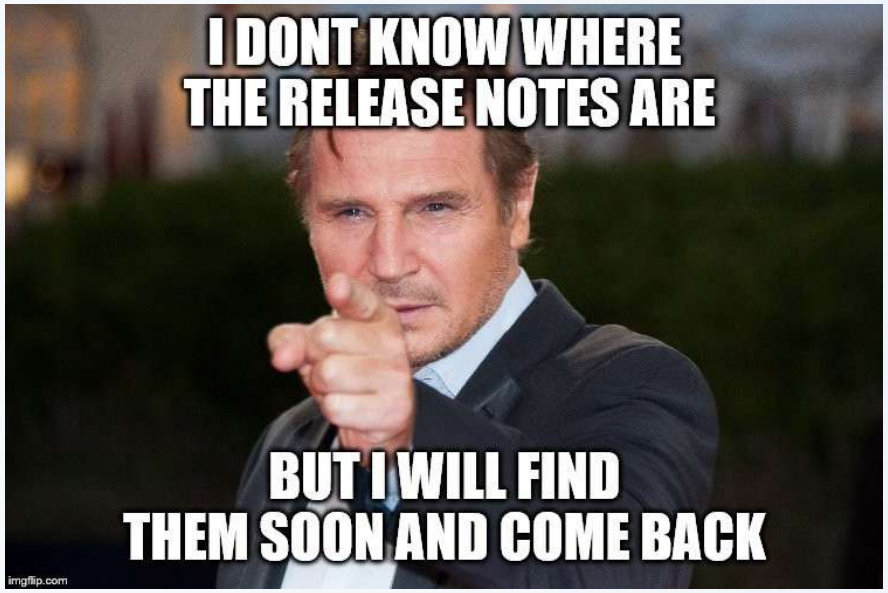
{$MACRO}

Nested templates

Release & upgrade notes

Always read the release notes!

- Even more important, read the **upgrade notes**!
  - Upgrade notes can contain “breaking changes”
  - Prevent (future) problems



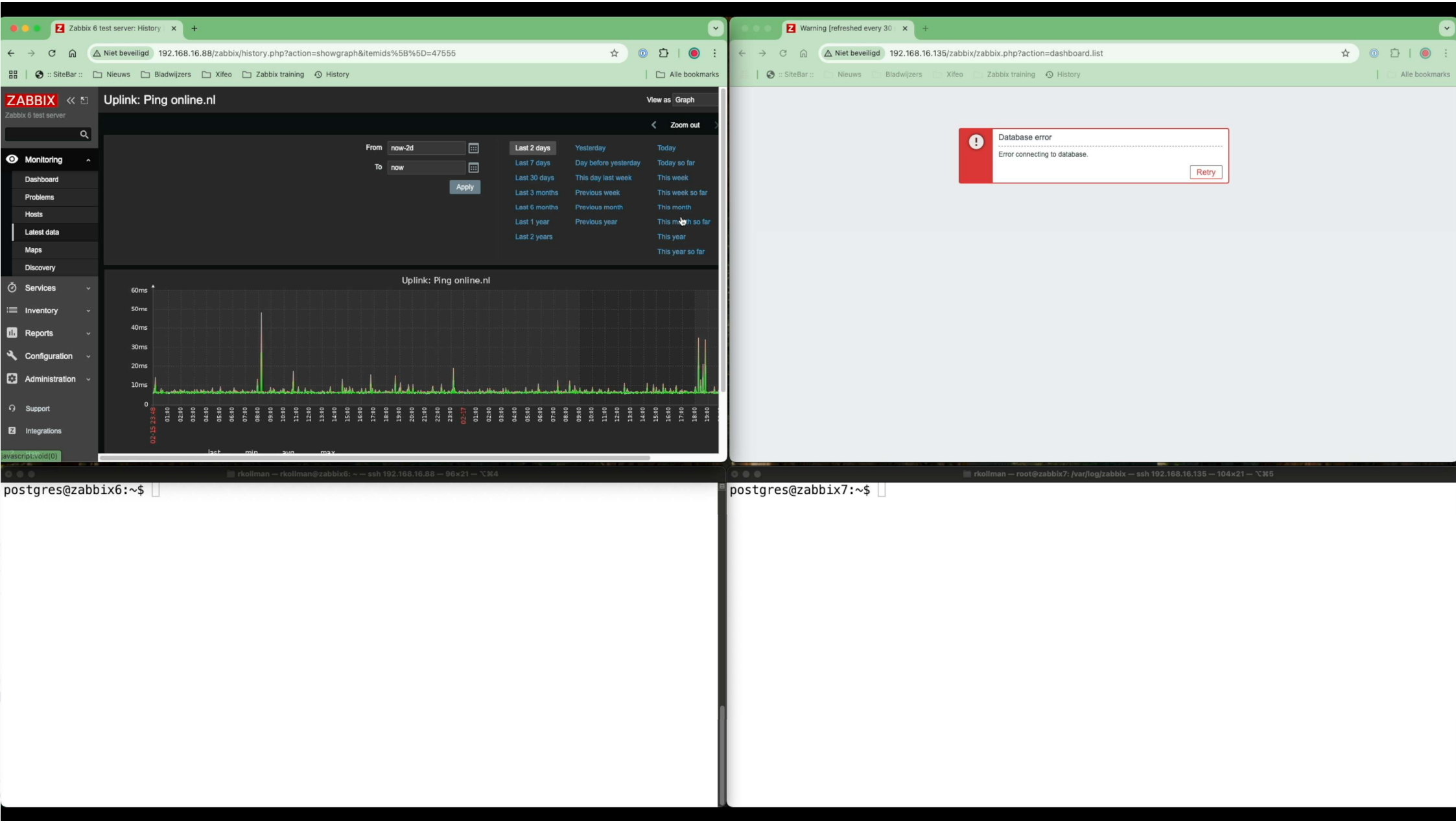
Challenging upgrade

“Zero downtime” migration [pgsql]

Build new server, new database release

- Export pg_dump with TimescaleDB => no history & trends data
  - Export history & trends to CSV
  - Data uncompressed = **lots of storage** needed!
- Import without history & trends = fast
  - Implementation & test Zabbix 7 starts immediately!
- Import history & trends after 3 weeks (go-live)
  - Takes time, but no downtime Zabbix 6 or 7!

“Demo” zero downtime migration

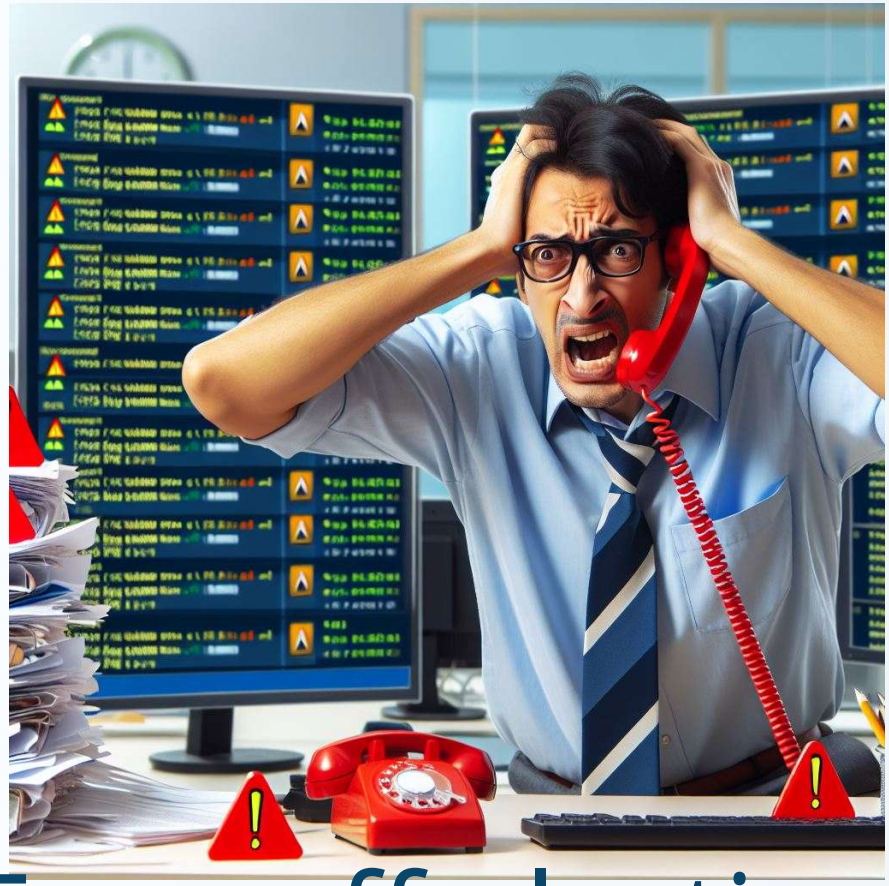

Zabbix 6 test server: History
Niet beveiligd
192.168.16.88/zabbix/history.php?action=showgraph&itemids%5B%5D=47555
:: SiteBar ::
Nieuws
Bladwijzers
Xifeo
Zabbix training
History
Alle bookmarks
ZABBIX
Zabbix 6 test server
Monitoring
Dashboard
Problems
Hosts
Latest data
Maps
Discovery
Services
Inventory
Reports
Configuration
Administration
Support
Integrations
Uplink: Ping online.nl
View as Graph
Zoom out
From now-2d
To now
Apply
Last 2 days
Last 7 days
Last 30 days
Last 3 months
Last 6 months
Last 1 year
Last 2 years
Yesterday
Day before yesterday
This day last week
Previous week
Previous month
Previous year
Today
Today so far
This week
This week so far
This month
This year
This year so far
Uplink: Ping online.nl
60ms
50ms
40ms
30ms
20ms
10ms
0
last
min
avg
max
Warning [refreshed every 30
Niet beveiligd
192.168.16.135/zabbix/zabbix.php?action=dashboard.list
Database error
Error connecting to database.
Retry
rkolman — rkolman@zabbix6: ~ — ssh 192.168.16.88 — 96×21 — ⌥⌘4
postgres@zabbix6:~$
rkolman — root@zabbix7: /var/log/zabbix — ssh 192.168.16.135 — 104×21 — ⌥⌘5
postgres@zabbix7:~$

Some anecdotes

Backups

Don’t forget backups!

- A lot of non-backed up installations
- Snapshot is not a backup!
- Full backup / config backup



Turn off alerting!

Questions?

- Xifeo Zabbix blog: https://www.xifeo.nl/zabbix-blog/
- LinkedIN: in/rkollman/
- mailto: raimond.kollman@xifeo.nl
- Used scripts: https://github.com/rkollman/Zabbix-scripts

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Thank you!

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