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Self Service Website Monitoring with Checkmk

Team Observability, 2024-06-11

Checkmk #10
Conference

REWE
DIGITAL

Agenda

- 01** REWE digital – Who we are
- 02** Checkmk @rewedigital
- 03** Website Monitoring at REWE: Actual State
- 04** Self Service Website Monitoring: Concept
- 05** Adding New Website: Example
- 06** Website Monitoring in Checkmk 2.3

01 REWE digital – Who we are

The REWE Group at a glance

RETAIL GERMANY



RETAIL INTERNATIONAL



CONVENIENCE



DIY STORE



TRAVEL AND TOURISM



OTHER



Who we are – facts & figures



Ca. **2.250**
IT specialists



> **1.800**
REWE pick-up service
Markets



10
Administrative locations
incl. abroad



> **7.300**
Markets*



> **35.000**
Cash registers



4
Pick&Go Markets –
Berlin, Cologne, Munich,
Düsseldorf



> **190.000**
Market employees



> **1 Mrd.**
Data records daily



16
Food Fulfillment Center
REWE delivery service
locations

* Of which Penny around 2,150 stores. REWE around 3,800 stores for the German retail sector. Checkout support at Nahkauf, Real, Karstadt, Filiale, Partner ind. Dortmund, Petz, REWE2Go.

02 Checkmk @rewedigital

Checkmk @rewedigital

- **Main Monitoring Environment**
 - Checkmk 2.2 on RHEL 8
 - 1 Central Site
 - 8 Remote Sites
 - 5,400+ Hosts (Linux and AIX)
 - 325,000+ Services
 - 200+ Users

Checkmk @rewedigital

▪ Main Monitoring Environment

- Checkmk 2.2 on RHEL 8
- 1 Central Site
- 8 Remote Sites
- 5,400+ Hosts (Linux and AIX)
- 325,000+ Services
- 200+ Users

▪ Self Service Monitoring Environment

- Checkmk 2.2 on RHEL 8
- check_http active check
- 1 Central Site
- 1 Remote Site (DMZ)
- 600+ Hosts
- 1,600+ Services
- 100+ Users
- 3,000+ Websites to monitor (currently 800)

03 Website Monitoring at REWE: Actual State

Website Monitoring at REWE: Actual State

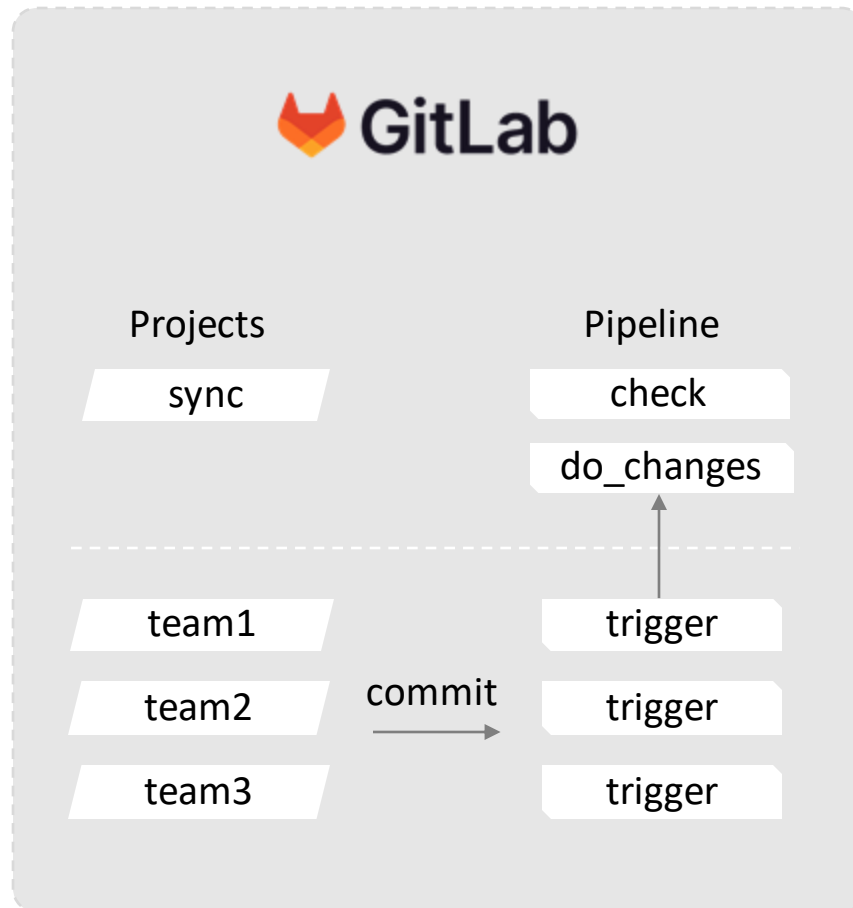
- **Monitoring of 3,000+ websites**
- **Monitored services**
 - HTTP status code
 - Timeout
 - Response Time
 - Content Check
 - Login (basic authentication)
 - Certificate validity

Website Monitoring at REWE: Actual State

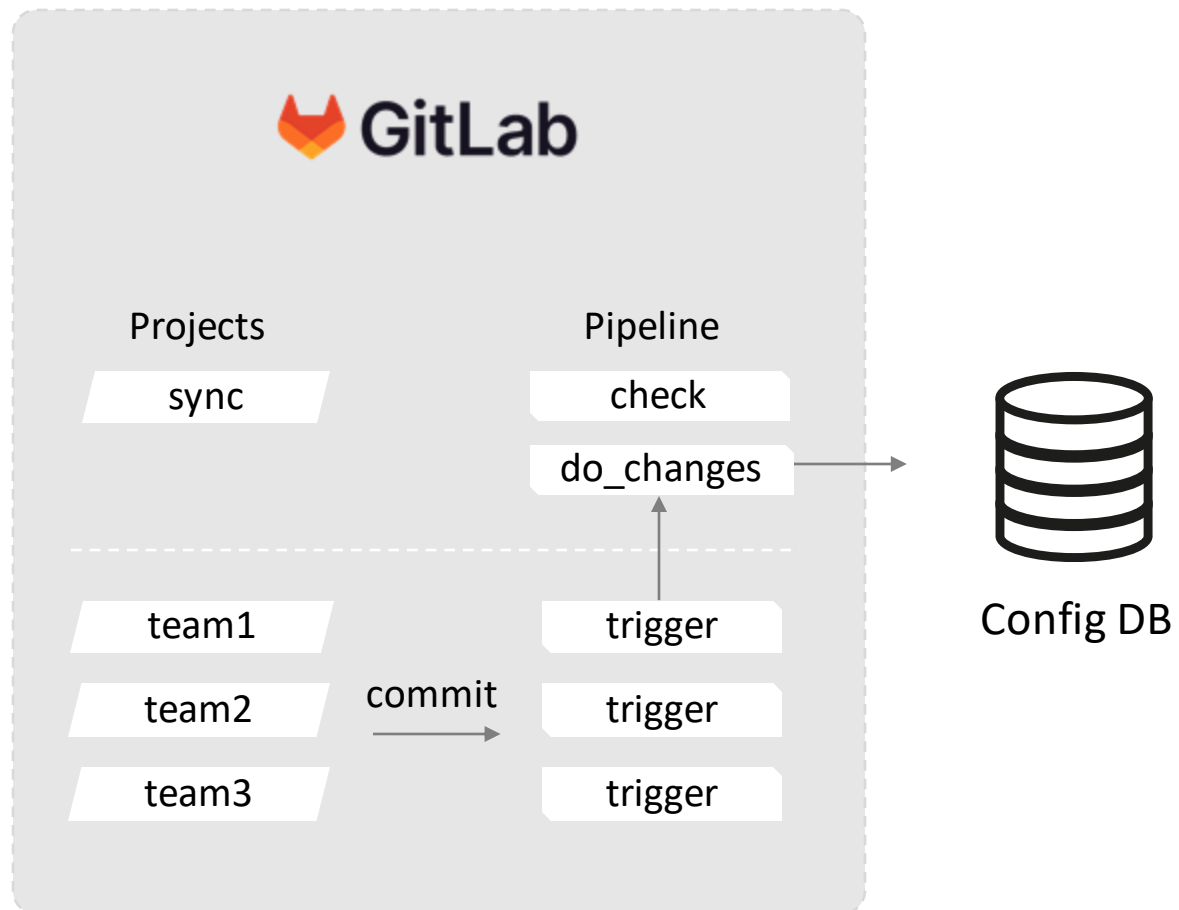
- **Monitoring of 3,000+ websites**
- **Monitored services**
 - HTTP status code
 - Timeout
 - Response Time
 - Content Check
 - Login (basic authentication)
 - Certificate validity
- **Self developed solution within SCOM**
- **Configuration by xml files (150+)**
- **Problems**
 - User unfriendly UI: very slow, not intuitive
 - Customers have no access to config files
 - Non-scalable
 - Time consuming testing
 - Developed by someone who is now in a different team

04 Self Service Website Monitoring: Concept

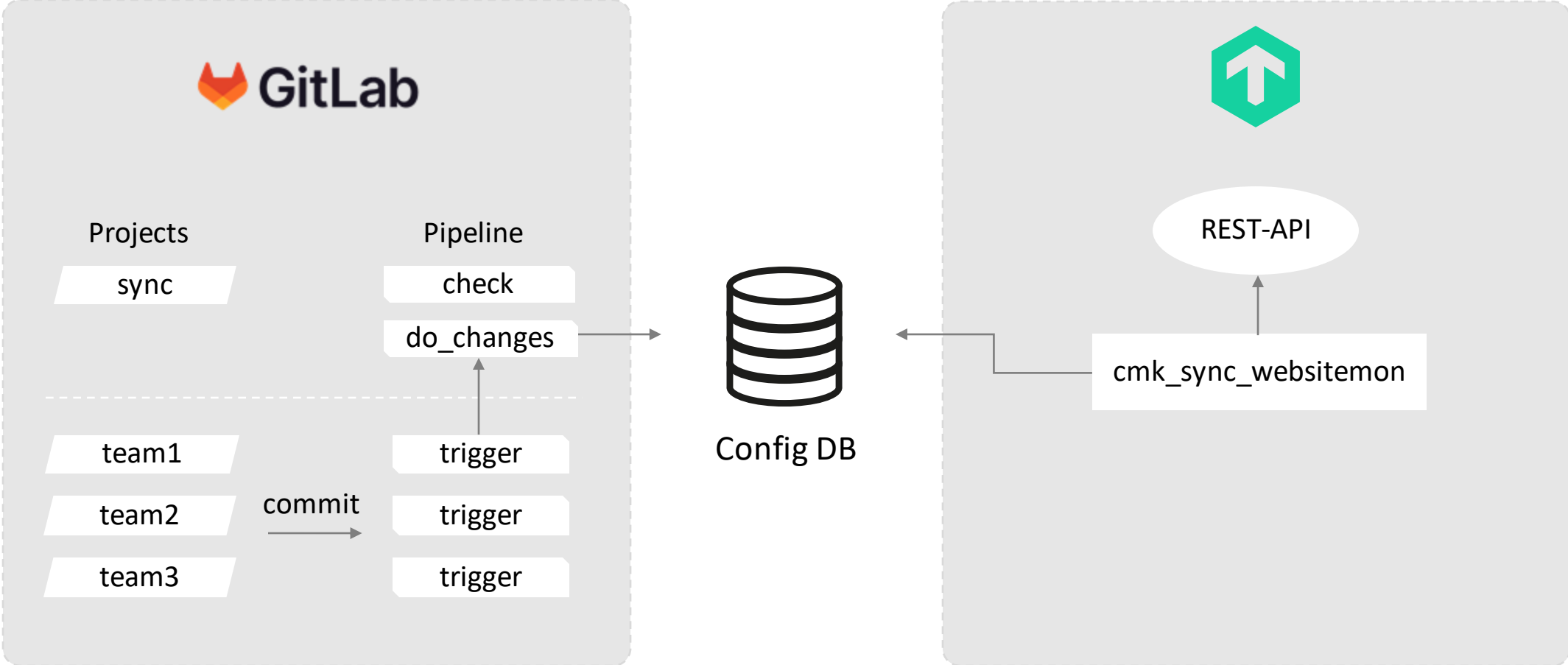
Self Service Website Monitoring: Concept



Self Service Website Monitoring: Concept



Self Service Website Monitoring: Concept



05 Adding New Website: Example

config yaml in GitLab

```
! cmkConference_WebsiteMonitoring.yaml ×
config > ! cmkConference_WebsiteMonitoring.yaml
1  ApplicationID: X047
2  Certificate:
3    LifetimeCriticalThreshold: 10
4    LifetimeWarningThreshold: 30
5  ResponseTime:
6    CriticalThreshold: 10
7    WarningThreshold: 5
8  Timeout: 10
9  ContentExpression: "."
10 Location: internet
11 AutomaticRestart: false
12 FollowRedirect: true
13 Environment: Production
14 Websites:
15   - URL: "https://checkmk.com/werks"
16     Criticality: very high
17     Label: checkmk Werks
18     ContentExpression: "Changelog"
19   - URL: "https://forum.checkmk.com/"
20     Criticality: low
21     Environment: Production
22     Label: checkmk Forum
23
```

Pipeline Result

Add check Forum

✓ Passed Thomas Schmitz created pipeline for commit `18e7b2d7` finished 1 minute ago

For `test`

latest 1 Jobs 1 minute 8 seconds, queued for 1 seconds

Pipeline Needs Jobs 1 Tests 0

test **Downstream**

✓ bridge Trigger job

✓ Sync #1719971 Multi-project

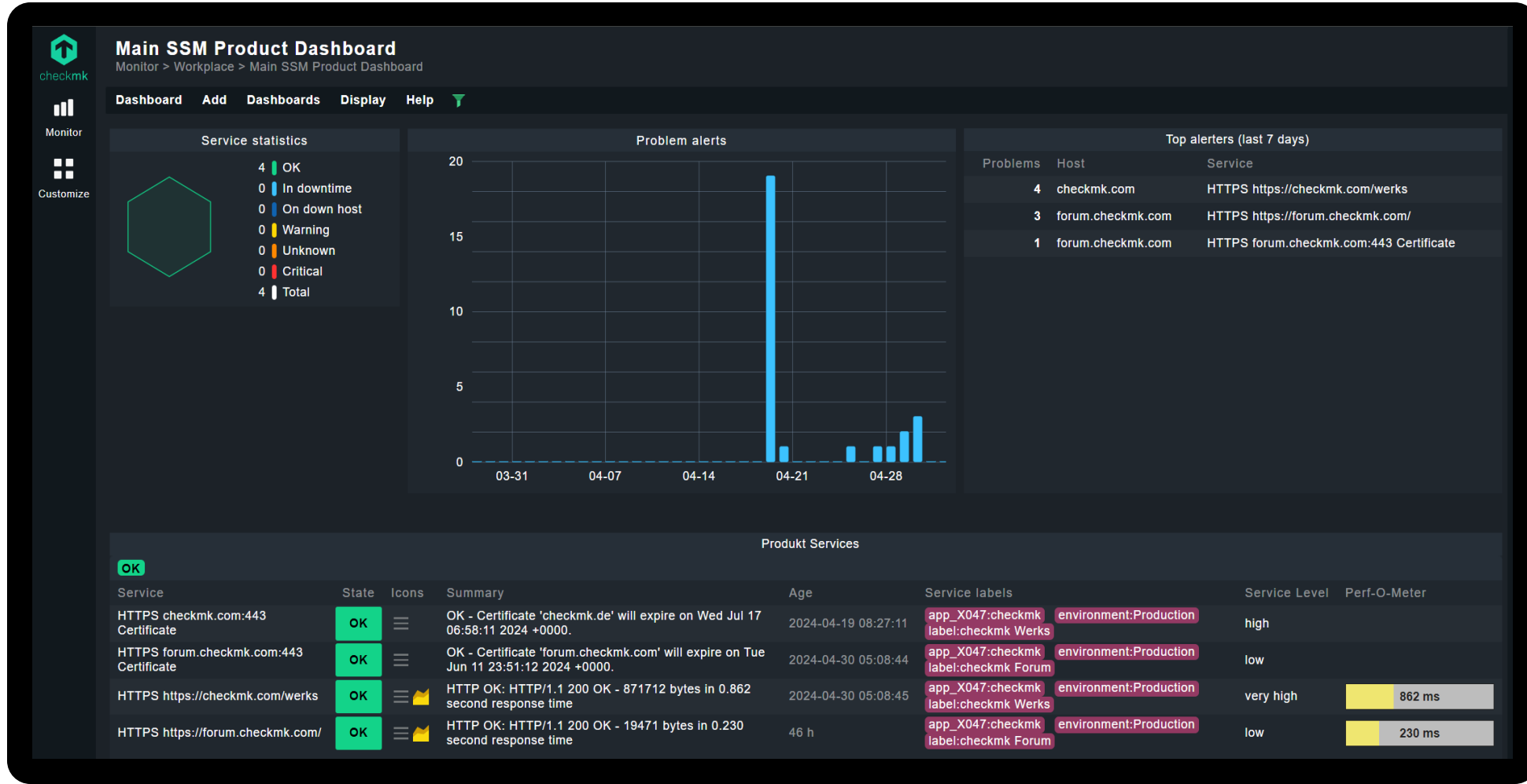
validate

✓ check_changes

deploy

✓ do_changes

Dashboard in Checkmk



Dashboard in Checkmk

Service	State	Icons	Summary
HTTPS checkmk.com:443 Certificate	OK	☰	OK - Certificate 'checkmk.de' will expire on Wed Jul 17 06:58:11 2024 +0000.
HTTPS forum.checkmk.com:443 Certificate	OK	☰	OK - Certificate 'forum.checkmk.com' will expire on Tue Jun 11 23:51:12 2024 +0000.
HTTPS https://checkmk.com/werks	OK	☰ 📈	HTTP OK: HTTP/1.1 200 OK - 871712 bytes in 0.862 second response time
HTTPS https://forum.checkmk.com/	OK	☰ 📈	HTTP OK: HTTP/1.1 200 OK - 19471 bytes in 0.230 second response time

06 Website Monitoring in Checkmk 2.3

Website Monitoring in Checkmk 2.3

- **New active check check_httpv2**
- **Massive reduction of rules**
 - Several websites can be included in one rule
 - No additional rule for certificate monitoring
- **Fixed problems with HTML body parsing**

Website Monitoring in Checkmk 2.3

- **New active check check_httpv2**
- **Massive reduction of rules**
 - Several websites can be included in one rule
 - No additional rule for certificate monitoring
- **Fewer services**
- **Fixed problems with HTML body parsing**
- **Authentication token can be stored in Checkmk password store**
- **HTTP 2.0 support**
- **Openssl 3.0**
 - This also affects the old check_http
 - Workaround available

Website Monitoring in Checkmk 2.3

- Improved information in Summary / Details

```
Summary HTTP OK: HTTP/1.1 200 OK - 3491 bytes in 0.111 second response time
Details
```


Website Monitoring in Checkmk 2.3


- Improved information in Summary / Details


Summary HTTP OK: HTTP/1.1 200 OK - 3491 bytes in 0.111 second response time

Details



Summary Version: HTTP/1.1, Status: 200 OK

URL to test:  [www](#)

Followed redirect to:  [www](#)

Method: GET

Version: HTTP/1.1

Details Status: 200 OK

Response time: 0.092 seconds

Page size: 2498 Bytes

Server certificate validity: 267 days

User agent: checkmk-active-httpv2/2.3.0

Expected regex in body: (?is)Username (matched)

Our Plan for Upgrading to Checkmk 2.3

- **Upgrade from Checkmk 2.2 to version 2.3**
 - check_http rules are not migrated automatically to check_httpv2
 - check_http is now deprecated
- **Migrate website monitoring to new active check per folder (= per team)**
 - Deactivate old check_http rules via script
 - Add check_httpv2 rules via script (based on the configuration in GitLab)
 - Activate changes
 - If everything works: delete old check_http rules

Q&A