The Checkmk Roadmap 2020+

CHECKMK CONFERENCE #6 – MUNICH, APRIL 28, 2020
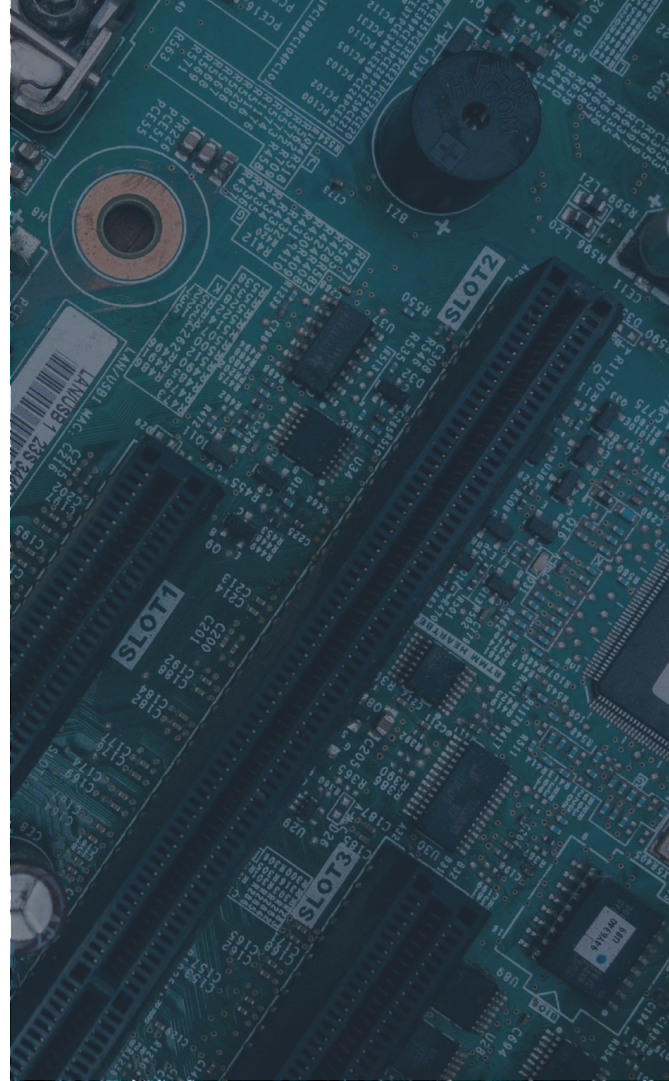
Lars Michelsen

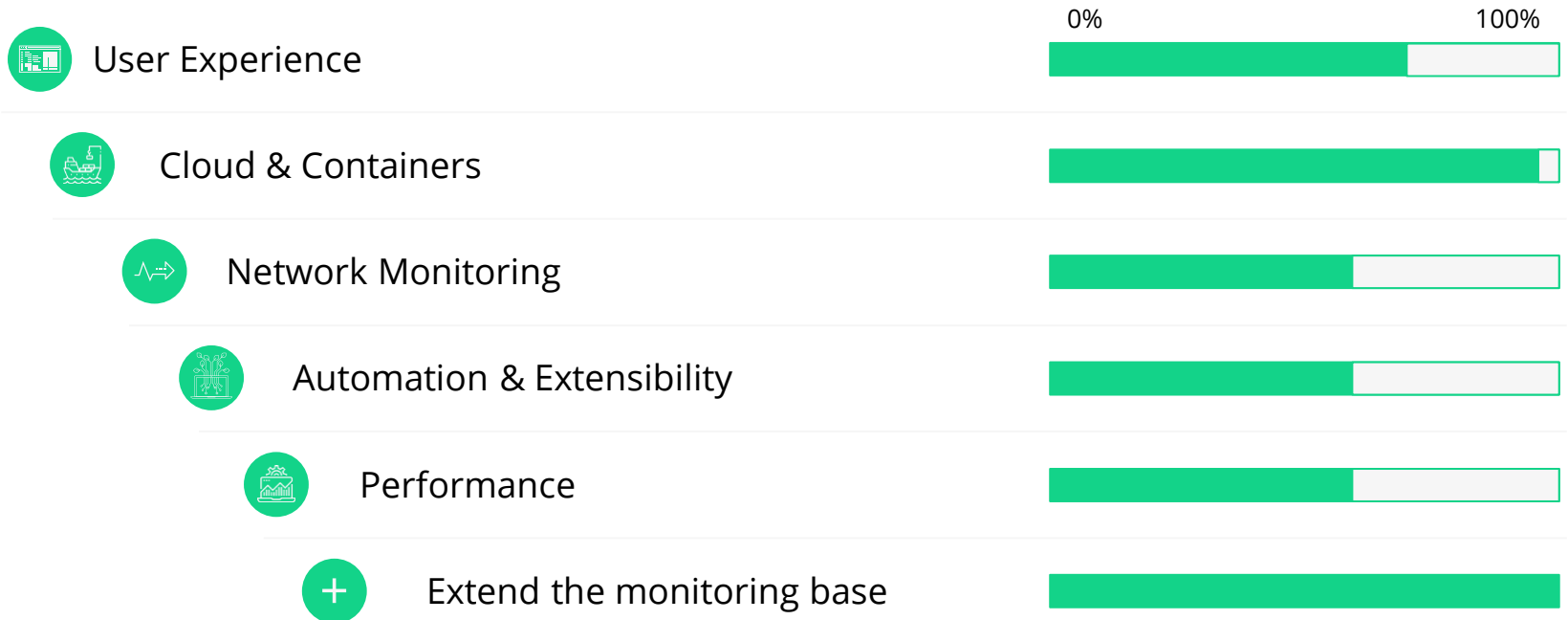Head of Development

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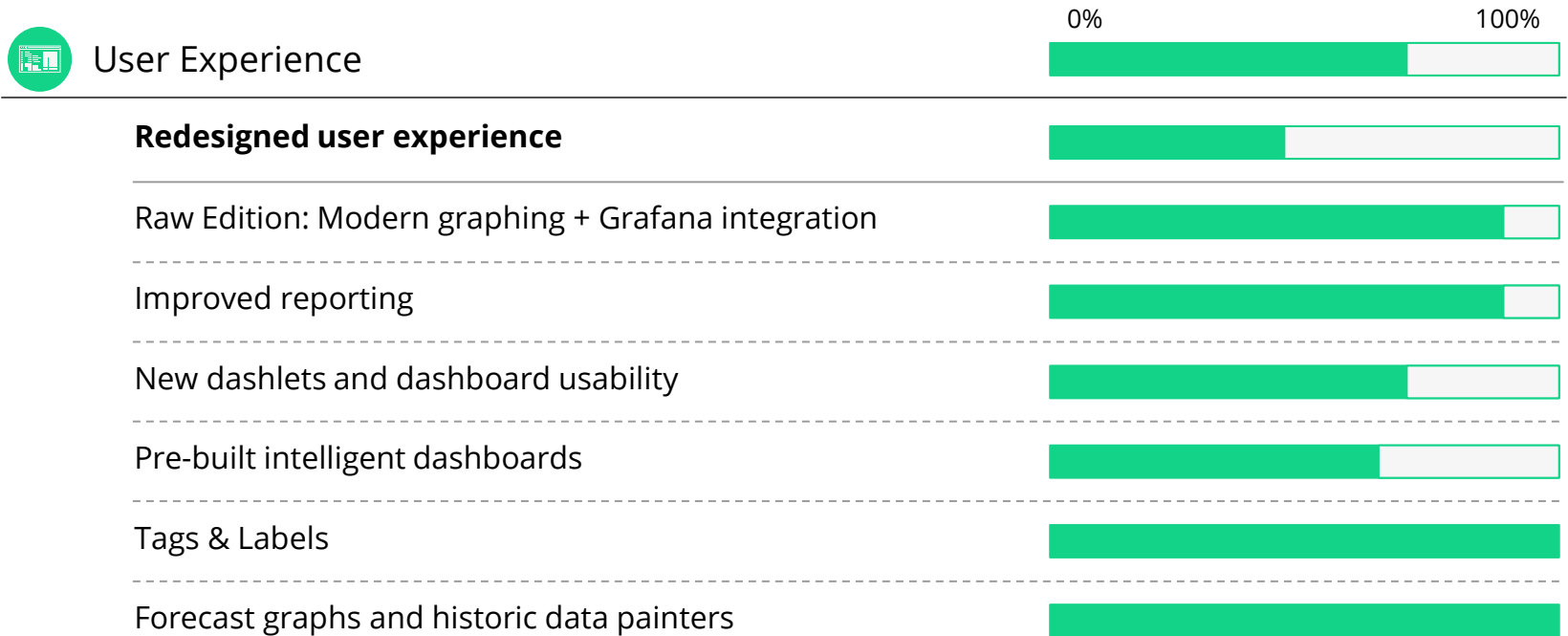
Agenda

1. **Recap: What's coming for Checkmk 1.7**

2. The next 100+ features

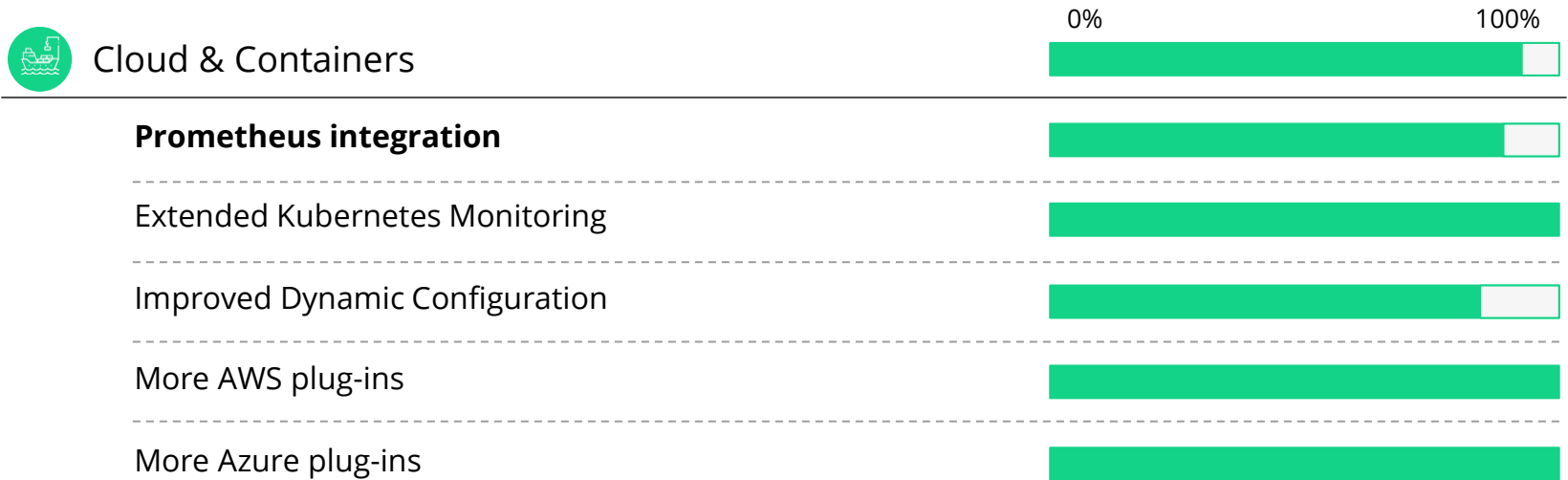3. The next big topics

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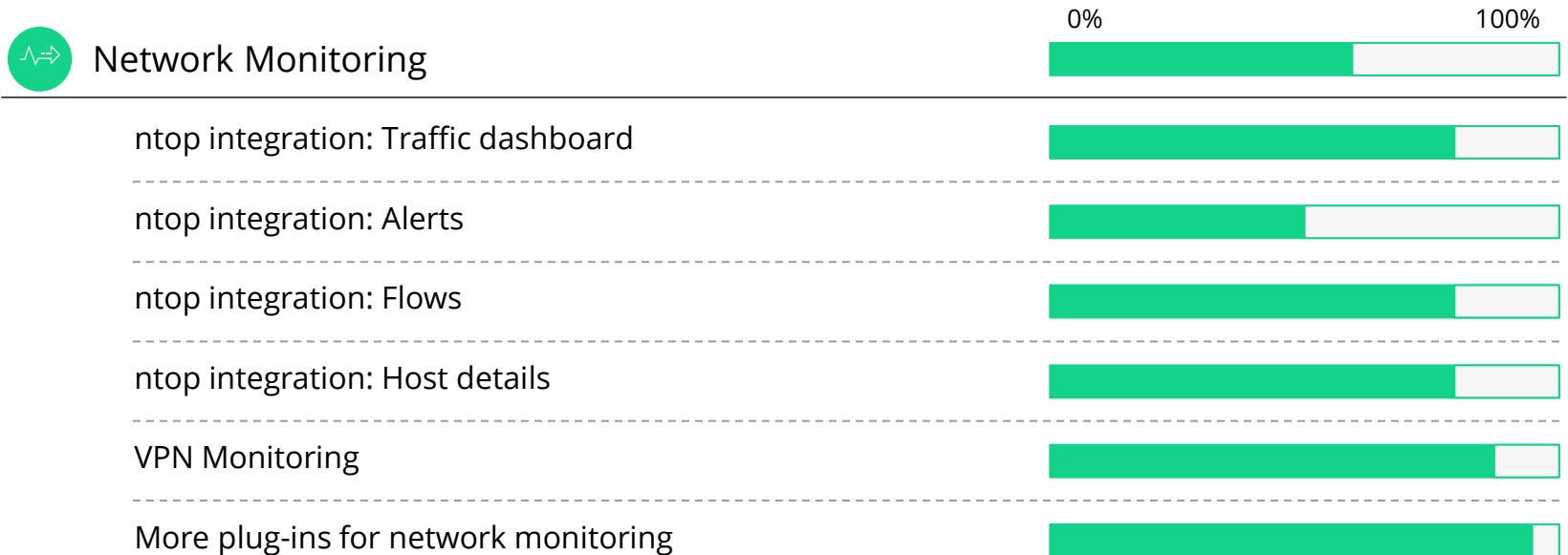# Most features are nearing completion

User Experience

Cloud & Containers

Network Monitoring

Automation & Extensibility

Performance

Extend the monitoring base

0%   100%

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Only project in early stage: Redesigning the UX

User Experience

0%   100%

Redesigned user experience

Raw Edition: Modern graphing + Grafana integration

Improved reporting

New dashlets and dashboard usability

Pre-built intelligent dashboards

Tags & Labels

Forecast graphs and historic data painters

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Nearly finished with Cloud & Containers for 1.7

0%   100%

Cloud & Containers

Prometheus integration

Extended Kubernetes Monitoring

Improved Dynamic Configuration

More AWS plug-ins

More Azure plug-ins

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Finishing up ntop integration as main topic

Network Monitoring

ntop integration: Traffic dashboard

ntop integration: Alerts

ntop integration: Flows

ntop integration: Host details

VPN Monitoring

More plug-ins for network monitoring

0%   100%

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Check-API on final spurt, REST-API progressing

Automation & Extensibility

Check-, Inventory- and Bakery-API

REST-API

Distributed agent bakery and bakery configurability

New notification plug-ins

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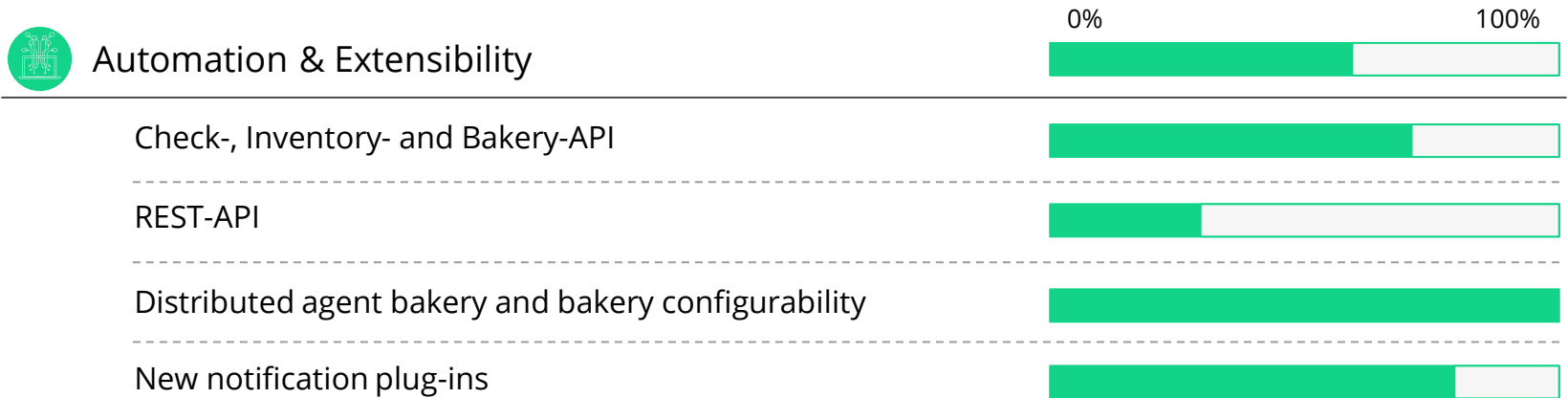
Major performance improvements still underway

Performance

0%   100%

More scalability for check helpers

Activate Changes: Incremental sync of configuration

WATO improvements

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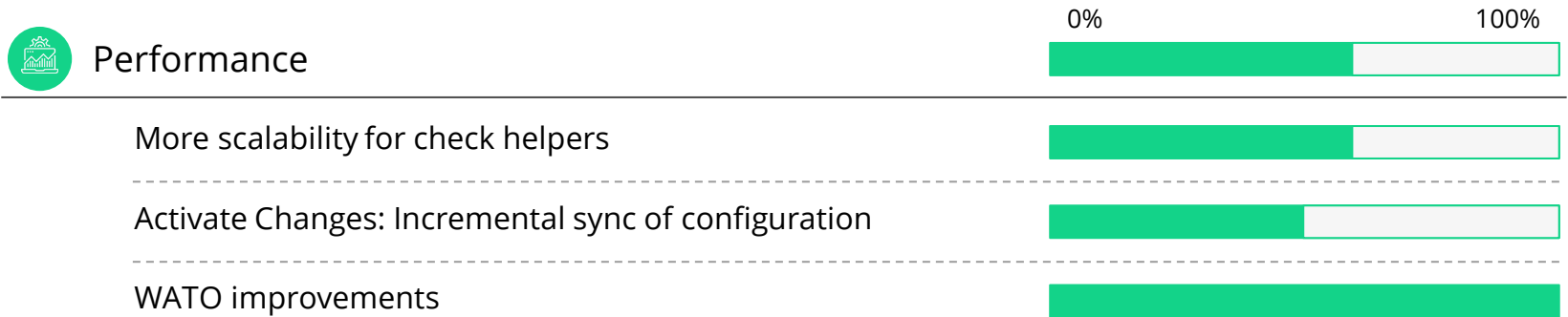
Many checks done, more to come :-)

Extension Packages

⚠ No changes   🏠 Main Menu

Installed extension packages

No entries.

Optional extension packages

▶ ACTIONS	NAME	VERS
🔌	azure_ad	
🔌	graylog_special_agent	
🔌	huawei_switches	
🔌	jenkins_special_agent	
🔌	jira_special_agent	
🔌	k8s_ingress_and_job_info	
🔌	mongodb	
🔌	tplink_checks	

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New: Feature Packs

- A lot of useful features are built during a year

- Make available vs. not decreasing stability

- Feature packs give you the option to choose

- Features are packed as MKPs in patch releases

- User can choose to enable feature & disable it again

More info: https://checkmk.com/cms_mkps.html#feature_packs

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Innovation releases

- Make new features testable during development phase

- Released when some larger feature needs to be tested

- No releases when code base is not ready for it

- Currently: In the middle of a complex Python 3 transition

- Does not make much sense to start innovation phase

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The road to Checkmk 1.7

May 2020
1.6 Feature Pack II

June - July 2020
1.7 Innovation Releases

~ October 2020
1.7 Release

February 2020
1.6 Feature Pack I

~ July 2020
1.6 Feature Pack III (optional)

July - Oct. 2020
1.7 Beta Phase
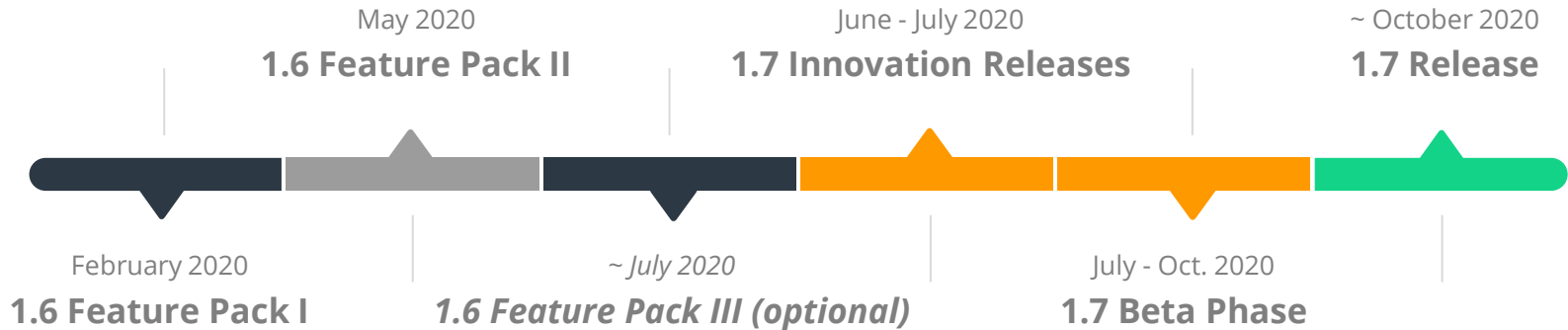
We need your support with testing - send us your bug reports etc.

feedback-1.7-beta@checkmk.com

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When is it finally done?

Idea stage

Concept stage

Implementation stage

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We are in the middle of the journey

| Overall UX Redesign | Redesign most used workflows | → Most will be done for 1.7 |

| Detailed UX Redesign | Create consistency and more intuitive user interfaces on all the detail pages | → Start in Q3 2020 |

| Dashboarding 3.0 | Step-up dashboarding usability | → Partly done in 1.7, will continue for 1.8 |

| Notifications & Reports | Improve standard notification & report layouts | → Partly done in 1.7, will continue for 1.8 |

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Anything missing?

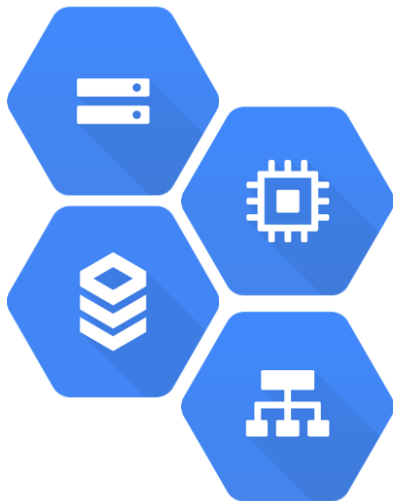**aws**

Microsoft Azure

A deep sea of emptiness

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Monitoring the Google Cloud Platform

- Special agent - similar to AWS and Azure

- Ready-built for dynamic configuration

- Checks for standard services

  - Cloud Storage

  - Compute Engine

  - Cloud SQL

  - Cloud Load Balancing

- Additional checks possible based on feature requests

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Deeper integration of Prometheus and Checkmk

Already done for Checkmk 1.7

- Integration of most important Prometheus exporters

- Running PromQL queries natively in Checkmk

Next steps

- Integrating more Prometheus exporters (based on feature requests)

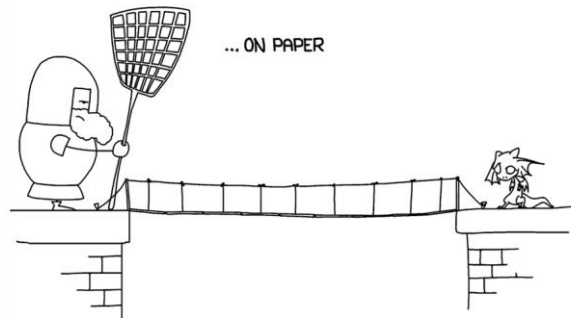- Directly connecting to Prometheus exporters

We need your experience in the field - please help us by testing it!
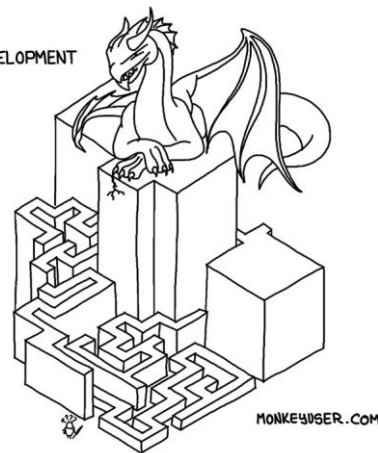
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Completeness of REST-API

- Technology stack established and first features done

- Goal for 1.8: Completeness

- Vision: Everything can be done via API

The performance improvements...

In progress for Checkmk 1.7

- We will have finished many performance improvements already for 1.7
  - Splitting the Check Helpers
  - Activate Changes with incremental sync
  - Several WATO improvements

Further current issues to be fixed

- Even faster activate changes
- Large number of users
- Network scans for very large networks

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2000+ check plug-ins - covering everything

check plug-ins
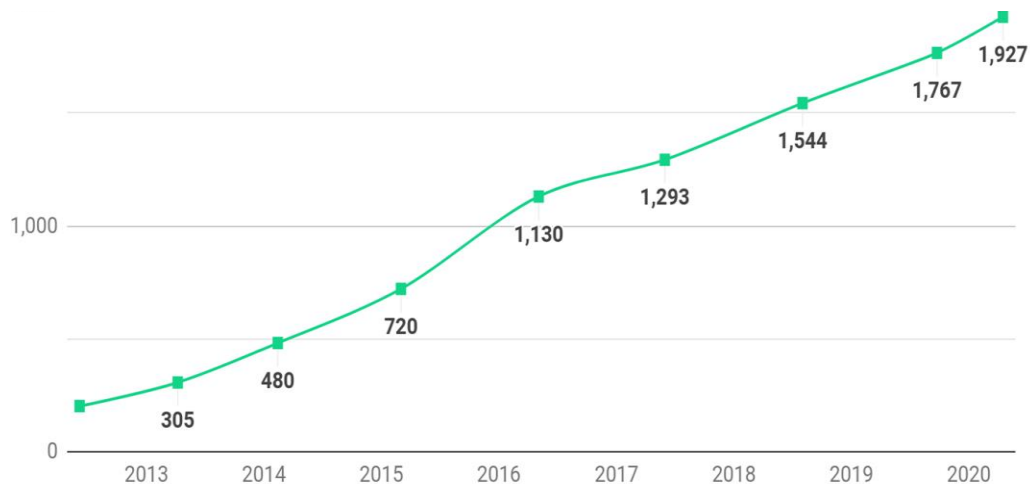
- Last year: many "strategic check plug-ins", e.g. AWS
- This year: mostly customer-request driven
- Many new devs → More capacity :)
- Also: Your votes matter!

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Complete end-to-end encryption

- Last year: Livestatus encryption

- Still missing: Notification spooler

- Notification spooler optionally forwards notifications from remote to central sites for delivery

- Workarounds:

  - Tunnel notification spooler traffic (SSH, VPN)

  - Do not use forwarded notifications

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Two-Factor Authentication

- 2FA is good practice for login procedures

- Multiple ways how to do 2FA

  - Hardware (e.g.Yubikey)

  - Software (e.g. Google authenticator)

- First step:

  - Add optional 2FA to GUI supporting U2F

  - Using a Checkmk local validation server

- Future:

  - Connecting other validation servers

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And ... honing all the existing features

- Checkmk has so many features

- No feature is ever complete

- Not only about fixing bugs

- Rather about honing features to be really great

- You can't market that, but these quality of life improvements are important

- We will care about this
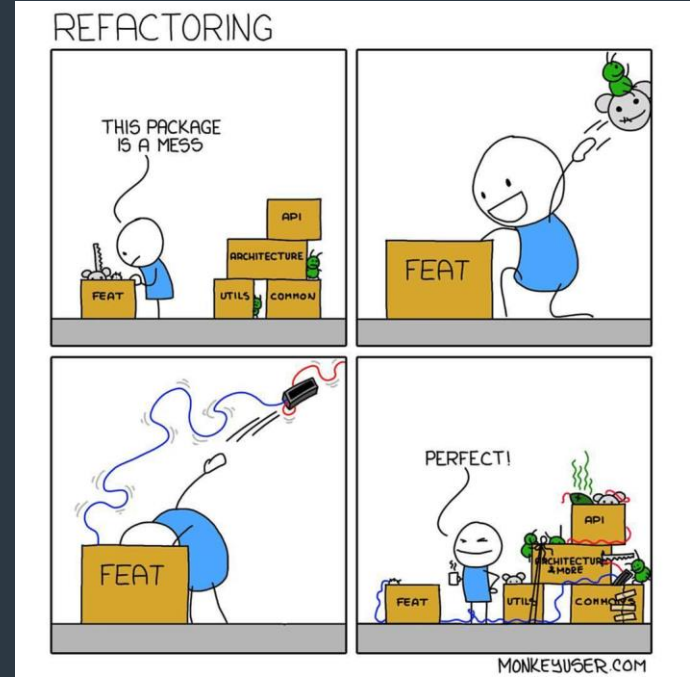
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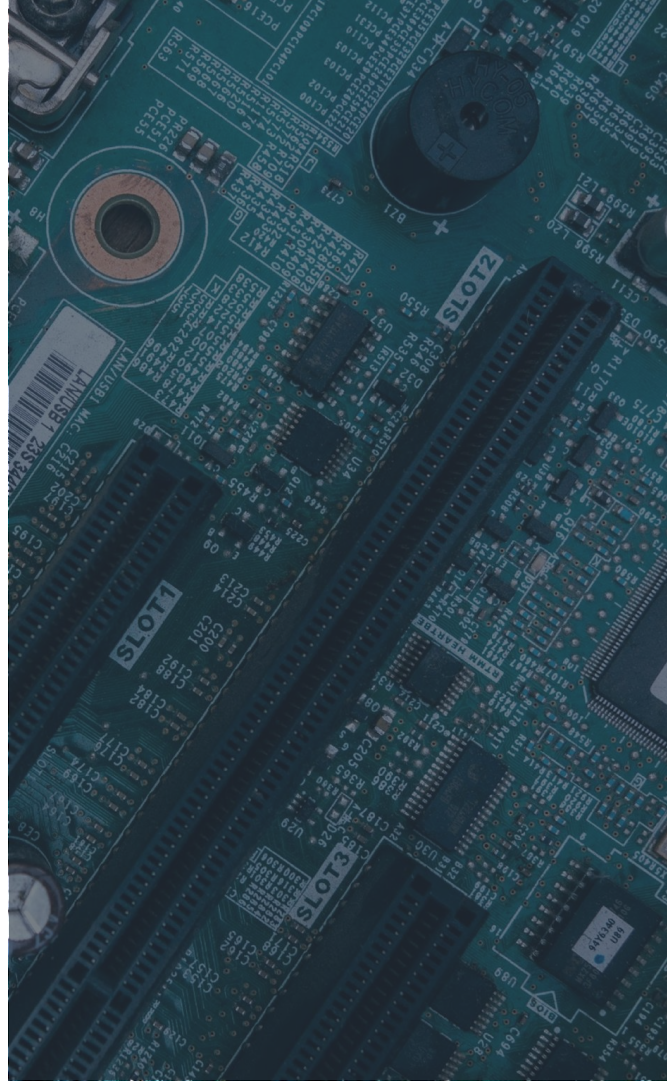
We will start working on these things in Q4/2020

These are our strategic priorities, a rough outline of focus areas

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Monitoring modern hypervisors

Kubernetes will be key to make VMWare vSphere7 much more dynamic and bring the dev and ops world closer.

Software providers will also increase delivery of their software via containers - ops needs to implement and monitor this.

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Checkmk in the Cloud

Enable better for cloud deployments

- Deployment with standard images directly from AWS Market Place - similar for Azure

- Agents with possibility to push data - better in cloud environments, also allows for self-registration

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E2E monitoring integration

- A lot of "blackbox" services are used these days

- E2E testing becomes more and more important

- Establish best practices in integrating E2E with Checkmk

- Potentially integrate E2E tools into the Checkmk UI

Automatic dependencies

1. **Resolving issues quicker**

2. **Prevent issues from happening**

3. **Reduce unnecessary notifications**

- Discovering dependencies based on multiple dimensions
  - Using physical and virtual networks
  - Application configurations (e.g. vSphere, Oracle, Kubernetes)
- Visualizing these dependencies

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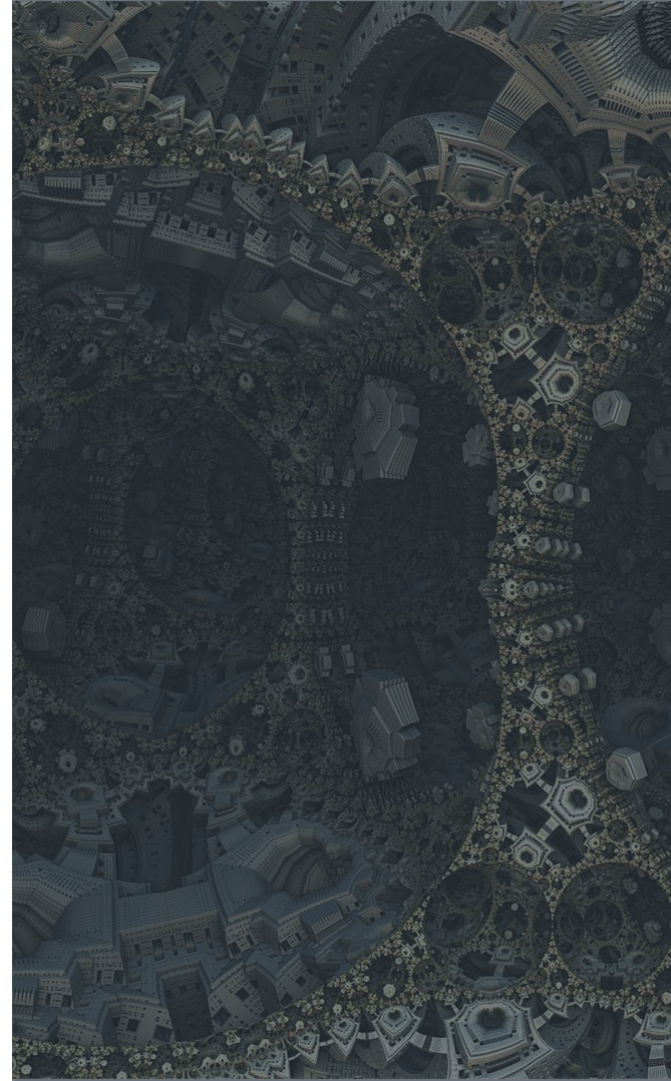
Checkmk analytics

- Complementary to dependency analysis

- Automatic correlation of metrics to find systems which experience similar atypical behaviour

- Powerful visualizations intelligently highlighting anomalies using large amounts of data to find root causes quicker

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More network monitoring

- Better understand networks

  - Extended visualization of network topologies

  - Discovery of network topologies (ntop, LLDP and more)

- Virtual networks in virtualization platforms

- Improve monitoring of network hardware

  - Include support info from vendors (e.g. PSIRT advisories)

  - Improve monitoring APIs for network devices, e.g. streaming telemetry

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- **Monitoring modern hypervisors**

- **Checkmk in the Cloud**

- **E2E monitoring integration**

- **Automatic dependencies**

- **More intelligence for Checkmk**

- **More network monitoring**

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Thank you

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