Checkmk 2.4 at a glance

May 20, 2025 - Live from Paulaner am Nockherberg, Munich
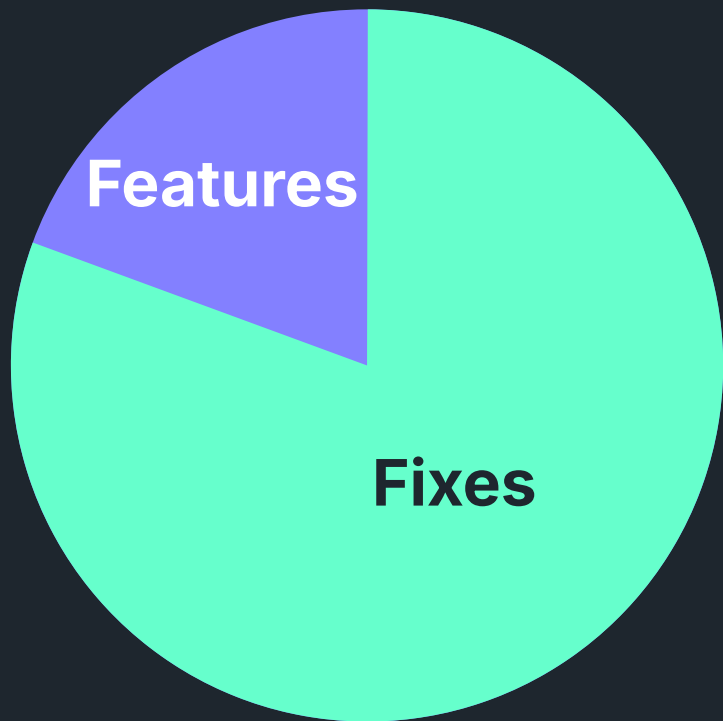
Martin Hirschvogel
Chief Product Officer
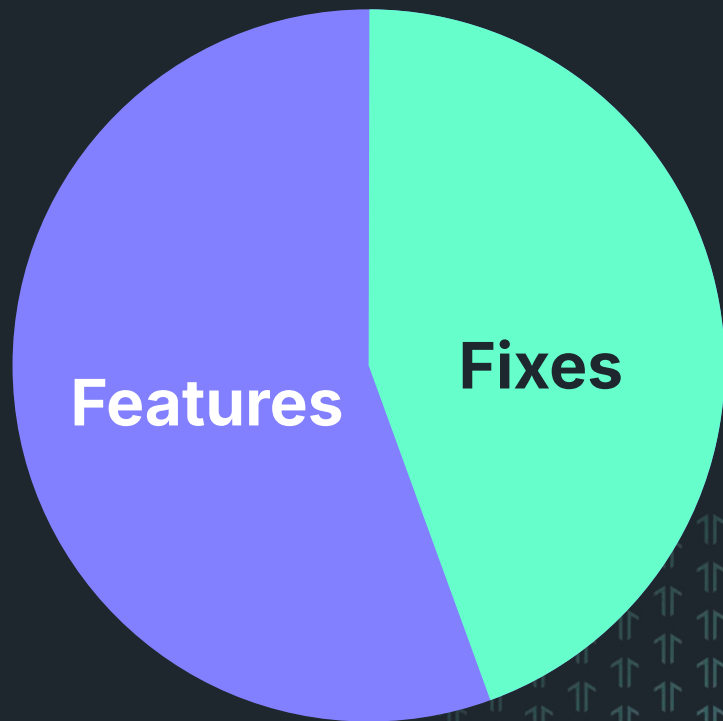Checkmk GmbH

$$\frac{1325}{\text{werks}}$$

Features

Fixes

Werks

Features

Fixes

Work

Link to video: here!

	2.3	2.4		
Service discovery	6.2s	2.2s	2.8x	faster
Activate changes	5.6s	2.4s	2.4x	faster
Parameters of this service	2.5s	0.7s	3.8x	faster
Manpages	3.0s	1.0s	3.0x	faster
Bake agents	4.9s	2.7s	1.8x	faster
Adding 8 services manually	35.1s	8.0s	4.4x	faster

Note: Two identical systems were compared with 421 hosts, 4483 services, 4 cores, 8 GB RAM.

Link to video: here!

The new automation helpers

Performance boost for Checkmk

Larger
sites

Smaller
sites

3+ processes

~200 MB

~200 MB

~200 MB

We improved memory usage to compensate!
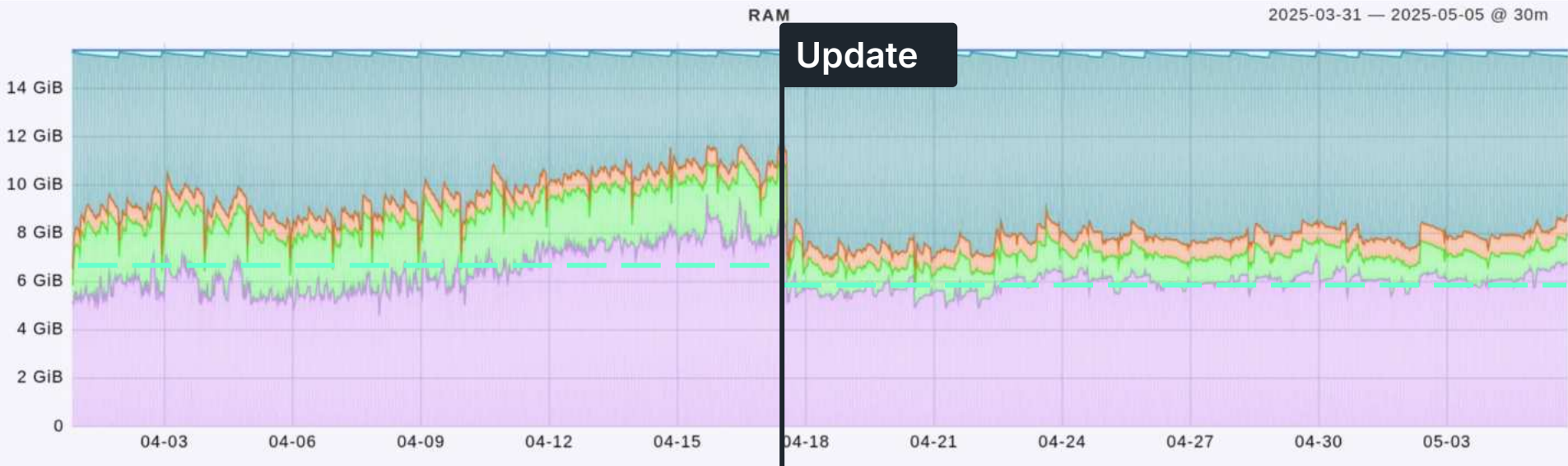
Note: This is Checkmk's internal IT monitoring

But … it depends!
Memory consumption could also increase

2.3

2.4

2.9GB RAM used

3.5GB RAM used

Note: Two identical systems were compared with 421 hosts, 4483 services, 4 cores, 8 GB RAM. Monitoring one very dynamic Kubernetes cluster
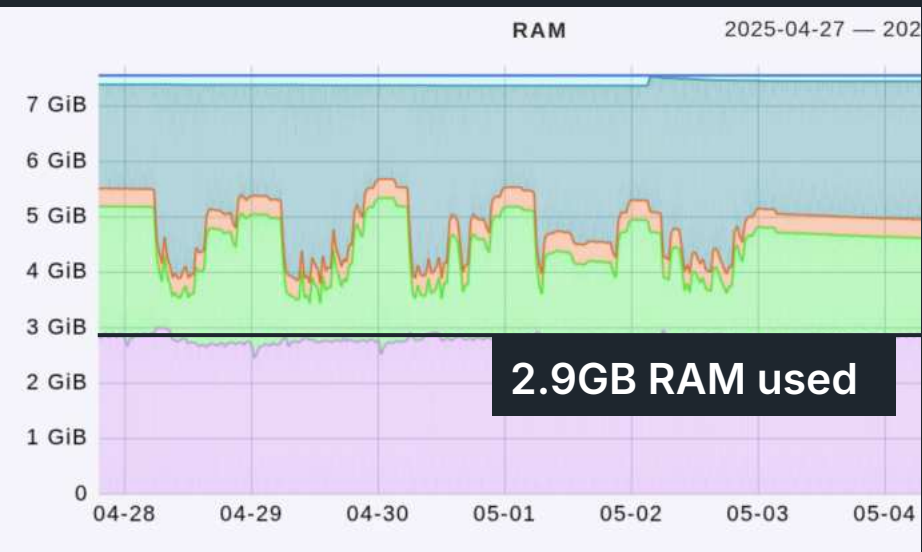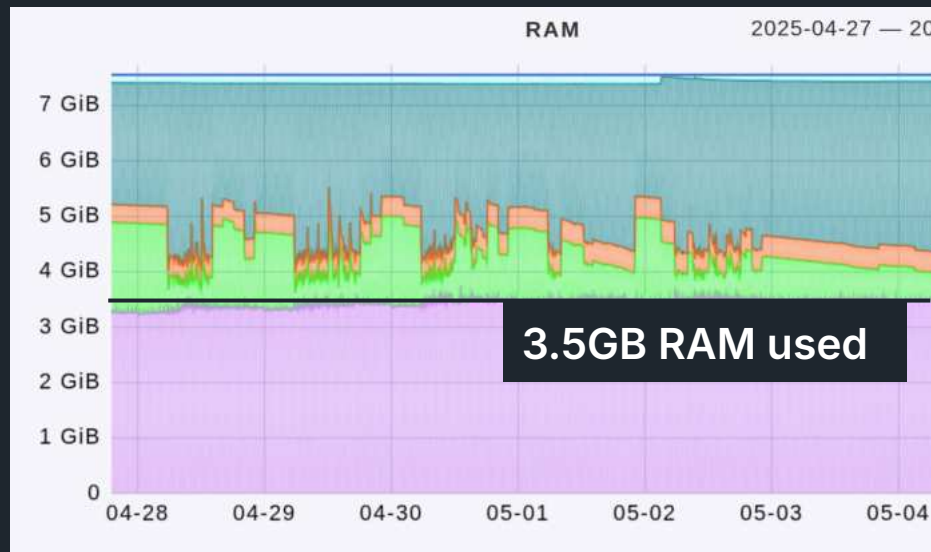
Then again. We improved CPU usage.

2.3

2.4

CPU utilization 2025-04-27 — 2025-05-

12.4%

CPU utilization 2025-04-27 — 2025-0

9.0%

Note: Two identical systems were compared with 421 hosts, 4483 services, 4 cores, 8 GB RAM. Monitoring one very dynamic Kubernetes cluster

10
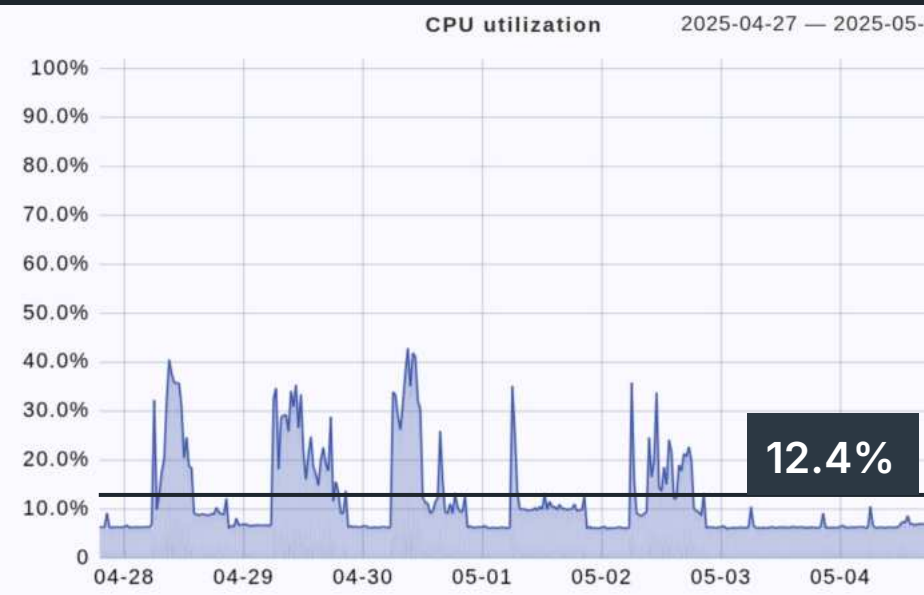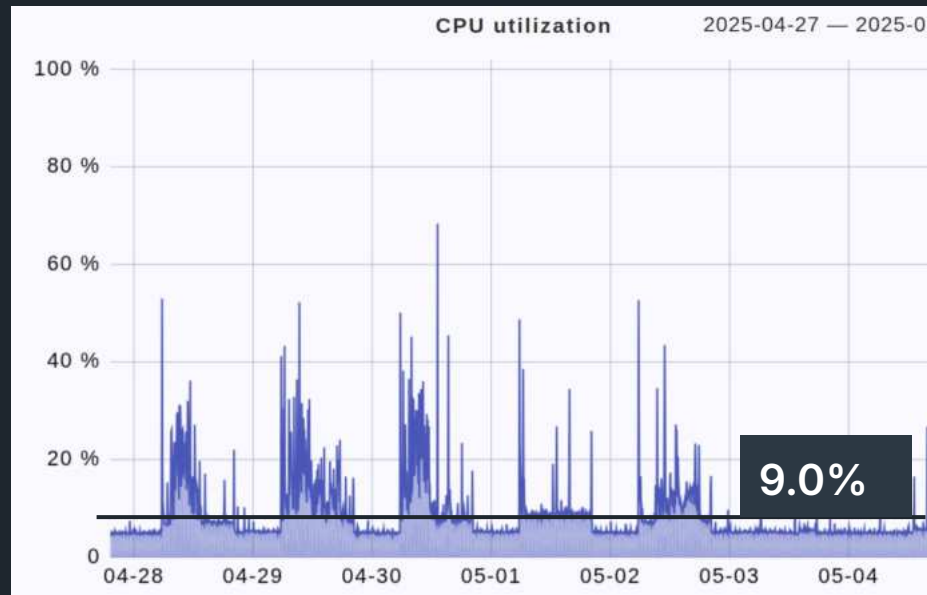
Ever wanted to monitor a Kubernetes cluster with pods changing every minute?

Ever wanted to add hundreds of hosts in a short time?

Reliably?

Monitoring 600+ new hosts instantly? No problem!
Also larger numbers are no problem!

Dynamic host management
Setup > Hosts > Dynamic host management

No pendi

| Dynamic host management | Display | Help | Find on this page ... | 🔍 | ⌃ |

[+] Add connection   🔧 Host manager settings

Recent processing cycles

	Progress	Cycle id	Host processing	Service discovery ran on	Changes activated on	Duration
✓	100%	3415	Created: 27, Modified 0, Deleted 14	27/27 hosts	41/41 hosts	13s
✓	100%	3414	Created: 615, Modified 0, Deleted 0	615/615 hosts	615/615 hosts	1m 5s
✓	100%	3413	Created: 29, Modified 0, Deleted 41	29/29 hosts	70/70 hosts	5s

Show all cycles

Note: Test system specs: 4 cores, 8 GB RAM. Monitoring two very dynamic Kubernetes clusters

Smaller changes? Done!
Includes activating changes...

Progress	Cycle id	Host processing	Service discovery ran on	Changes activated on	Duration
100%	2957	Created: 0, Modified 0, Deleted 1	Skipped	1/1 hosts	1s
100%	2956	Created: 0, Modified 0, Deleted 1	Skipped	1/1 hosts	2s
100%	2955	Created: 2, Modified 0, Deleted 12	2/2 hosts	14/14 hosts	4s
100%	2954	Created: 1, Modified 0, Deleted 11	1/1 hosts	12/12 hosts	3s
100%	2953	Created: 13, Modified 0, Deleted 45	13/13 hosts	58/58 hosts	4s
100%	2952	Created: 22, Modified 0, Deleted 0	22/22 hosts	22/22 hosts	4s
100%	2951	Created: 0, Modified 0, Deleted 22	Skipped	22/22 hosts	2s
100%	2950	Created: 0, Modified 0, Deleted 1	Skipped	1/1 hosts	2s
100%	2949	Created: 0, Modified 0, Deleted 10	Skipped	10/10 hosts	2s
100%	2948	Created: 1, Modified 0, Deleted 3	1/1 hosts	4/4 hosts	3s
100%	2947	Created: 0, Modified 0, Deleted 3	Skipped	3/3 hosts	1s

Automatic configuration for dynamic hosts
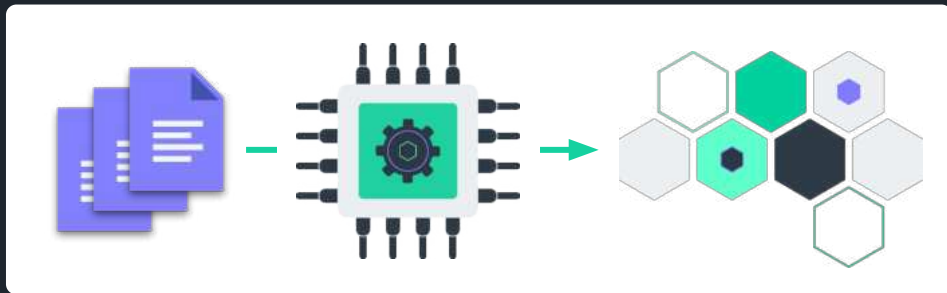
- Hosts are automatically created with 'dynamic host management'

- Typical use case: piggyback hosts

  - VMware vSphere: ESXi hosts + VMs

  - Kubernetes: anything

  - AWS, Azure, GCP: VMs, Load Balancers, Databases, ...

What does a connector do?

Checkmk 2.3

| Collect piggyback data across sites | Calculate change | Create / modify / delete hosts | Discover services | Activate changes |

Dynamic host mgmt = all 'connections'

So, what's the problem?

It's not just performance…

Collect piggyback data across sites	Calculate change	Create / modify / delete hosts	Discover services	Activate changes
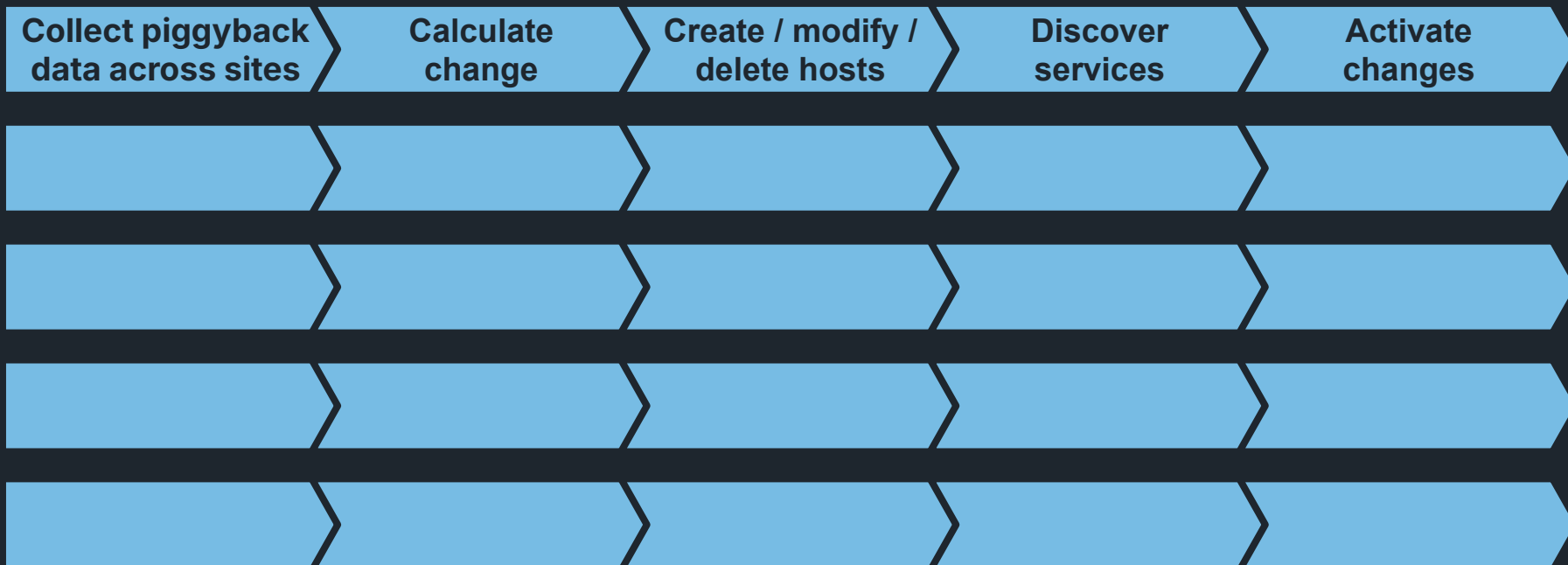
Parallel processing meets concurrency:

Collect piggyback data across sites	Calculate change	Create / modify / delete hosts	Discover services	Activate changes
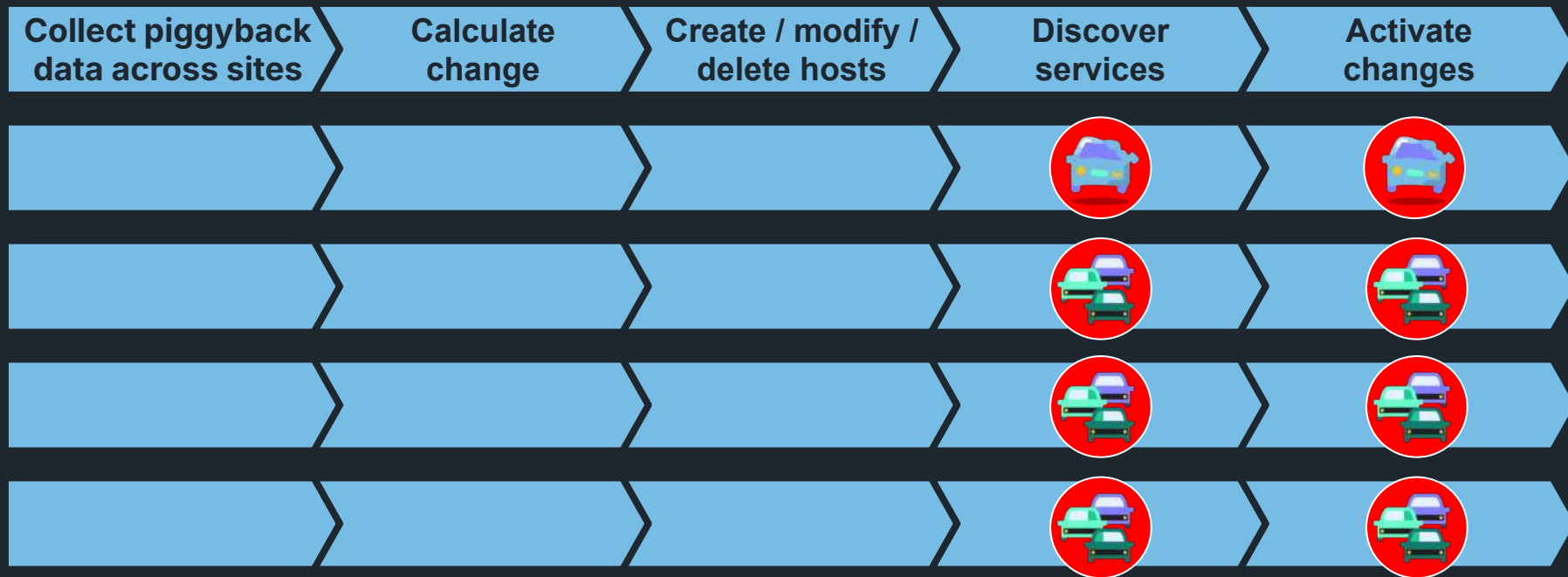
Decoupling of connector and configuration changes
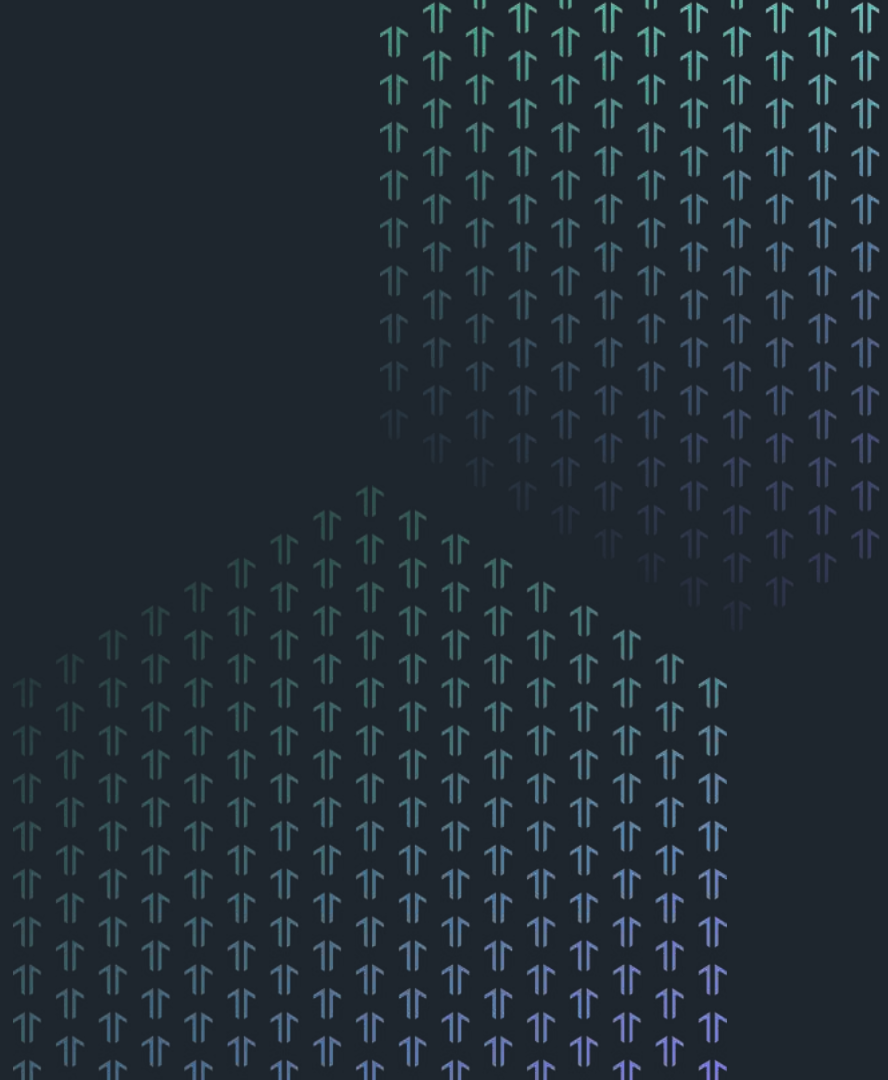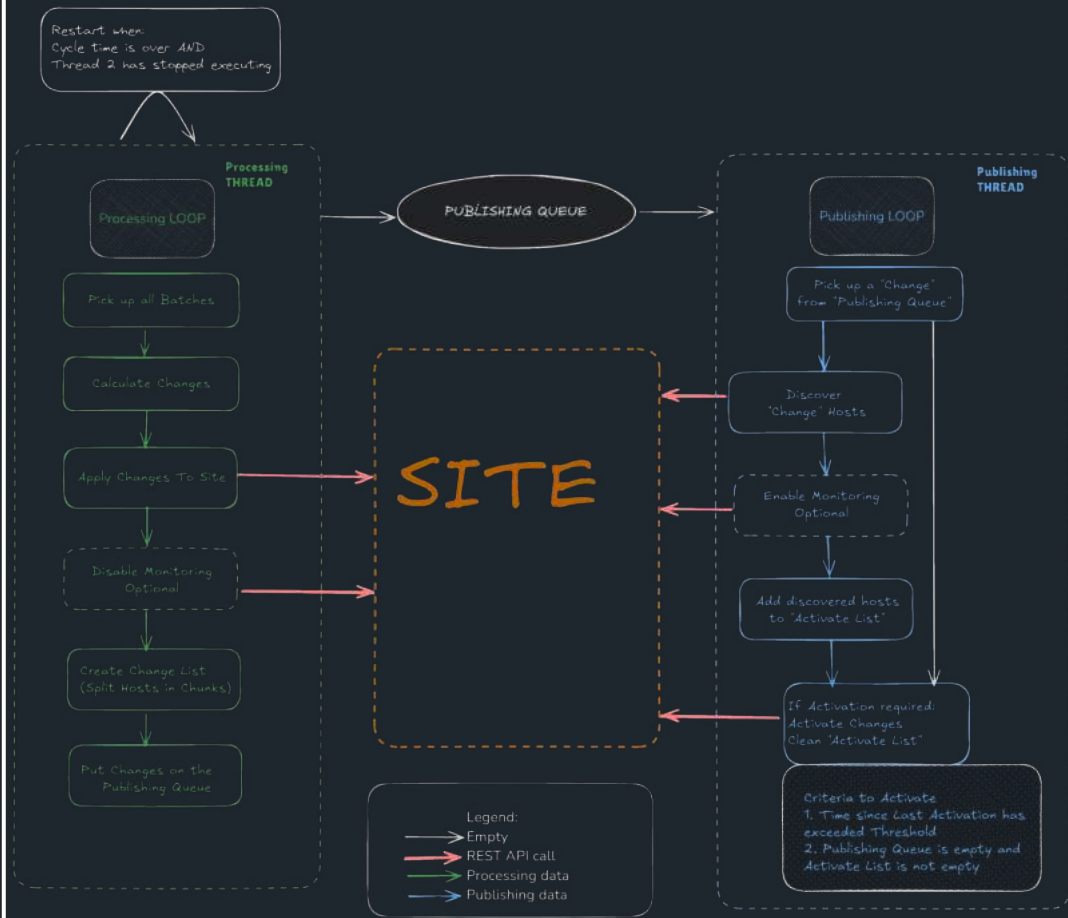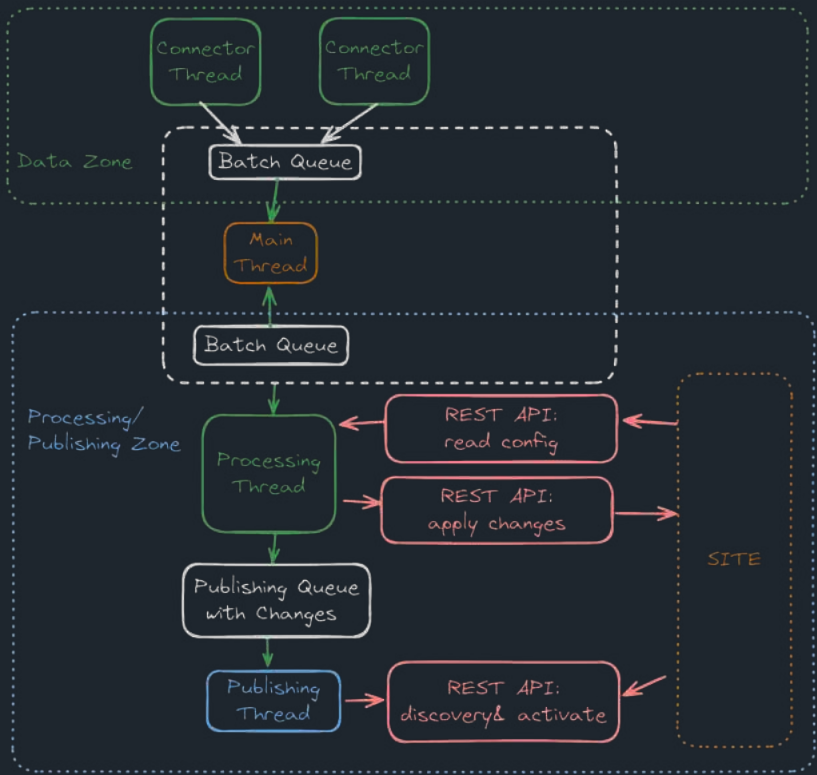
The new architecture for dynamic configuration
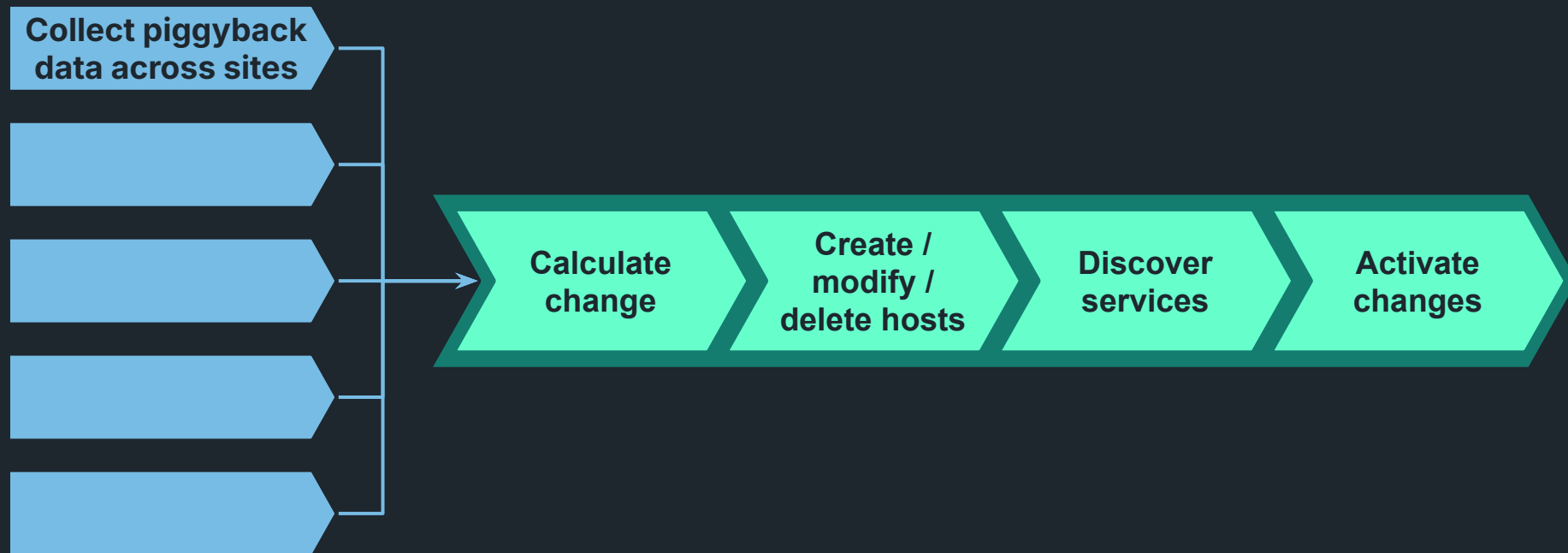
Collect piggyback data across sites

Calculate change

Create / modify / delete hosts

Discover services

Activate changes

Dynamic host management

Dynamic host management   Display   Help   Find on this page ...

Add connection   Host manager settings

Recent processing cycles

Progress	Cycle id	Host processing	Service discovery ran on	Changes activated on	Duration
1 batch is waiting for the next cycle start (13 seconds remaining)	-	-	-	-	1s
✓ 100%	3497	Created: 0, Modified 0, Deleted 5	Skipped	5/5 hosts	4s
✓ 100%	3496	Created: 1, Modified 0, Deleted 10	1/1 hosts	11/11 hosts	3s

Show all cycles

Connections

#	Actions	Title	ID	Site	Status
					⌄ OK (Started at 2025-05-06 16:13:14, duration: 19.2 s)

				Step	Message	Status	Duration	Completion
0	✏️ 🔲 📱 ⏱️ 🔳 🔄 ↗️ 🗑️	dev-1	connection_1	v240 - Local site v240	Connector: Collecting piggyback hosts on site "v240"	376 piggybacked hosts found	OK	800 ms	2025-05-06 16:13:15
					Connector: Adding host changes to queue	Added to queue with batch id 19731	OK	59.4 s	-
					Waiting for processing of host changes to start	Finished	OK	13.8 s	2025-05-06 16:13:29

New hub for dynamic host management

...at 2025-05-06 16:14:13, duration: 1.52 s)

	Message	Status	Duration	Completion
...ting piggyback hosts on	0 piggybacked hosts found	OK	849 ms	2025-05-06 16:14:14
1	...nnector: Adding host changes to queue	Added to queue with batch id 19732	OK	669 ms	-
	Waiting for processing of host changes to start	Running	OK	669 ms	-

Stable

Dynamic environments won't break Checkmk anymore

Fast

Utilizing incremental activation

Smooth

No migration needed*

* Except for: Exclude "Activate changes" for time ranges

Checkmk 2.4 at a glance
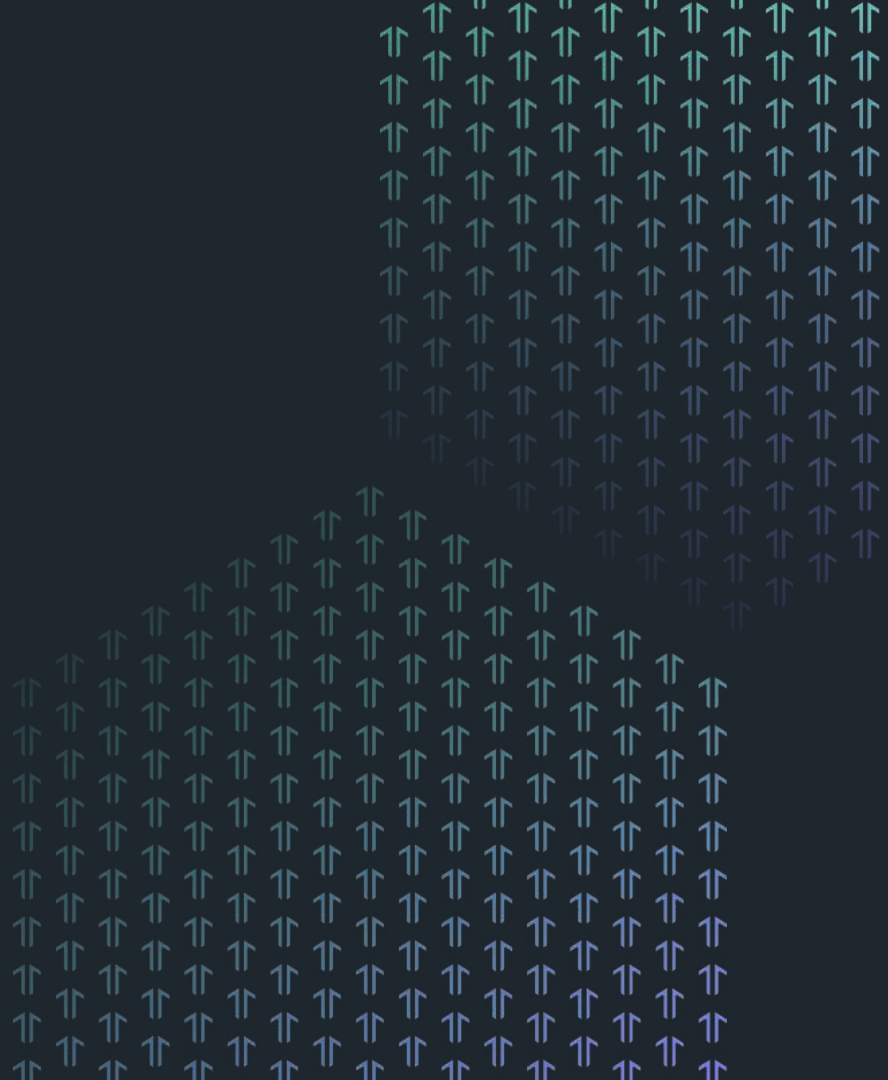
Our focus for Checkmk 2.4

Cloud   Data Center   IoT

Great user experience
for beginners and experts

Monitor anything

Powerful configuration

Alerts & analytics

Extensible interfaces
for automation & development

Monitoring platform
Secure & scalable.

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Piggyback unleashed

a.k.a distributed piggyback

Today
15:00 – 15:25

Moritz Kiemer
Team Lead Development
Checkmk GmbH

The (in)famous automation user

> ⌄ ⌂ ▒▒▒▒▒▒▒ added a comment - 24/Jan/24 12:08 PM 🔗
>
> Hi ▒▒
>
> I'm very speaking of the user *automation*. It is a built-in user which is hard coded with its name. If you do not further have it, please just create it with a secret. You do not need to use it, but CheckMK has some internal routins (espacially for the API) which uses it.
>
> The outdated warning only comes for users with passwords, not with secrets as they are handled differently.
>
> Best Regards
> ▒▒▒▒▒
>
> Edit · Delete

> ⌄ ⌂ ▒▒▒▒▒▒ added a comment - 24/Jan/24 12:47 PM 🔗   **REPORTER**
>
> Hello ▒▒▒▒▒
>
> OMG… that was indeed the problem. I accidentally removed that user during the user outdated warning cleanup. Recreating the user fixed this issue.
>
> Thanks for your patience & help! This ticket can be closed.
> Best regards,
> ▒▒▒

And it's gone! No internal dependency anymore.
On fresh 2.4.0 sites

Note: Please really read Werk #17344 - it contains a lot of details!

And it's gone! No internal dependency anymore.
On fresh 2.4.0 sites

Users
Setup > Users

No pending ch

Users   Related   Display   Help   Find on this page ...

∨ **Security**

Authentication ....   ○ Normal user login with password

password: Strength:

repeat: (optional)

Enforce change: Change password at next login or access

⦿ Automation secret for machine accounts

Store the secret in cleartext

Security warnings
Sent by mail if possible, fallback: personal messages

11

Your messages
User > Messages

Messages   **Related**   **Display**   **Help**   ⌄ ✓

checkmk

▪️ Monitor

▦ Customize

⚙️ Setup

ℹ️ Help

👤 2

⌄ **Security message #1**

Your Checkmk Password has been changed. If this action was not triggered by you, contact your administrator for further investigation.

✓ 🗑️   Sent on: 2025-05-07 19:04:01, Expires on: 2025-05-14 19:04:01

⌄ **Security message #2**

Your Checkmk Password has been changed. If this action was not triggered by you, contact your administrator for further investigation.

✓ 🗑️   Sent on: 2025-05-07 19:03:23, Expires on: 2025-05-14 19:03:23

Monitor

Customize

Setup

Help

User

1

Sidebar

Host   Display   Help

Basic settings

Host name (require

show more

User message

You left your coffee on the router. Again!

OK

Two-factor authentication can now be enforced

Small change, huge impact!

Globally

∨ Enforce two factor authentication

Current setting	☐ Enforce for all users
Factory setting	off
Current state	This variable is at factory settings.

Per role

∨ Basic properties

Internal ID (required)	user (built-in role)
Alias	Normal monitoring user
Enforce two-factor authentication	☐

What's with all the CVEs
What our security team actually does

**Today
17:30 – 18:00**

Hannes Rantzsch
Security Specialist
Checkmk GmbH

Our current focus for Checkmk

Cloud   Data Center   IoT

Great user experience
for beginners and experts

Monitor anything

Extensible interfaces
for automation and development

Powerful configuration

Alerts & analytics

Monitoring platform
Secure & scalable

checkmk

Monitor

Customize

Setup

Dashboard   Add   Dashboards   Display   Help

Overview

Hosts : UP

21/21

Host statistics

21	Up
0	In downtime
0	Unreachable
0	Down
21	Total

Service statistics

485	OK
0	In downtime
0	On down host
5	Warning
9	Unknown
3	Critical

Event statistics

3001	Ok
0	Warning
0	Unknown
0	Critical
3001	Total

Host overview

Recommendation service

Runtime: CPU utilization

Runtime: CPU utilization
1.5

Recommendations per second
12.99

Last log entries

ID	Icons	State	Last	Cnt.	Message
5189618		OK	3.87 s	1	Receive ListRecommendations for product ids:['9SIQT8TOJO', '66VCHSJNUP', '1YMWWN1N4O', 'LS4PSXUNUM', 'HQTGWGPNH4']
5189619		OK	3.87 s	1	Receive ListRecommendations for product ids:['1YMWWN1N4O', 'LS4PSXUNUM', 'OLJCESPC7Z', '0PUK6V6EV0', 'L9ECAV7KIM']
5189620		OK	3.87 s	1	Receive ListRecommendations for product ids:['OLJCESPC7Z', '1YMWWN1N4O', '0PUK6V6EV0', '6E92ZMYYFZ', '2ZYFJ3GM2N']
5189615		OK	4.87 s	1	Receive ListRecommendations for product ids:['OLJCESPC7Z', 'L9ECAV7KIM', '9SIQT8TOJO', 'HQTGWGPNH4', '0PUK6V6EV0']
5189616		OK	4.87 s	1	Receive ListRecommendations for product ids:['66VCHSJNUP', 'L9ECAV7KIM', '2ZYFJ3GM2N', 'OLJCESPC7Z', '6E92ZMYYFZ']
5189617		OK	4.88 s	1	Receive ListRecommendations for product ids:['L9ECAV7KIM', '9SIQT8TOJO', 'HQTGWGPNH4', '6E92ZMYYFZ', 'OLJCESPC7Z']
5189612		OK	6.88 s	1	Receive ListRecommendations for product ids:['2ZYFJ3GM2N', '6E92ZMYYFZ', '1YMWWN1N4O', '66VCHSJNUP', '0PUK6V6EV0']
					Receive ListRecommendations for product ids:['LS4PSXUNUM', '2ZYFJ3GM2N', 'OLJCESPC7Z'

Cart service

Runtime: CPU utilization

Runtime: CPU utilization
0.07

Runtime: thread count
6

Last log entries

ID	Icons	State	Last	Cnt.	Message
5189642		OK	3.49 s	1	GetCartAsync called with userId={userId}
5189643		OK	3.49 s	1	GetCartAsync called with userId={userId}
5189644		OK	3.49 s	1	GetCartAsync called with userId={userId}
5189637		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189638		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189639		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189640		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189641		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189632		OK	5.49 s	1	GetCartAsync called with userId={userId}
5189633		OK	5.49 s	1	GetCartAsync called with userId={userId}
5189634		OK	5.49 s	1	GetCartAsync called with userId={userId}

Ad service

JVM: CPU utilization

JVM: CPU utilization
0.00006

Queue size
0
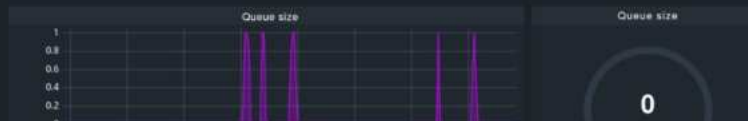
Last log entries

ID	Icons	State	Last	Cnt.	Message
5189424		OK	15.8 s	1	Targeted ad request received for [travel]
5189152		OK	38.8 s	1	Targeted ad request received for [binoculars]
5189078		OK	42.8 s	1	Non-targeted ad request received, preparing random response.
5188833		OK	58.8 s	1	Targeted ad request received for [accessories]
5188756		OK	60 s	1	Targeted ad request received for [books]
5188712		OK	64 s	1	Targeted ad request received for [assembly]
5188576		OK	74 s	1	Targeted ad request received for [travel]
5188415		OK	86 s	1	Targeted ad request received for [telescopes]
5188096		OK	109 s	1	Non-targeted ad request received, preparing random response.
5167885		OK	121 s	1	Targeted ad request received for [travel]
5187827		OK	124 s	1	Targeted ad request received for [books]

Help

User

Sidebar

The two sides of application monitoring

Supported already by Checkmk

many more ...
+   active checks

The two sides of application monitoring

Supported already by Checkmk

Business applications
Not 'your' software

?

The two sides of application monitoring

Supported already by Checkmk

Business applications
Not 'your' software

Custom applications
'Your' software

Monitoring applications with Checkmk

checkmk

Built-in
plug-ins

Custom
plug-ins

Local
checks

Business applications
Not 'your' software

Custom applications
'Your' software

Standardization being massively pushed

- Large number of exporters generating Prometheus metrics.
- Many applications already expose Prometheus metrics natively.

`http_server_request_duration_seconds_bucket{method="get",path="/"} 0.0`

- The standard for observability: metrics, logs and traces.
- For instrumenting, generating, collecting, & exporting telemetry

Makes application monitoring much simpler.

Integrating OpenTelemetry and Checkmk

Application

Prometheus

/metrics

OpenTelemetry

OpenTelemetry Collector

OpenTelemetry

Checkmk Server

Open Telemetry Collector

Special Agent

OK	OTel metric app_recommendations_counter
OK	OTel metric kafka.logs.flush.Count
OK	OTel metric kafka.logs.flush.time.50p
OK	OTel metric kafka.logs.flush.time.99p
OK	OTel metric process.runtime.go.goroutines
OK	OTel metric process.runtime.go.mem.heap_a
OK	OTel metric jvm.cpu.time
OK	OTel metric jvm.gc.duration
OK	OTel metric jvm.memory.committed

checkmk

Dashboard   Add   Dashboards   Display   Help

Experimental?

Monitor

Customize

Setup

Overview

Hosts : UP

21/21

Host statistics

21 Up
0 In downtime
0 Unreachable
0 Down
21 Total

Service statistics

485 OK
0 In downtime
0 On down host
5 Warning
9 Unknown
3 Critical

Event statistics

3001 Ok
0 Warning
0 Unknown
0 Critical
3001 Total

Host overview

Help

User

Sidebar

Recommendation service

Runtime: CPU utilization

Runtime: CPU utilization — 1.5

Recommendations per second

Recommendations per second — 12.99

Last log entries

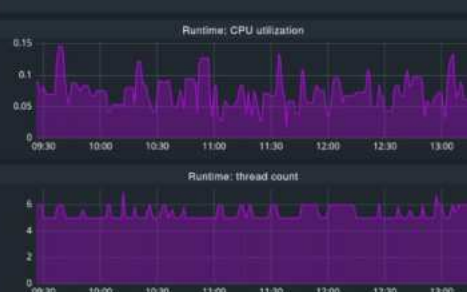| ID	Icons	State	Last	Cnt.	Message
5189618		OK	3.87 s	1	Receive ListRecommendations for product ids:['9SIQT8TOJO', '66VCHSJNUP', '1YMWWN1N4O', 'LS4PSXUNUM', 'HQTGWGPNH4']
5189619		OK	3.87 s	1	Receive ListRecommendations for product ids:['1YMWWN1N4O', 'LS4PSXUNUM', 'OLJCESPC7Z', '0PUK6V6EV0', 'L9ECAV7KIM']
5189620		OK	3.87 s	1	Receive ListRecommendations for product ids:['OLJCESPC7Z', '1YMWWN1N4O', '0PUK6V6EV0', '6E92ZMYYFZ', '2ZYFJ3GM2N']
5189615		OK	4.87 s	1	Receive ListRecommendations for product ids:['OLJCESPC7Z', 'L9ECAV7KIM', '9SIQT8TOJO', 'HQTGWGPNH4', '0PUK6V6EV0']
5189616		OK	4.87 s	1	Receive ListRecommendations for product ids:['66VCHSJNUP', 'L9ECAV7KIM', '2ZYFJ3GM2N', 'OLJCESPC7Z', '6E92ZMYYFZ']
5189617		OK	4.88 s	1	Receive ListRecommendations for product ids:['L9ECAV7KIM', '9SIQT8TOJO', 'HQTGWGPNH4', '6E92ZMYYFZ', 'OLJCESPC7Z']
5189612		OK	6.88 s	1	Receive ListRecommendations for product ids:['2ZYFJ3GM2N', '6E92ZMYYFZ', '1YMWWN1N4O', '66VCHSJNUP', '0PUK6V6EV0']
					Receive ListRecommendations for product ids:['LS4PSXUNUM', '2ZYFJ3GM2N', 'OLJCESPC7Z'

Cart service

Runtime: CPU utilization

Runtime: CPU utilization — 0.07

Runtime: thread count

Runtime: thread count — 6

Last log entries

ID	Icons	State	Last	Cnt.	Message
5189642		OK	3.49 s	1	GetCartAsync called with userId={userId}
5189643		OK	3.49 s	1	GetCartAsync called with userId={userId}
5189644		OK	3.49 s	1	GetCartAsync called with userId={userId}
5189637		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189638		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189639		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189640		OK	4.49 s	1	GetCartAsync called with userId={userId}
5189632		OK	5.49 s	1	GetCartAsync called with userId={userId}
5189633		OK	5.49 s	1	GetCartAsync called with userId={userId}
5189634		OK	5.49 s	1	GetCartAsync called with userId={userId}

Ad service

JVM: CPU utilization

JVM: CPU utilization — 0.00006

Queue size

Queue size — 0

Last log entries

ID	Icons	State	Last	Cnt.	Message
5189424		OK	15.8 s	1	Targeted ad request received for [travel]
5189152		OK	36.8 s	1	Targeted ad request received for [binoculars]
5189078		OK	42.8 s	1	Non-targeted ad request received, preparing random response.
5188833		OK	58.8 s	1	Targeted ad request received for [accessories]
5188756		OK	60 s	1	Targeted ad request received for [books]
5188712		OK	64 s	1	Targeted ad request received for [assembly]
5188576		OK	74 s	1	Targeted ad request received for [travel]
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5187827		OK	124 s	1	Targeted ad request received for [books]

Ceph statistics

R Owner: Robert Sander
    <r.sander@heinlein-support.de>

👁 Views: 56754

⬇ Downloads: 13631

🕙 Updated on: 11 Feb 2025

📚 Number of versions: 15

💬 Source: Website

Rating

★ ★ ★ ★ ★ 5.0

▬▬▬▬▬▬	5 Stars (1)
	4 Stars (0)
	3 Stars (0)
	2 Stars (0)
	1 Stars (0)

View all ratings

🔔
Subscribe to package updates

State	Service	Icons	Summary	Perf-O-Meter
OK	Ceph Class nvme	≡ ☁ 📺 〰	Used: 38.40% - 42.9 TiB of 112 TiB (warn/crit at 96.46%/98.23% used), trend per 1 day 0 hours: +352 GiB, trend per 1 day 0 hours: +0.31%, Time left until disk full: 200 days 9 hours	38.4 %
OK	Ceph OSD 0	≡ ☁ 📺 〰	Used: 46.45% - 3.25 TiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +27.0 GiB, trend per 1 day 0 hours: +0.38%, Time left until disk full: 142 days 2 hours, PGs: 29, Apply latency: 0ms, Commit latency: 0ms	46.45 %
OK	Ceph OSD 0 DB	≡ ☁ 📺 〰	Used: 0.18% - 12.8 GiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +239 MiB, trend per 1 day 0 hours: +<0.01%	0.18 %
OK	Ceph OSD 1	≡ ☁ 📺 〰	Used: 38.45% - 2.69 TiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +22.3 GiB, trend per 1 day 0 hours: +0.31%, Time left until disk full: 197 days 3 hours, PGs: 24, Apply latency: 0ms, Commit latency: 0ms	38.45 %
OK	Ceph OSD 1 DB	≡ ☁ 📺 〰	Used: 0.14% - 10.3 GiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +305 MiB, trend per 1 day 0 hours: +<0.01%	0.14 %
OK	Ceph OSD 2	≡ ☁ 📺 〰	Used: 38.37% - 2.68 TiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +22.1 GiB, trend per 1 day 0 hours: +0.31%, Time left until disk full: 199 days 21 hours, PGs: 24, Apply latency: 0ms, Commit latency: 0ms	38.37 %
OK	Ceph OSD 2 DB	≡ ☁ 📺 〰	Used: 0.11% - 8.12 GiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +286 MiB, trend per 1 day 0 hours: +<0.01%	0.11 %
OK	Ceph OSD 3	≡ ☁ 📺 〰	Used: 36.81% - 2.57 TiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +20.7 GiB, trend per 1 day 0 hours: +0.29%, Time left until disk full: 218 days 4 hours, PGs: 24, Apply latency: 0ms, Commit latency: 0ms	36.81 %
OK	Ceph OSD 3 DB	≡ ☁ 📺 〰	Used: 0.11% - 8.08 GiB of 6.99 TiB (warn/crit at 93.83%/96.91% used), trend per 1 day 0 hours: +180 MiB, trend per 1 day 0 hours: +<0.01%	0.11 %
OK	Ceph Pool .mgr	≡ ☁ 📺 〰	Used: <0.01% - 21.3 MiB of 15.1 TiB (warn/crit at 94.71%/97.36% used), trend per 1 day 0 hours: -28 B, trend per 1 day 0 hours: -0.00%, Objects: 6.00, Read IOPS: 0.00, Write IOPS: 0.00, Read Throughput: 0 B, Write Throughput: 0 B	0.0001 %
OK	Ceph Pool nvme1	≡ ☁ 📺 〰	Used: 48.51% - 14.3 TiB of 29.4 TiB (warn/crit at 95.37%/97.69% used), trend per 1 day 0 hours: +117 GiB, trend per 1 day 0 hours: +0.39%, Time left until disk full: 132 days 11 hours, Objects: 4088557.00, Read IOPS: 193.05, Write IOPS: 770.12, Read Throughput: 49.1 MiB, Write Throughput: 15.9 MiB	48.51 %
OK	Ceph Status	≡ ☁ 📺 〰	Overall health OK, Used: 38.40% - 42.9 TiB of 112 TiB (warn/crit at 96.46%/98.23% used), trend per 1 day 0 hours: +352 GiB, trend per 1 day 0 hours: +0.31%, Time left until disk full: 200 days 9 hours, Objects: 4088563, Placement groups: 129, PGs in active+clean: 129	38.4 %

Thanks Robert! 👏

Some love for check_http + check_cert
Introduced in 2.3. Refined in 2.4.

State	Service	Icons	Summary	Age	Checked	Perf-O-Meter
OK	CERT play.checkmk.com		Verification: OK, Subject CN: play.checkmk.com, Server certificate validity: 76 day(s)	39 h	25.1 s	76 d
OK	HTTPS play.checkmk.com		Version: HTTP/2.0, Status: 200 OK	157 s	37.1 s	0.26 s

check_http

- Connect to an explicit server
- Ignore certificates
- Enforce IPv4 or IPv6
- Macro support for user agent & for IPv6

check_cert

- Proper service summary, service details and metrics
- Certificates valid in the future
- Macro support for Issuer & Subject

```
OMD[mysite]:~$ cmk-migrate-http -h
```

Note: Migration tool only supports typical use cases and will not be extended further.

A lot of new, improved & fixed monitoring plug-ins

500+

fixes alone

S.M.A.R.T.
Disk health

systemd
Performance

vmware

NetApp

CISCO

Bazel

jolokia
JMX on Capsaicin

NUTANIX

docker

aws

ORACLE

Google Cloud

Azure

aruba
a Hewlett Packard
Enterprise company

Hewlett Packard
Enterprise

kubernetes

PROXMOX

PURESTORAGE

F**RTINET**

PostgreSQL

infoblox

TRIPP·LITE

Raritan
A brand of legrand

Extreme
networks

APC

SAP

Quantum

CHECK POINT

DELL Technologies

selection

Monitoring servers via Redfish

**Tomorrow
09:45 – 10:15**

Andreas Döhler
Community Hero

How to run the agent as non-root

Today
15:25 – 15:40

Andreas Umbreit
Software Developer
Checkmk GmbH

Our current focus for Checkmk

Cloud   Data Center   IoT

Great user experience
for beginners and experts

Monitor anything

Powerful configuration

Alerts & analytics

Extensible interfaces
for automation and development

Monitoring platform
Secure & scalable

Updating discovery parameters on the fly
New service discovery feature: Changed services

Updating discovery parameters on the fly
New service discovery feature: Changed services

Updating discovery parameters on the fly
New service discovery feature: Changed services

Updating discovery parameters on the fly
New service discovery feature: Changed services

Set-up cloud monitoring in minutes

Today
14:00 – 14:20

Wontek Hong
Tech Lead
Checkmk GmbH

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for automation and development

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Integrating Checkmk and Grafana
https://github.com/Checkmk/grafana-checkmk-datasource
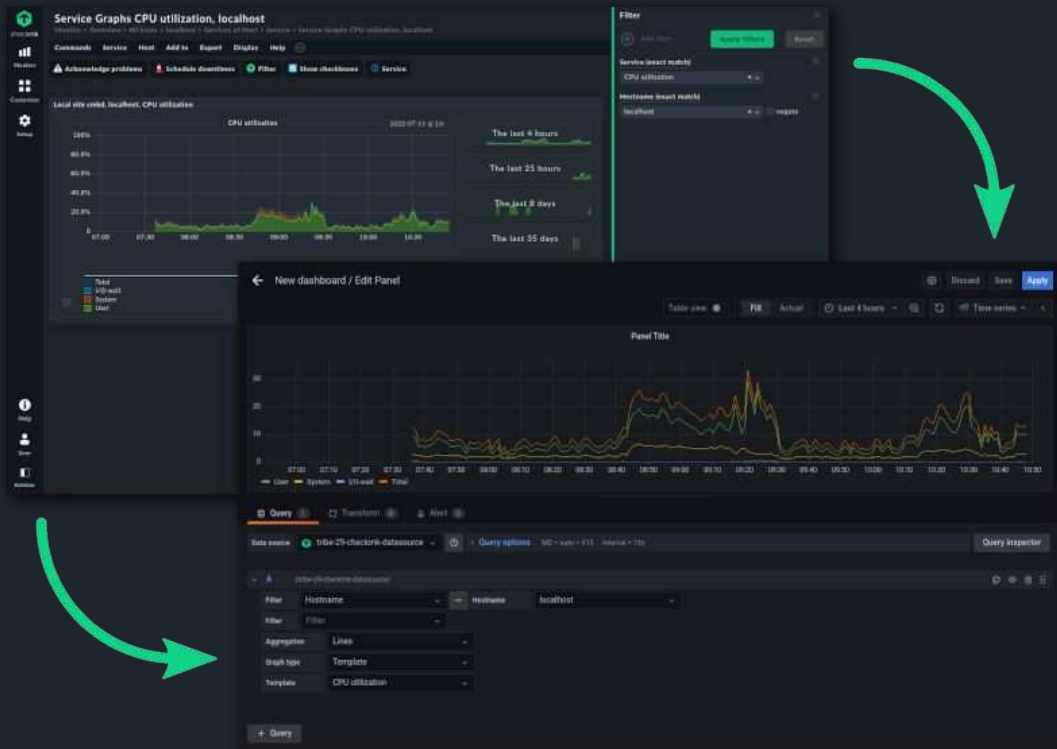
Developed by Checkmk

Open source

Available for free

Grafana Cloud requires officially 'signed' plug-ins

Developed by Checkmk

Open source

Requires Checkmk Cloud

Signed plug-in available for all CMK editions now
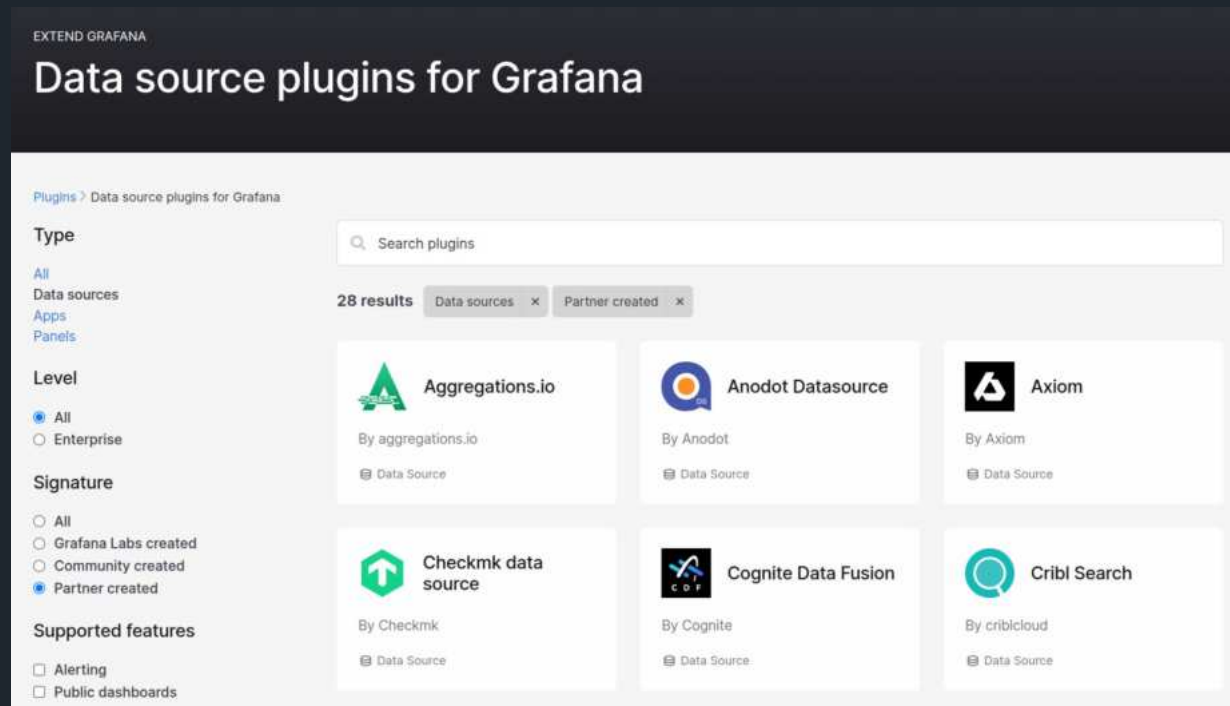
Developed by Checkmk

Open source

Available for all editions*

You'll love notifications with Checkmk!

Today
14:20 – 15:00

Tanja Hohenstatt
Team Lead UX Design
Checkmk GmbH

Our current focus for Checkmk

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**Extensible interfaces**
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Lifecycle of plug-in development APIs

Agent-based API v1 removed in 2.4.0!

1.6	2.0	2.1	2.2	2.3	2.4	2.5

Agent-based API v1

Agent-based API v2

Server-side calls API v1

Rulesets API v1

Graphing API v1

Agent bakery API v1

Supported   Deprecated   Depends

New REST API endpoints

LDAP Connections ⌄

POST Create an LDAP connection

GET Show all LDAP connections

DEL Delete an LDAP connection

PUT Update an ldap connection

GET Show an LDAP connection

SAML connections ⌄

POST Create a SAML connection

GET Show all SAML connections

DEL Delete a SAML connection

GET Show a SAML connection

Broker Connection ⌄

POST Create a peer to peer broker connection

GET Show all peer to peer broker connections

DEL Delete a peer to peer broker connection

PUT Edit a peer to peer broker connection

GET Show a peer to peer broker connection

Checkmk Conference #11

Activate changes endpoint reports details per site
Select REST-API improvements

```
"status_per_site": [
    {
        "site": "munich",
        "phase": "done",
        "state": "success",
        "status_text": "Success",
        "status_details": "Started at: 16:29:11. Finished at: 16:29:12.",
        "start_time": "2025-03-06T15:29:11.801165+00:00",
        "end_time": "2025-03-06T15:29:12.846029+00:00"
    },
    {
        "site": "atlanta",
        "phase": "done",
        "state": "success",
        "status_text": "Success",
        "status_details": "Started at: 16:29:11. Finished at: 16:29:15.",
...
```
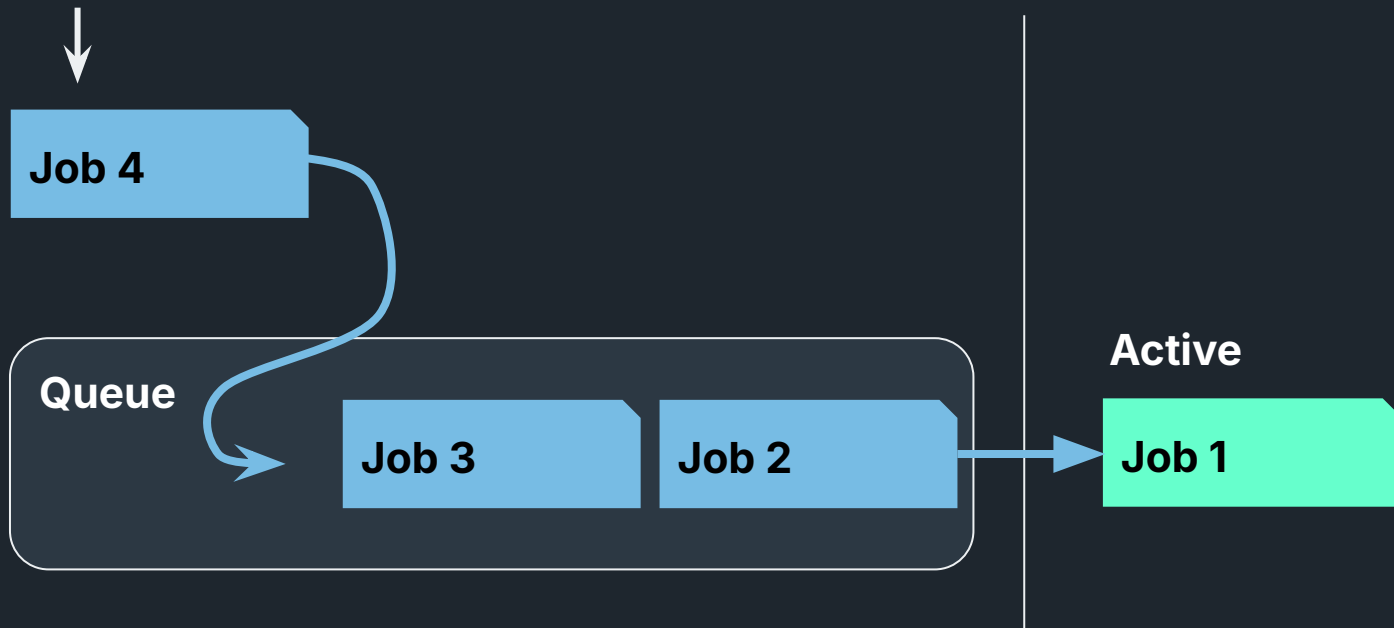
Enhanced bulk service discovery
Select REST-API improvements

Bulk service discovery call

Job 4

Queue

Job 3

Job 2

Active

Job 1

More performance for key endpoint 'Hosts'

POST Bulk create hosts

POST Bulk delete hosts

PUT Bulk update hosts

POST Create a cluster host

POST Create a host

GET Show all hosts

DEL Delete a host

GET Show a host

PUT Update a host

POST Move a host to another folder

PUT Rename a host

GET Wait for renaming process completion

PUT Update the nodes of a cluster host

Bulk update:
Plain higher efficiency

Show all hosts:
Filtering of result content for faster responses (I)

```
resp = session.get(

f"{API_URL}/domain-types/host_config/collections/all"
,
    params={
        "fields": '(value~id))',
    },
)
```

2.2x faster than with default fields

More performance for key endpoint 'Hosts'

POST Bulk create hosts	
POST Bulk delete hosts	
PUT Bulk update hosts	
POST Create a cluster host	
POST Create a host	
GET Show all hosts	
DEL Delete a host	
GET Show a host	
PUT Update a host	
POST Move a host to another folder	
PUT Rename a host	
GET Wait for renaming process completion	
PUT Update the nodes of a cluster host	

Bulk update:
Plain higher efficiency
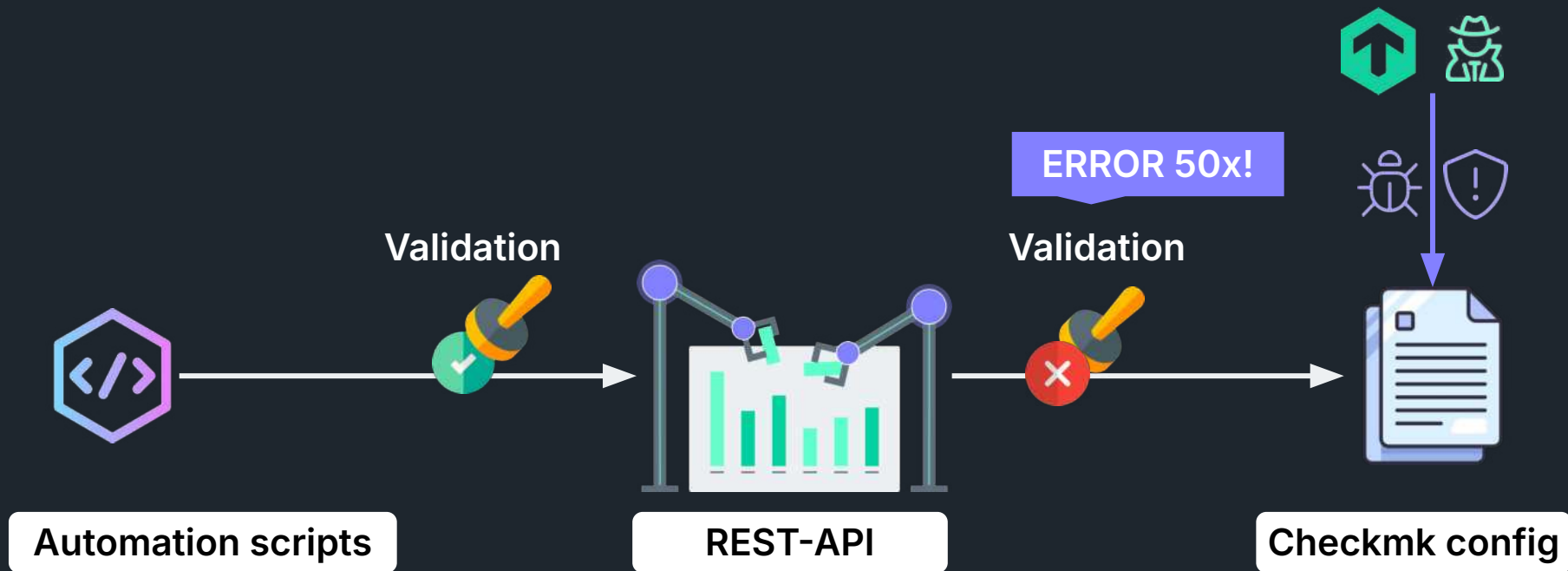
Show all hosts:
Filtering of result content for faster responses (II)

```python
resp = session.get(

f"{API_URL}/domain-types/host_config/collections/all"
,
    params={
        "hostnames": ['host1', 'host2'],
        "site": 'site1',
    },
)
```

Improving the runtime stability of Checkmk

ERROR 50x!

Validation

Validation

Automation scripts

REST-API

Checkmk config

Validation warns during update on inconsistencies

Config object (.mk)   **Update**

Users
User Roles
Contacts
Contact Groups
Host Groups
Host Tag Groups
Service Groups
Aux Tags
Passwords
Notification Rules
LDAP
Time Periods
Site Management
DCD

Config validation

```
We have identified an issue with the configuration of
your site.

Currently, this is a warning to make you aware of a
potential problem.
Our validation process checks your configuration files
against a work-in-progress internal representation.
In this case, we found at least one mismatch between
the two.

For now you can proceed with the update of your site.
However, in the future we will treat this as an error
and stop the update procedure.

The following mk files had issues during the
validation: ...
```

This is Checkmk 2.4 at a glance

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Product news
What's new in Checkmk – Version 2.4 at a glance

What's new in Checkmk – Version 2.4 at a glance

Discover the key highlights of the latest Checkmk release and how version 2.4 enhances your monitoring.

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Release Notes 2.4.0 - Technical details

Release Notes 2.4.0 – Technical details

Explore the full list of technical changes, improvements, and new features introduced in Checkmk 2.4.0.

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Simply smarter notifications – The new Checkmk Notification Hub

The new Checkmk Notification Hub

Checkmk 2.4 introduces a revamped notification system that's just as powerful as before — but far easier to use.

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Blog: How-to
Migrating to the new HTTP active Check

Migrating to the new HTTP active check

Learn how to migrate to the new HTTP active check with Checkmk 2.4.

Read More →

Product news
Update to Checkmk version 2.4.0

Update to Checkmk version 2.4.0

In this article, you'll find the key topics relevant for updating your Checkmk from version 2.3.0 to 2.4.0.

Read More →

Product news
The relevant werks for Checkmk 2.4.0

The relevant werks for Checkmk 2.4.0

Checkmk 2.4 includes more than 1,000 werks. Check out the most relevant changes.

Read More →

Plenty of resources!

https://checkmk.com/blog/checkmk-24-whats-inside-latest-release