

# 1. Check\_MK Konferenz

22. Oktober 2014



Mathias Kettner GmbH

Linux und Open Source



# Herzlich Willkommen in München!



# Unser Team





# Das Programm

7:30 - 9:30	Gemeinsames Frühstück im Konferenzhotel Für alle Teilnehmer, die inklusive Übernachtung gebucht haben
9:30 - 10:30	<b>Mathias Kettner</b> <a href="#">Ein Jahr Entwicklung - die wichtigsten Neuerungen in Check_MK - Teil 1</a>
15 Minuten Pause	
10:45 - 11:45	<b>Götz Golla (MK)</b> <a href="#">Ein Jahr Entwicklung - die wichtigsten Neuerungen in Check_MK - Teil 2</a>
15 Minuten Pause	
12:00 - 13:00	<b>Tobias Oetiker</b> <a href="#">RRDtool für Fortgeschrittene</a>
Gemeinsames Mittagessen im Konferenzhotel	
14:15 - 15:15	<b>Mathias Kettner</b> <a href="#">Der Check_MK Micro Core</a>
15 Minuten Pause	
15:30 - 16:30	<b>Sascha Brechmann</b> <a href="#">Konfigurationsmanagement mit Puppet: Einführung / Best Practices</a>
30 Minuten Pause	
17:00 - 18:00	<b>Lars Michelsen (MK)</b> <a href="#">Check_MK virt1/rail1/rack1 - Die neue Check_MK Appliance</a>
75 Minuten Pause	
19:15 - 22:30	Abendprogramm

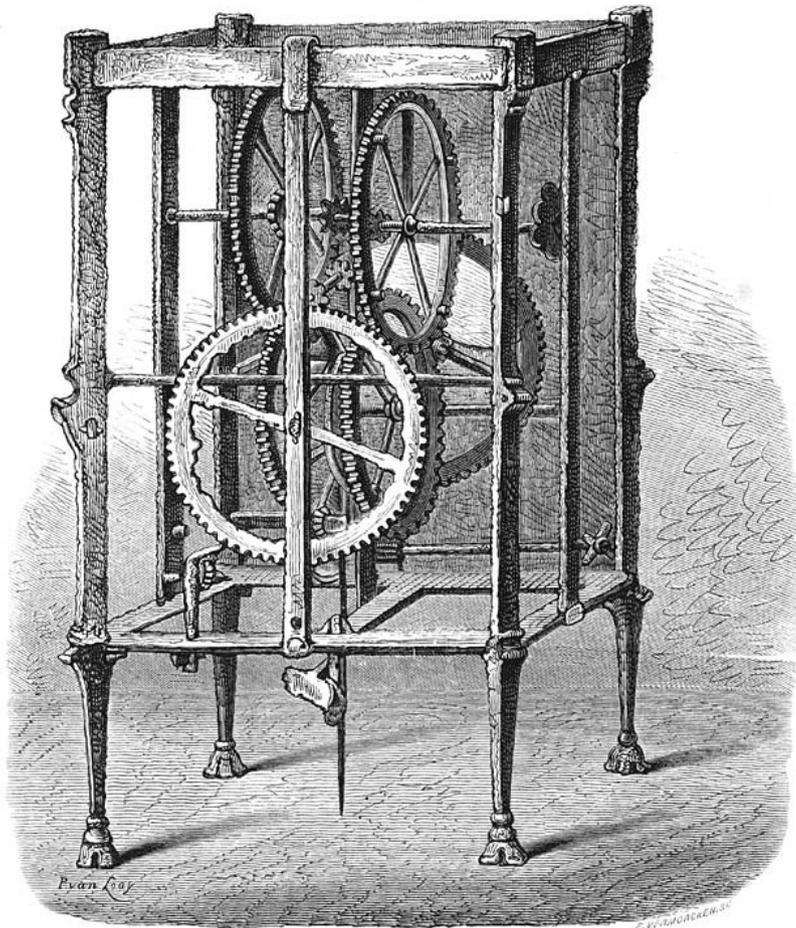


7:30 - 9:30	Gemeinsames Frühstück im Hotel Für Teilnehmer, die im Konferenzhotel übernachten
9:30 - 10:30	<b>Hubert Bösl (Flughafen München)</b> <a href="#">Eventbasiertes Monitoring mit Check_MK beim Flughafen München</a>
15 Minuten Pause	
10:45 - 11:45	<b>Robert Sander (Heinlein Support GmbH)</b> <a href="#">Alarmierung der Extraklasse - die neuen regelbasierten Notifizierungen</a>
15 Minuten Pause	
12:00 - 13:00	<b>Daniel Kirsten (Synetics)</b> <a href="#">Die i-doit CMDB in Kombination mit Check_MK - vom Monitoring zum IT-Service</a>
Gemeinsames Mittagessen im Konferenzhotel	
14:15 - 15:15	<b>Thorsten Bruhns (OPITZ CONSULTING Deutschland GmbH)</b> <a href="#">Das neue ORACLE-Monitoring von Check_MK</a>
15 Minuten Pause	
15:30 - 16:30	<b>Götz Golla (MK)</b> <a href="#">Check_MK Inventory - Hardware- und Software-Inventarisierung mit Check_MK</a>
15 Minuten Pause	
16:45 - 17:45	<b>Bastian Kuhn (MK)</b> <a href="#">Verteiltes Monitoring - Vor-/Nachteile verschiedener Architekturen, Best Practises</a>



## Neuigkeiten in Check\_MK

### Teil 1



# *Die Werks*



Ein „Werk“ (Englisch: „Werk“)...

- ...ist eine für den Benutzer sichtbar Änderung
- ... hat eine Nummer
- ... hat einen Eintrag im ChangeLog



Nummern der Werks:

- #0001 bis #7999 - Check\_MK Projekt
- #8000 bis #8999 - Check\_MK Monitoring System
- #9000 bis #9999 - Check\_MK Appliance



## Drei Stufen von Werks

- Stufe 1: **Trivial Change**  
Betrifft maximal 5-10% der Anwender
- Stufe 2: **Prominent Change**  
Ist für viele Anwender interessant
- Stufe 3: **Major Feature**  
Große neue Dinge, maximal 10 pro Jahr



## Klassifizierung von Werks

- New Feature
- Bug Fix
- Security Fix



Inkompatible Werks:

Aufmerksamkeit des Anwenders nötig!

- evtl. Neu-Inventurisierung nötig
- evtl. Anpassungen der Konfiguration nötig
- sollte man immer sorgfältig ansehen



 English Visitors  
please click here.

 Check\_MK

 Schulungen

 Über uns

## Check\_MK Changes - Werks

The software development of Check\_MK is organized in so called *Werks*. A Werk is any change or bug fix that has influence on the user's experience. Each Werk has a unique ID, one of the levels *Trivial Change*, *Prominent Change* or *Major Feature* and one of the classes *Bug Fix*, *Feature* or *incompatible Change*. Whenever you make an update to a new Check\_MK version please make sure that you have understood all incompatible changes. You might have to adapt your configuration. If you like to get informed about new werks, you can subscribe to [various mailinglists](#) which inform you about werks of specific levels.

### Version 1.2.5i6

#### Friday, 17.10.2014

[#1130](#) checks: esx monitoring: agent\_vsphere now retrieves additional data (used by HW-inventory) Trivial Change  
New Feature

#### Thursday, 16.10.2014

[#1413](#) inv: HW/SW-Inventory implementation step one finished Major Feature  
New Feature

[#1412](#) multisite: Speed up of displaying and sorting after WATO folder path Trivial Change  
New Feature

[#0661](#) inv: HW/SW-Inventory: install date of software packages no longer in unix timestamps but date format Trivial Change  
New Feature incompatible

#### Wednesday, 15.10.2014

[#1187](#) checks: Hivemanager: Extended Check and Agent Trivial Change  
New Feature

[#1159](#) wato: Remote BI Aggregations can now be configured to be checked as single services Trivial Change

### Navigation:

[Überblick](#)

[Das Check\\_MK Projekt](#)

[Download](#)

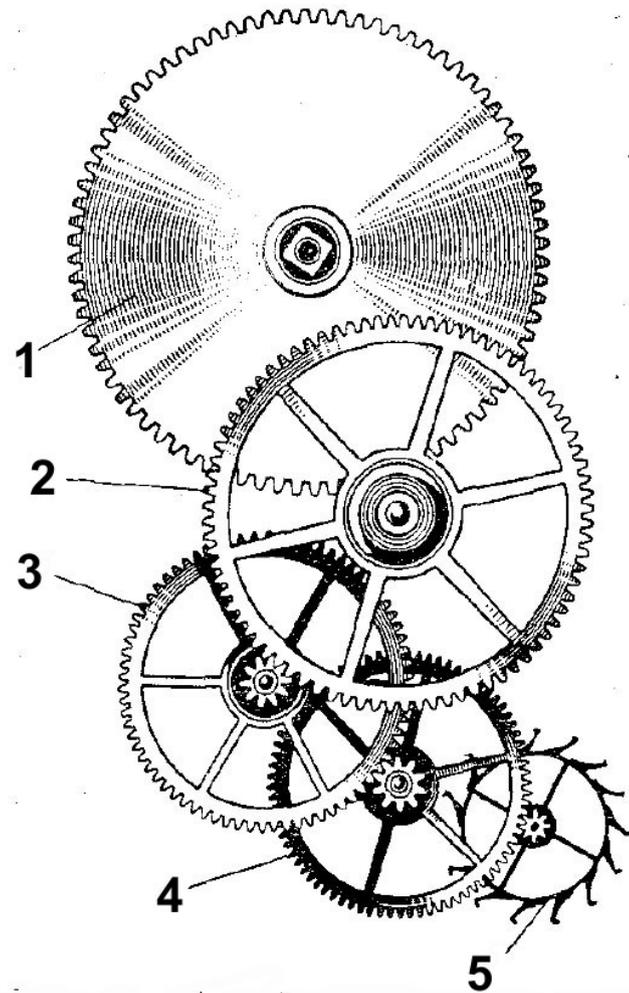
[Dokumentation \(Englisch\)](#)

[Mailinglisten](#)

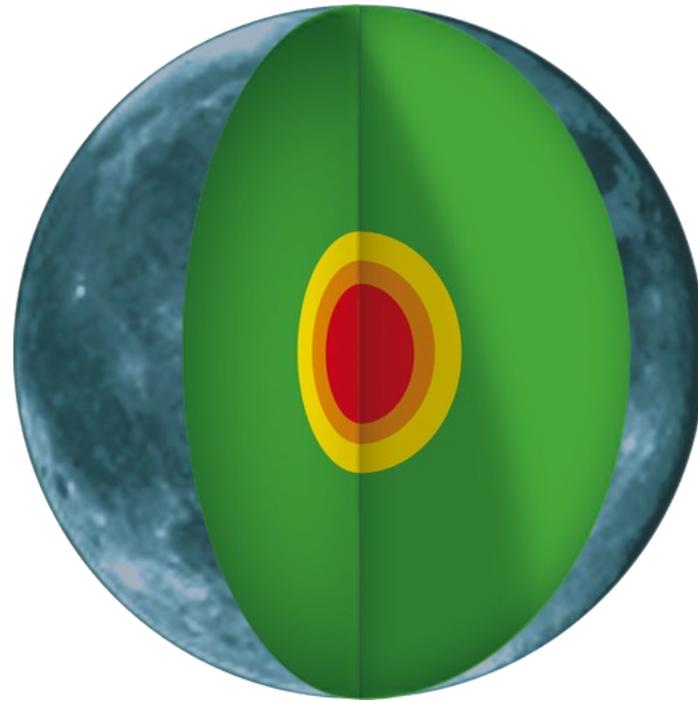
[Änderungshistorie \(Werks\)](#)

[Bekannte Fehler & Feedback](#)

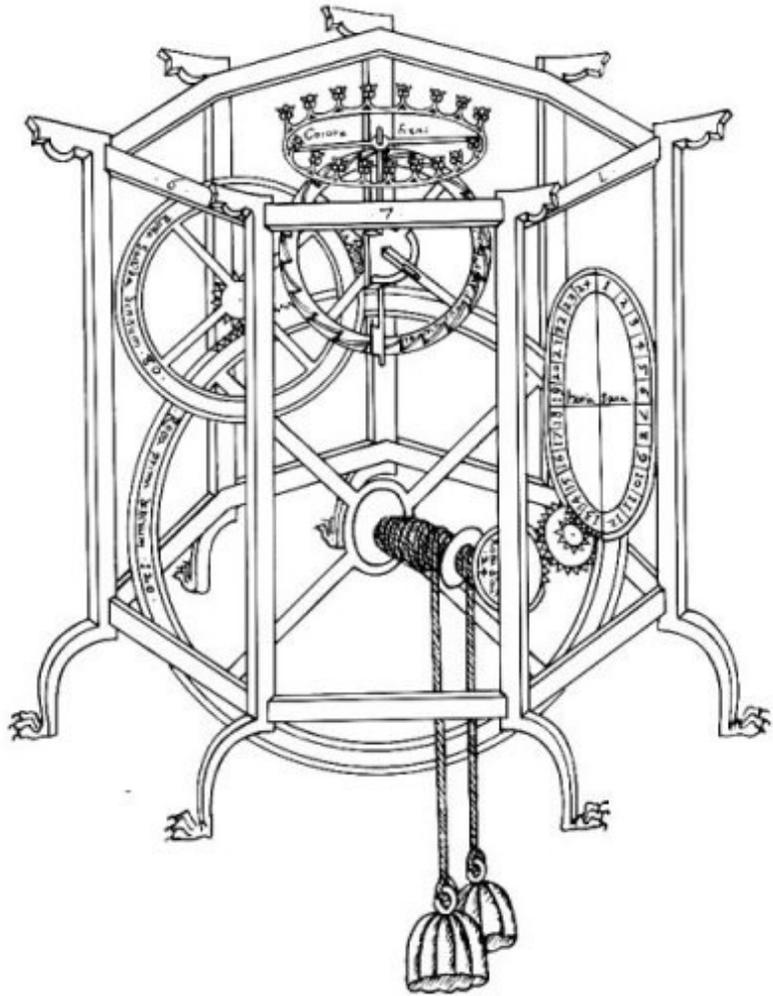
[Öffentliches GIT-Archiv](#)



# *Der Dashboard Designer*



## Live Demonstration



# *Die Agent Bakery*



Der Check\_MK Agent ist einfach, aber

- Manchmal ist Konfiguration notwendig
- Manchmal sollen Plugins mitinstalliert werden
- Manchmal soll das pro Host unterschiedlich sein



## Möglichkeiten zum Ausrollen

- Von Hand installieren und anpassen
- Puppet
- Eigene Skripte
- etc...



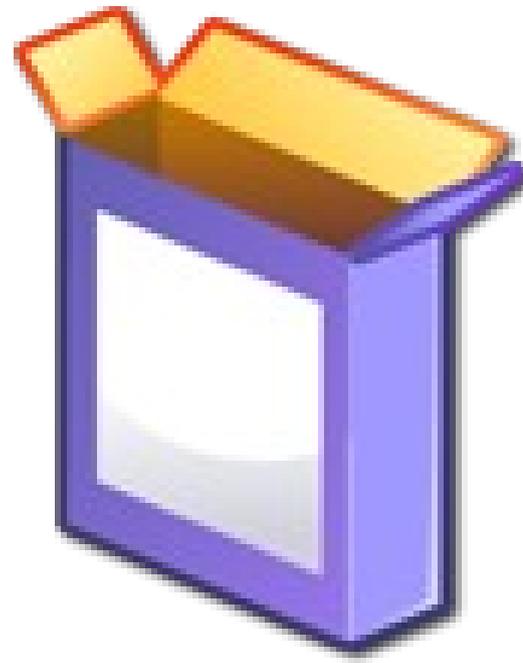
## Jetzt neu: Die Check\_MK Agent Bakery

- Konfiguration der Agenten über WATO
- WATO erstellt DEB / RPM / MSI
- Das Ganze auch Host-spezifisch
- über eine URL abrufbar



## Aktueller Stand der Implementierung

- Für Linux komplett
- Bei Windows fehlen noch die Plugins und einige Einstellungen in `check_mk.ini`
- UNIX fehlt noch (Tarballs)
- Benötigt Subskription



## Live Demonstration



## Nächste Schritte

- UNIX und Windows komplett machen
- Kryptografische Signatur
- Skript für den Client, zum Aktualisieren



WATO

*WATO*

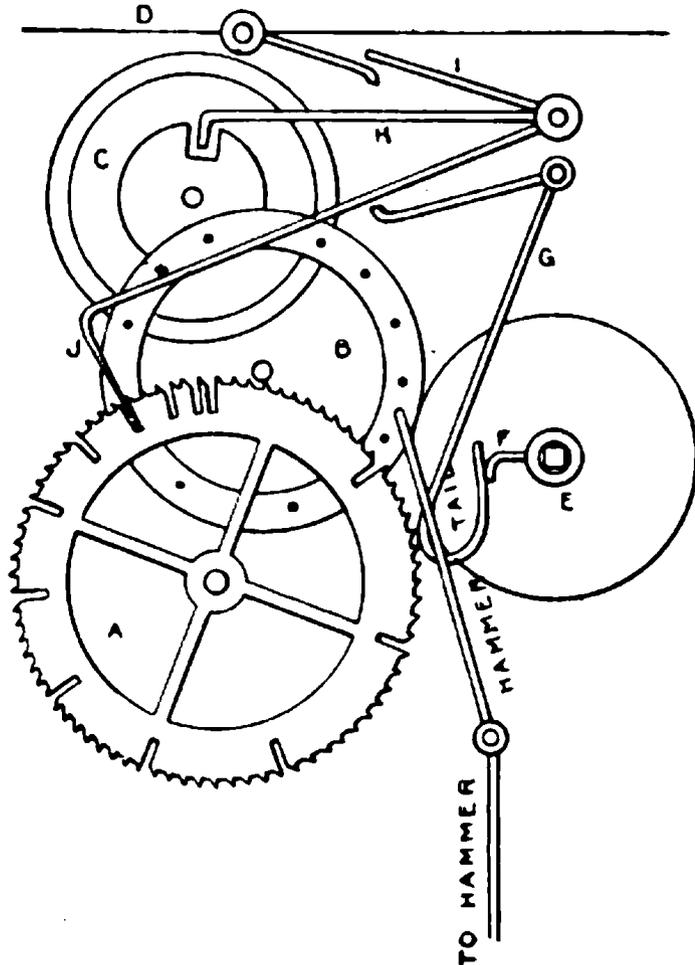


Fig. 64.—American Striking Work



- WATO hat zahlreiche Verbesserungen erfahren
- Wir stellen hier einige davon vor



## Werk #0244: Neue Backup-Funktion

Backup & Restore omdadmin (admin) 16:38 MK

[Main Menu](#) [No Changes](#) [Factory Reset](#)

▼ Create snapshot

Elements to save .....

Configuration

- Automatically Detected Services
- Event Console Configuration
- Hosts, Services, Groups, Timeperiods, Business Intelligence and Monitoring Configuration
- Local Authentication Data

Historic Data

- Application Logs
- Event Console Archive and Current State
- Logwatch Data
- Monitoring History
- Performance Data

Other

- Doku Wiki Pages and Settings
- NagVis Maps, Configurations and User Files
- Personal User Settings and Custom Views
- Stored SNMP Walks

Comment

Create snapshot

Restore from uploaded file

Only supports snapshots up to 100MB. If your snapshot is larger than 100MB please copy it into the sites backup directory /omd/sites/htdocs/var/check\_mk/wato/snapshots. It will then show up in the snapshots table



## Werk #0112: Clustered Services Of...

It's possible to have clusters that share nodes. You could say that such clusters "overlap". In such a case using the ruleset *Clustered services* is not sufficient since it would not be clear to which of the several possible clusters a service found on such a shared node should be assigned to. With this ruleset you can assign services and explicitly specify which cluster assign them to.

▼ Conditions

Folder ..... Main directory ▾

Host tags ..... Agent type: ignore ▾

Criticality: ignore ▾

Networking Segment: ignore ▾

monitor via SNMP: ignore ▾

monitor via Check\_MK Agent: ignore ▾

Explicit hosts .....  Specify explicit host names

Services .....  Specify explicit values

.\*WPA17.\*

▼ Clustered services for overlapping clusters

Assign services to the following cluster: xycluster05

▶ Additional options



## Werk #0114: User Custom Attributes

Create User Attribute omdadmin (admin) 16:48

[← User Attributes](#)

▼ Properties

Name .....	<input type="text" value="phone"/>
Title* .....	<input type="text" value="Telefonnummer"/>
Topic .....	<input type="text" value="Personal Settings"/>
Help Text* .....	<input type="text" value="Die Telefonnummer des Benutzers (nur die Durchwahl)"/>
Data type .....	<input type="text" value="Simple Text"/>
Editable by Users .....	<input checked="" type="checkbox"/>
Show in Table .....	<input type="checkbox"/>
Add as Custom Macro .....	<input checked="" type="checkbox"/>

\*These texts may be localized depending on the users' language. You can configure the localizations [in the global settings](#).



## Werk #0448: Show Check Parameters in WATO

Services of host localhost (might be cached data) omdadmin (admin) 16:50

[Folder](#) [Status](#) [Properties](#) [Parameters](#)  
[Diagnostic](#) [Full Scan](#)

[Save manual check configuration](#) [Automatic Refresh \(Tabula Rasa\)](#) [Hide Check Parameters](#)

Already configured services

Status	Checkplugin	Item	Service Description	Plugin output	Check Parameters			
OK	cpu.loads	None	CPU load	15min load 0.77 at 2 CPUs	5.00 per core, 10.00 per core			<input type="checkbox"/>
OK	cpu.threads	None	Number of threads	437 threads	2000 threads, 4000 threads			<input type="checkbox"/>
OK	cups_queues	bunt	CUPS Queue bunt	is idle. enabled since Fri Jan 3 19:53:45 2014 - Jobs: 0				<input type="checkbox"/>
OK	cups_queues	fax	CUPS Queue fax	is idle. enabled since Mon Mar 10 10:44:36 2014 - Jobs: 0				<input type="checkbox"/>
OK	df	/	fs_/	69.6 % used (73.89 of 106.20 GB), (levels at 80.00/90.00 %), trend: 0.00 B / 24 hours, inodes available 6364k/89 92 %	Levels for filesystem: used space Percentage used space 80.0%, 90.0% 20 GB Reference size for magic factor: Minimum 50.0%,			<input type="checkbox"/>



## Werk #0454: Traceroute in Diagnostic Page

Datasource Program (Rules)

Test

SNMPv2c

✗ Got empty SNMP response

SNMPv2c (without Bulkwalk)

✗ Got empty SNMP response

Traceroute

✓ traceroute to 2.20.143.5 (2.20.143.5), 30 hops max, 60 byte packets

1	10.10.0.1	5.092 ms	5.159 ms	13.103 ms
2	213.148.133.205	62.439 ms	62.957 ms	63.054 ms
3	87.234.13.193	32.917 ms	33.940 ms	34.890 ms
4	87.234.12.209	43.048 ms	44.740 ms	47.931 ms
5	80.81.192.168	48.468 ms	54.169 ms	54.580 ms
6	2.20.143.5	55.132 ms	52.067 ms	52.651 ms

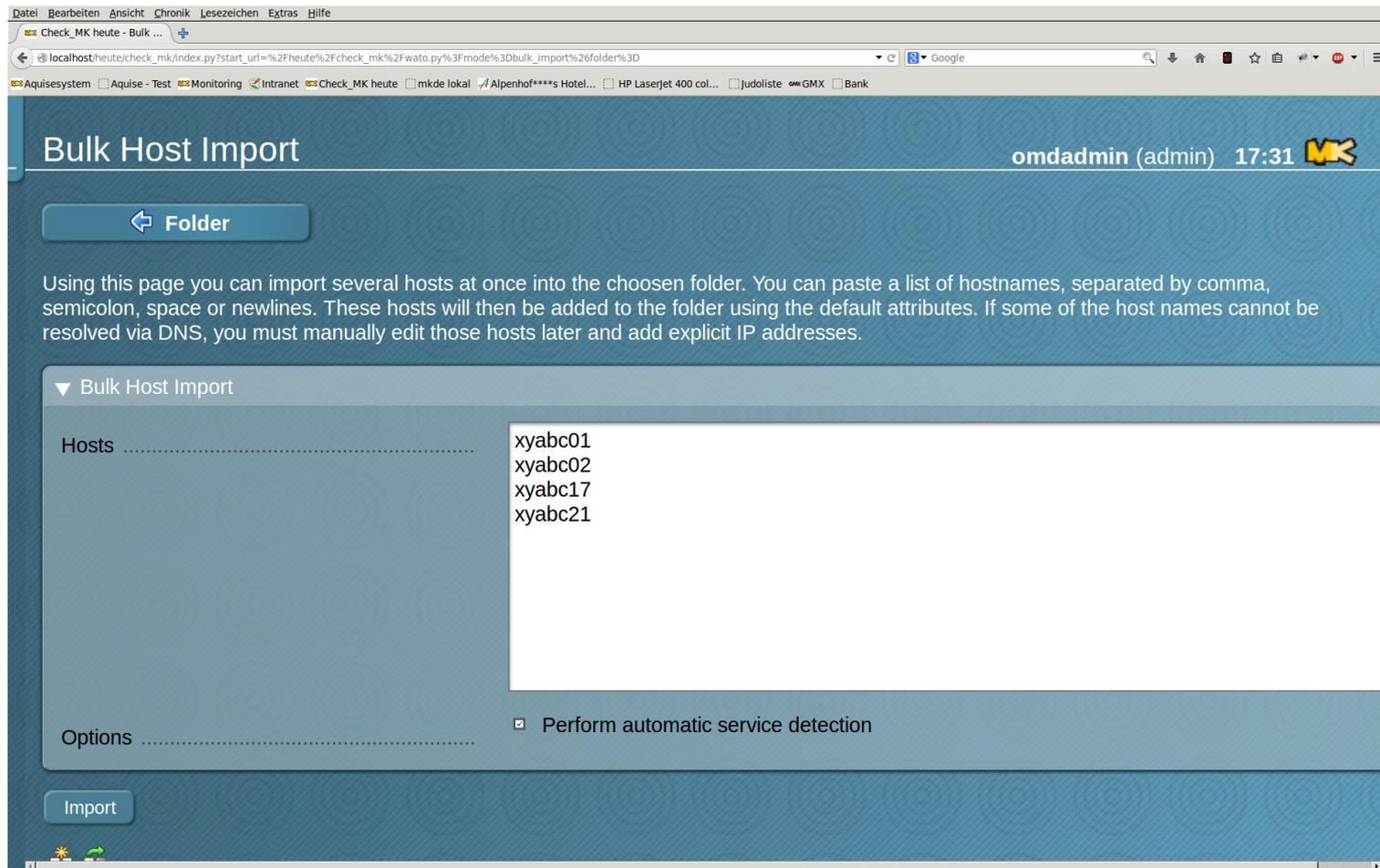


## Werk #0687: Summary Page with Settings...

The screenshot shows the WATO interface for the 'Parameters of localhost / CPU load' page. At the top, there is a breadcrumb 'Parameters of localhost / CPU load' and a user session 'omdadmin (admin) 16:57' with the MK logo. Below this are navigation buttons: 'Folder', 'Status', 'Host-Properties', 'Services', and 'Host-Diagnostic'. The main content area is divided into sections: 'Check Origin and Parameters', 'Event Console', 'Grouping', and 'Monitoring Configuration'. The 'Check Origin and Parameters' section shows 'CPU load (not utilization!)' with a rule 'Rule 1 in Main directory' and an 'Inventorized check' with various settings like 'Base prediction on: Day of the week (1-7, 1 is Monday)', 'Time horizon: 90 days', and 'Dynamic levels - upper bound: Absolute difference from prediction, 2.00 above predicted value, 4.00 above predicted value'. The 'Monitoring Configuration' section lists various settings such as 'Clustered services', 'Disabled services', 'Alternative display name for Services', 'Delay service notifications', 'Enable/disable flapping detection for services', 'Enable/disable notifications for services', 'Notes URL for Services', 'Notification period for services', and 'Notified events for services', each with a 'Default Value' and a toggle icon.



## Werk #0761: Bulk import of hosts in WATO





## Werk #0965: Cumulative Permissions on Folders

The screenshot shows the 'Folder Properties' dialog box in WATO. The 'Title' field is 'Main directory'. Under 'Basic settings', the 'Permissions' section is expanded. A red oval highlights the following options:

- Die Linux Admins
- Die Netzwerker
- Die Windows Admins
- Everybody
- Give these groups also **permission on all subfolders**
- Add these groups as **contacts** to all hosts in this folder
- Add these groups as **contacts in all subfolders**

Other settings visible include 'SNMP Community' and 'Parents', both set to 'empty (Default value)'.



## Werk #0973: Renaming of Hosts

The screenshot shows the WATO web interface for host management. The title bar reads "Properties of host Gaxl556". The user is logged in as "omdadmin (admin)" at "17:37". The interface includes several action buttons: "Folder", "Status", "Services", "Parameters", "Rename Host", "Diagnostic", and "Update DNS Cache".

Renamed host **localhost** into **Gaxl556** at the following places:

- The WATO folder
- 11 BI rules and aggregations
- Auto-discovered services of the host
- Cached output of monitoring agents
- Files with performance counters
- Logfile information of logwatch plugin
- RRD databases with performance data
- RRD updates in journal of RRD Cache
- Monitoring history entries (events and availability)
- The current monitoring state (including acknowledgements and downtimes)

**WARNING:** the IP address lookup of Gaxl556 has failed. The core has been started by using the address 0.0.0.0 for the while. You will not be able to activate any changes until you have either updated your DNS or configured an explicit address for Gaxl556.



## Werk #0976: Show output of active checks

Status	Checkplugin	Item	Service Description	Plugin output	Check Parameters			
OK	nfsexports	/foot	NFS export /foot	export is active				
OK	ntp.time	None	NTP Time	sys.peer - stratum 1, offset -0.33 ms, jitter 11.73 ms, last reached 75 secs ago (synchronized on 193.175.73.151)	10, 200.00 ms, 500.00 ms			
OK	omd_status	neu	OMD neu status	all services are running				
OK	postfix_mailq	None	Postfix Queue	The mailqueue is empty	10 mails, 20 mails			
OK	tcp_conn_stats	None	TCP Connections	ESTABLISHED: 15, TIME_WAIT: 8	(no parameters)			
OK	uptime	None	Uptime	up since Sat Oct 18 15:34:39 2014 (0d 02:05:45)	(no parameters)			
<b>Active checks</b>								
CRIT	ftp	FTP	FTP	Connection refused	(no parameters)			
OK	http	HTTP Homepage	HTTP Homepage	HTTP OK: HTTP/1.1 200 OK - 454 bytes in 0.001 second response time	Homepage, (no parameters)			
OK	icmp	PING	PING	OK - 127.0.0.5: rta 0.068ms, lost 0%	Round trip 0.05 ms, average: 0.10 ms			
CRIT	tcp	TCP Port 1	TCP Port 1	Connection refused	1, (no parameters)			

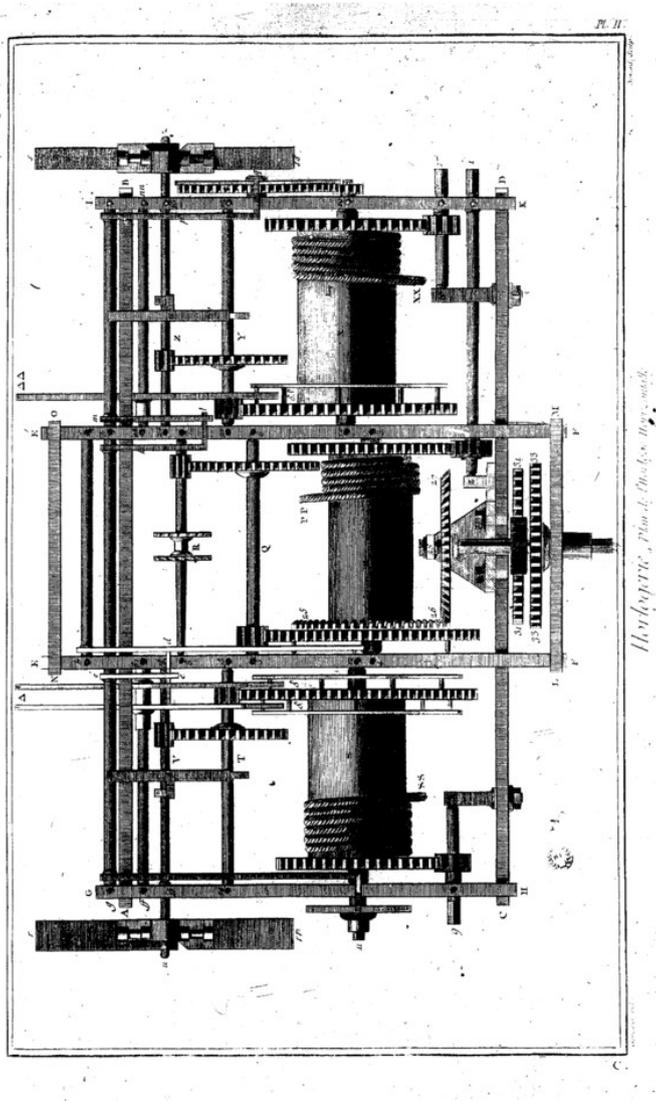


Noch ein paar Dinge:

- Passwort-Änderungen werden sofort verteilt
- Viele Sicherheits-Fixes
- Host-Verwaltung per Webservice (JSON/Python)



WATO



# *Business Intelligence*



BI berücksichtigt jetzt auch:

- Scheduled Downtimes
- Acknowledgements
- Hard-States



BI

File Edit View Chronik Lesezeichen Extras Hilfe

Check\_MK heute - Aggr...

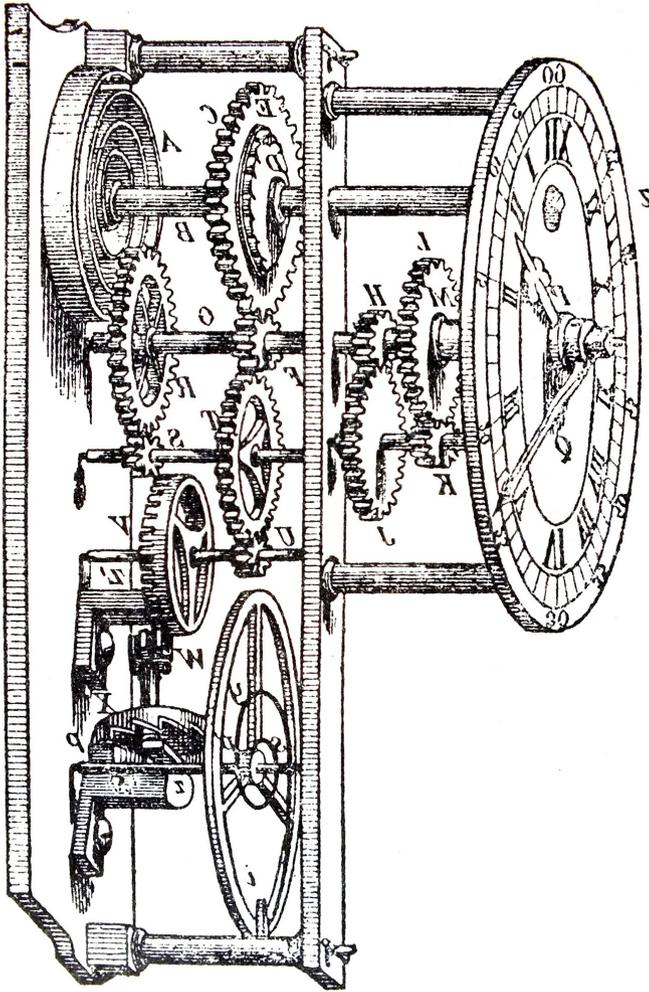
localhost/heute/check\_mk/index.py?start\_url=%2Fheute%2Fcheck\_mk%2Fview.py%3Fview\_name%3Daggr\_host

Aquisesystem Aqise - Test Monitoring Intranet Check\_MK heute mkde lokal Alpenhof\*\*\*\*s Hotel... HP Laserjet 400 col... Judoliste GMX Bank

- CR Networking
- CR Logfiles

- OK LOG /omd/sites/aq/var/log/liveproxyd.log ♦ OK - no error messages
- OK LOG /omd/sites/aq/var/log/livestatus.log ♦ OK - no error messages
- OK LOG /omd/sites/aq/var/log/nagios.log ♦ OK - no error messages
- OK LOG /omd/sites/aq/var/log/rrdcached.log ♦ OK - no error messages
- OK LOG /omd/sites/aq/var/log/update.log ♦ OK - no error messages
- CR LOG /omd/sites/heute/var/log/cmc.log ♦ CRIT - 1 CRIT, 68 WARN messages (Last worst: "2014-10-18 17:49:41 [5] Executing external command: ACKNOWLEDGE\_SVC\_PROBLEM;Gaxl556;NFS export /foot;2;1;0;omdadmin;Ist bekannt")
- WA LOG /omd/sites/heute/var/log/cmcrushd.log ♦ WARN - 10 WARN messages (Last worst: "\*\*\*\* ACHTUNG \*\*\* 2014-10-18 17:34:12.032628 Pre-creating configuration for CMC for change id 97727270460379881... \*\*\* ENDE \*\*\*\*")
- OK LOG /omd/sites/heute/var/log/diskspace.log ♦ OK - no error messages
- OK LOG /omd/sites/heute/var/log/liveproxyd.log ♦ OK - no error messages
- WA LOG /omd/sites/heute/var/log/mkeventd.log ♦ WARN - 4 WARN messages (Last worst: "\*\*\*\* ACHTUNG \*\*\* [1413643058.868429] Executing command: RELOAD \*\*\* ENDE \*\*\*\*")
- OK LOG /omd/sites/heute/var/log/nagios.log ♦ OK - no error messages
- OK LOG /omd/sites/heute/var/log/rrdcached.log ♦ OK - no error messages
- OK LOG /omd/sites/neu/var/log/diskspace.log ♦ OK - no error messages
- OK LOG /omd/sites/neu/var/log/liveproxyd.log ♦ OK - no error messages
- OK LOG /omd/sites/neu/var/log/livestatus.log ♦ OK - no error messages
- WA LOG /omd/sites/neu/var/log/nagios.log ♦ WARN - 1 WARN messages (Last worst: "\*\*\*\* ACHTUNG \*\*\* [1413644710] SERVICE ALERT: localhost;LOG /omd/sites/heute/var/log /diskspace.log;OK;HARD;1;OK - no error messages \*\*\* ENDE \*\*\*\*")

CRIT



# *Availability*

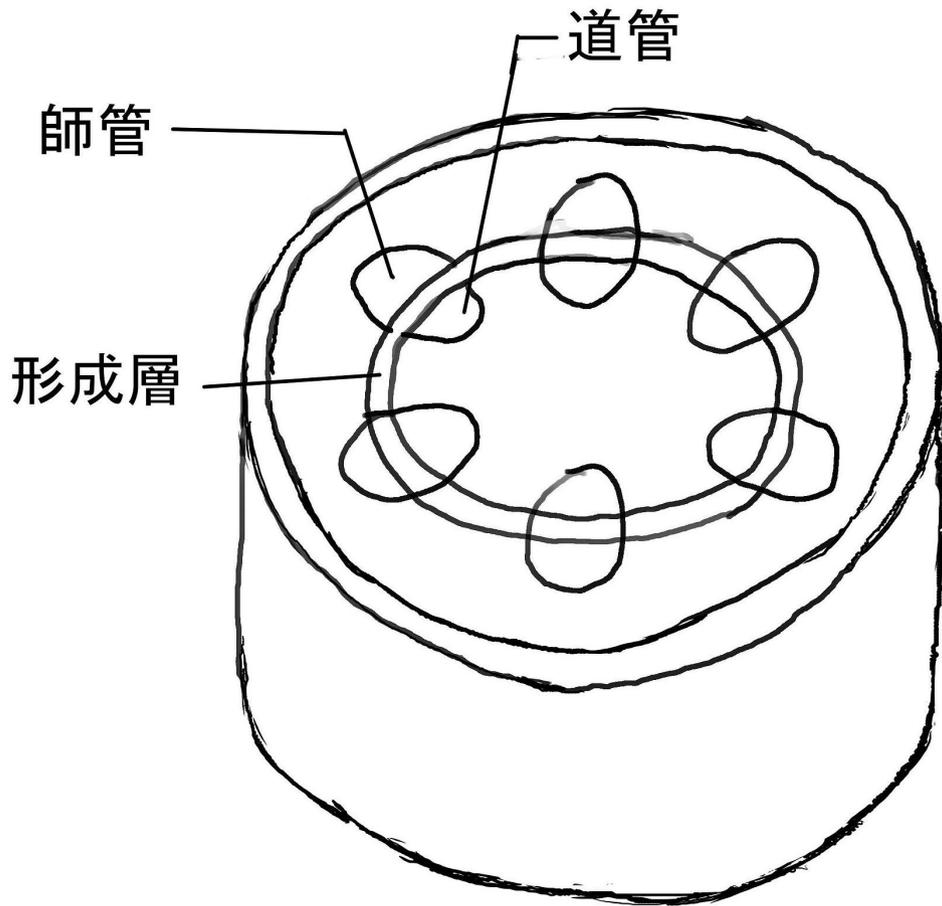


# Availability

Werk #0756: Mehrere BI-Aggregate auf einmal

Werk #0966: CSV-Export einer AV-Tabelle

Werk #0985: Häufige Zustandswechsel  
werden als "Chaos" dargestellt (lila)



## *Micro Core*



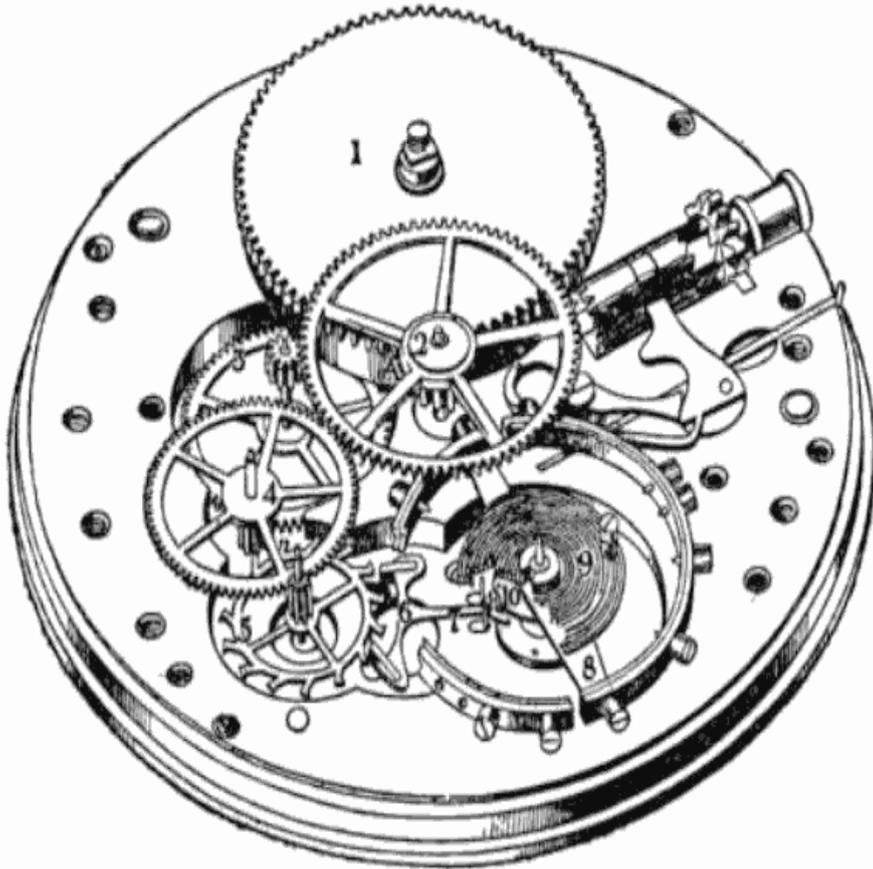
## Availability Cache

- Interner Cache über Alert-Historie
- Drastische Beschleunigung der Availability
- Liest Logfiles einmalig mit ca. 50 MB/sec ein
- Spätere Abfragen ohne spürbare Wartezeit
- Per Default noch aus, aber bald stellen wir um



## Weitere wichtige Änderungen seit 1.2.4

- Anbindung von Graphite
- Freshness Checking
- Etliche zusätzliche Notification-Variablen



# *Reporting*



- Erzeugung von PDF-Dokumenten
- Inhalt variabel definierbar
  - Fixe Elemente wie Logos, Seitenzahlen, etc.
  - Eigentliche Inhalte wie:
    - Views
    - PNP-Graphen
    - Verfügbarkeittestabellen
    - Fließtext
    - In Zukunft noch weitere Elemente...



Ein Bericht hat einen **Kontext**, z.B.:

- Bericht über einen einzelnen Host
- Bericht über einen Service auf einem Host
- Sammelbericht über alles mögliche

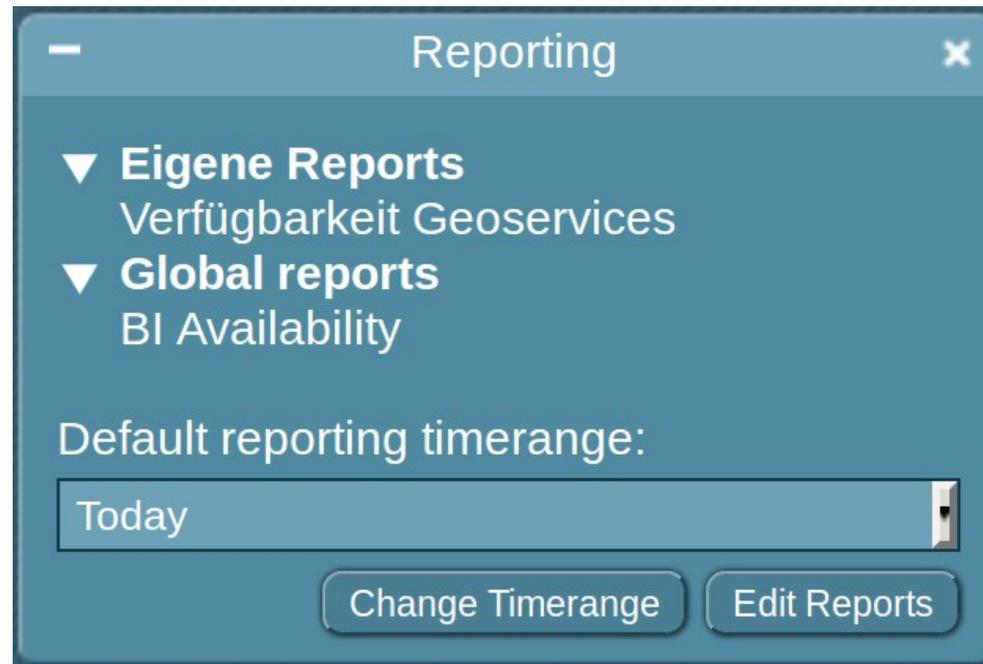


Angabe des Kontextes:

- Im Bericht fest einkonfiguriert
- Durch die Umgebung gewählt
- Im Berichtsplaner eingestellt (Zukunft)
- Eine Kombination davon



# Reporting



## Live Demonstration



**Vielen Dank  
für Ihre  
Aufmerksamkeit**

