

# CHECK\_MK

## CONFERENCE #3



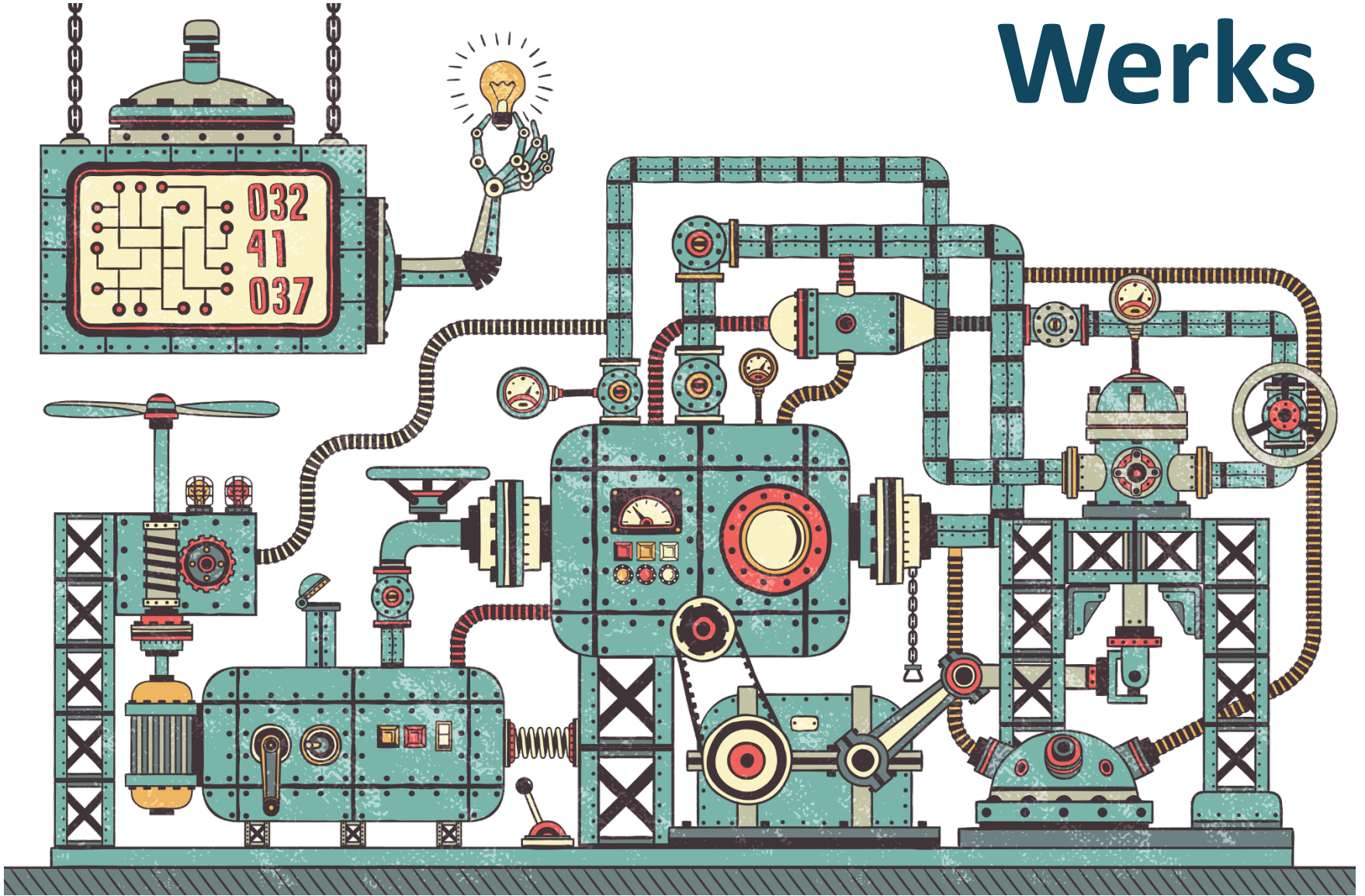
CHECK\_MK  
CONFERENCE #3



# News in WATO

Marcel Schulte & Marcel Arentz

# Werks



# Activate Changes

#4075

- Complete Rework of Activate Changes
- Bulk activation, comments, etc
- Activations in parallel





# Werk #4075

Activate pending changes

omdadmin (admin) 13:08

Main Menu

Site Configuration

Audit Log

▼ Activate pending changes

Comment (optional) .....

Activate affected

Activate selected

Activation status

	Actions	Site	Status	Version	Changes	Last result
<input type="checkbox"/>		Der Master	<span>online</span>	2017.04.23	1	Has never been activated
		Der Slave 1	<span>online</span>	2017.04.23	0	Has never been activated
<input type="checkbox"/>		Der Slave 2	<span>online</span>	2017.04.23	2	Has never been activated
		Der Slave 3	<span>online</span>	2017.04.23	0	Has never been activated

Pending changes

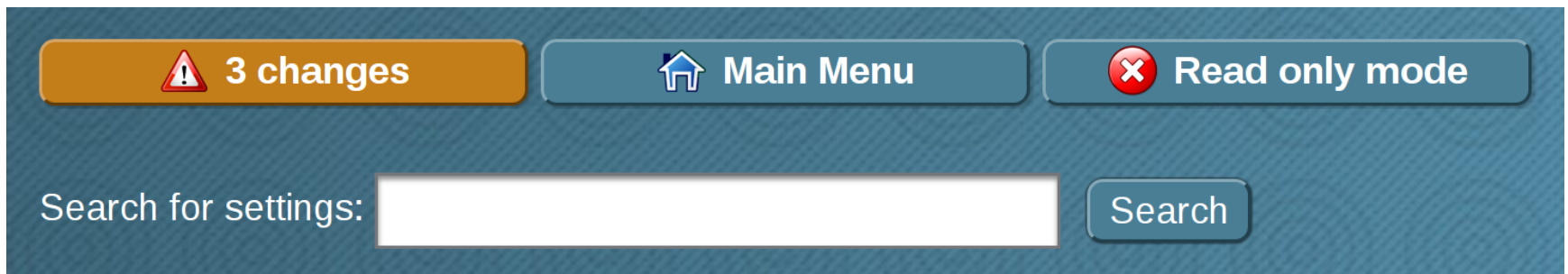
Object	Time	User	Affected sites	Change
	2017-04-23 13:08:28	omdadmin	heute_slave_2	Created new host heute_slave_2.
	2017-04-23 13:08:03	omdadmin	heute_slave_2	Created new folder Main directory / slave_2
	2017-04-23 12:58:28	omdadmin	heute	Modified host heute.



# Activate Changes

#4227

- Activate Changes can now be locked:



The screenshot shows a user interface for managing changes. At the top, there is a blue header with the text "Activate Changes" and "#4227". Below this, a list item states "- Activate Changes can now be locked:". The main interface is a dark blue panel with a grid pattern. It features three buttons at the top: a yellow button with a warning icon and "3 changes", a blue button with a home icon and "Main Menu", and a blue button with a red 'X' icon and "Read only mode". Below these buttons is a search bar with the text "Search for settings:" and a "Search" button.



# Werk #4227

▼ Read only mode

Enabled .....

Enabled in time range▼

Disabled


Enabled permanently

Enabled in time range

Until 2017 5 4 11 52 11

Can still edit .....

Users listed here are still allowed to modify things.

 omdadmin - omdadmin▼

Add user

Message .....



# Service Discovery

#4319

#3472

- Complete Rework of Service Discovery dialog
- Easier to work with discovered services
- Vanished services more prominent on top



# Werks #4319 #3472

Services of host heute (might be cached data)

omdadmin (admin) 13:32

No changes

Main Menu

Folder

Status

Properties

Parameters

Diagnostic

Fix all missing/vanished

Automatic refresh (tabula rasa)

Full scan

Show checkboxes

Show check parameters

Undecided services (currently not monitored)

	State	Service	Status detail	Check plugin
	OK	File /etc/passwd	Size: 3224 B, Age: 34 min	fileinfo
	OK	Filesystem /	60.4% used (10.62 of 17.59 GB), trend: 0.00 B / 24 hours	df
	OK	Interface 2	[eth0] (up) speed unknown	Inx_if

Monitor

Disable

Vanished services (monitored, but no longer exist)

	State	Service	Status detail	Check plugin
	UNKN	My_Service	No data found in agent output	local

Remove

Disable

Monitored services

Move to undecided

Disable

	State	Service	Status detail	Check plugin
	PEND	Apache 127.0.0.1:80 Status	WAITING - Counter based check, cannot be done offline	apache_status
	OK	CPU load	15 min load 0.58 at 4 Cores (0.14 per Core)	cpu.loads
	OK	CPU utilization	user: 5.8%, system: 1.5%, wait: 0.1%, steal: 0.0%, guest: 0.0%, total: 7.4%	kernel.util
	OK	CUPS Queue HP-Color-LaserJet-4700	is idle. enabled since Fri 07 Apr 2017 10:59:34 AM CEST - Jobs: 0	cups_queues

Check\_MK Conference #3 - News in WATO

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Services of host heute (might be cached data)

omdadmin (admin) 13:32

No changes

Main Menu

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# Service Discovery

#3130

- More dynamic periodic service discovery
- Activate only matching services



# Host & Service Parameters

#3785

#3469

#4217

- Negate conditions (item, services) in rulesets
- Type of rule is shown
- Move Rules via Drag&Drop



# Werks #3785 #3469 #4217

Filesystem mount options (Linux/U... omdadmin (admin) 13:50  



No changes



Main Menu



Back













Services



Parameters

**Matching:** The first matching rule defines the parameter.

## ▼ Rules in folder Main directory (2)

Ma.		Actions	Conditions	Value	Description
		   	Host name is <b>heute</b> Mount point is not / or /var	ro	
		   	Host name is <b>heute</b> Mount point is not /other or /media	errors=remount-ro	

Create Host specific rule for: Host heute

Create rule in folder:

Main directory ▼



# Host & Service Parameters

#4142

#3687

- Extended search dialog
- Regexes in piggyback translation rule



# Host and Service Parameters

#3154

- Password store in Check\_MK
- Retrieve passwords out of a store
- No password visibility in GUI anymore



# Werk #3154

## Passwords

omdadmin (admin) 14:02



No changes



Main Menu







New password

This password management module stores the passwords you use in your checks and special agents in a central place. Please note that this password store is no kind of password safe. Your passwords will not be encrypted.

All the passwords you store in your monitoring configuration, including this password store, are needed in plain text to contact remote systems for monitoring. So all those passwords have to be stored readable by the monitoring.

## Passwords

► Actions	Title	Editable by	Shared with
 	Email	Administrators (having the permission "Write access to all passwords")	Not shared
 	vSphere 6.0u2	ESXi Administrators	ESXi Administrators





Hosts

#2900

# Werk #2900

# Host bulk import



# Werk #2900

## Bulk host import

omdadmin (admin) 14:20



✖ Abort

← Back

### ▼ File Parsing Settings

Set field delimiter ..... ✖

;

Has title line ..... ✖

The first line in the file contains titles.

Update preview

Import

(please select)

Don't import

Hostname

Alias

IPv4 Address

IPv6 Address

SNMP Community

Tag: Agent type

Tag: Criticality

Tag: Networking Segment

Tag: /IP Address Family

### Preview

Hostname ▼	IPv4 Address ▼	Tag: Agent type ▼	(please select) ▼
switch	192.168.2.1	snmp	
centos	192.168.2.115	cmk-agent	switch
oracle	192.168.2.159	cmk-agent	switch
windows10	192.168.2.117	cmk-agent	centos



Hosts

#2902

# Werk #2902

# Host network scan



# Werk #2902

▼ Network Scan

Network Scan ..... ✕

IP ranges to scan

IP Network

Network address: 192.168.2.0

Netmask: 24

Add new IP range

IP ranges to exclude

IP-Range

IP-Range

IP Network

Explicit List of IP Addresses

List of patterns to exclude

Add new IP range

Scan interval

1

 days 

0

 hours

✕ Parallel pings to send

100

Run as

omdadmin (omdadmin)

☐ Translate Hostnames

Last Scan Result ..... ☐

No scan performed yet. (Default value)



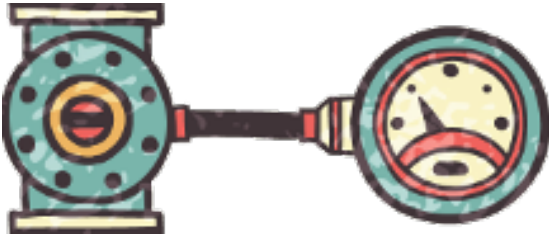
# Hosts

#2878

#3667

- Improved host search
- all bulk operations for search results
- Regexes in search





## Further Hosts Werks

- #2442 Remove host: improved cleanup of obsolete host files
- #2897 Move host is now an action icon using a popup menu
- #3851 Checkbox hosttags are now checked by default
- #2924 Contact groups from hosts can be added to services
- #3657 Custom host attributes can now be configured
- #2923 SNMP community is now always displayed with \*\*\*\*\*
- #3544 Now able to handle SNMPv3 credentials





# Users, Roles & Permissions

#3728

#3915

#3304

- new default user: automation
- Logging of last access time of users
- Bulk deleting of users



# Users, Roles & Permissions

#1302

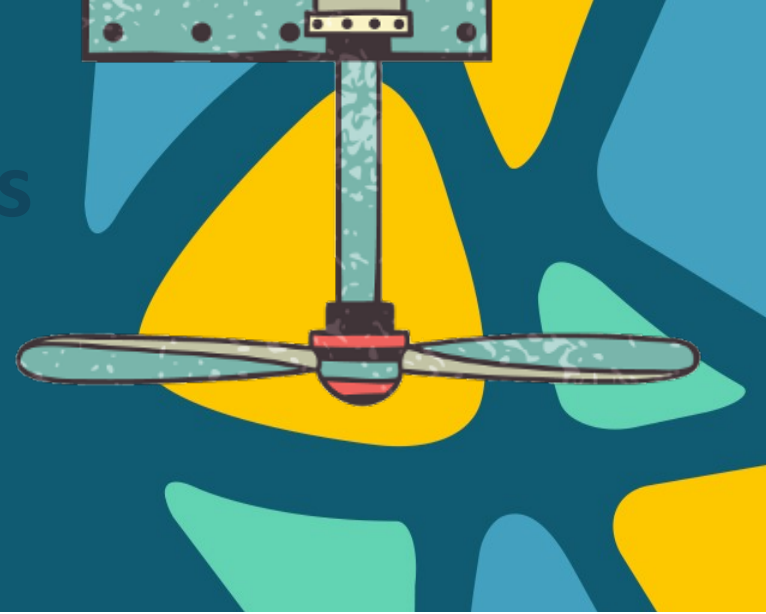
#3618

#3984

- Forbid renaming of hosts
- Reworked layout for roles and permissions
- Now capable of searching, sorting, filtering



Users, Roles & Permissions



Werk #4017

# Hide WATO folders



# Werk #4017

Main directory ma (user) 14:42

No changes Main Menu Rulesets  
 Manual Checks Bulk discovery Custom attributes  
 Status Search

Main directory ▾

Sorry, you have no permissions to the folder <b>Main directory</b>. The folder is not permitted for any contact group. You may enter the folder as you might have permission on a subfolders, though.

ESXi Administrators  
(no hosts)  
slave\_1

Main directory 1 host omdadmin (admin) 14:45

No changes Main Menu Rulesets  
 Manual Checks Folder Properties New folder  
 New host New cluster Bulk import  
 Bulk discovery Bulk renaming Custom attributes  
 Parent scan Status Search

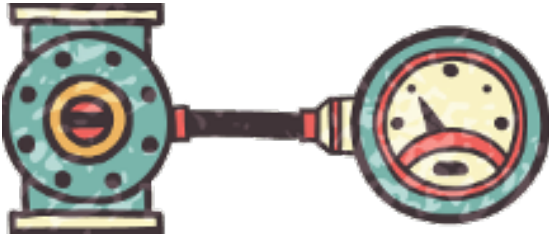
Main directory ▾

ESXi Administrators  
(no hosts)  
slave\_1

1 Host  
slave\_2

(no hosts)  
slave\_3



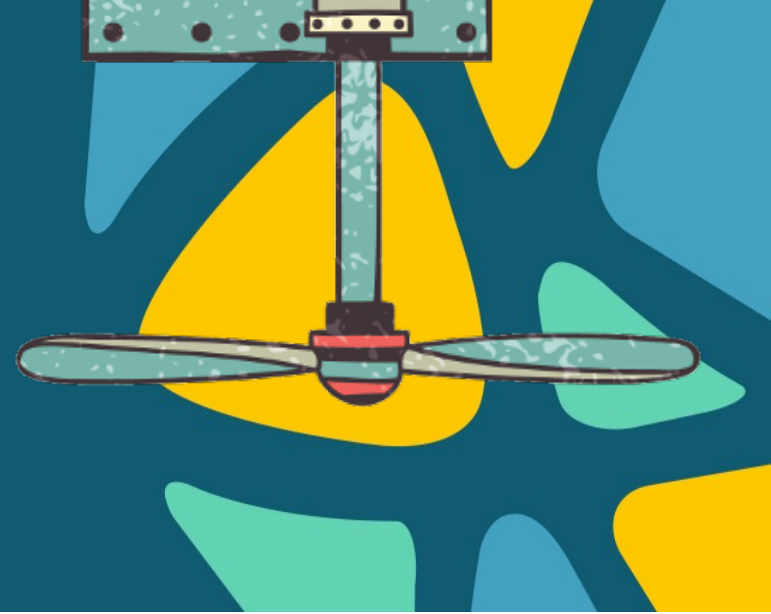


# Notification Werks

- #3239** The delay and the period of notifications can be fractions of a minute now.
- #4044** Display host/service notification delay with d/h/m/s, not with fractions of minute
- #4167** Notification plugins: now can be hidden by role
- #3116** Timerange buttons for downtimes can now be configured



Distributed Monitoring



# Werk #4320

# Global Settings





# Werk #4320

## Distributed Monitoring

omdadmin (admin) 14:50



No changes



















Main Menu



New connection

### Connections to local and remote sites

▶ Actions	ID	Alias	Socket	Status host	Disabled	Timeout	Pers.	Replication	Login
   	heute	Der Master	local site		no	10 sec	no		
   	heute_slave_1	Der Slave 1	Use livestatus Proxy-Daemon		no	10 sec	no	Slave, EC	<button>Logout</button>
   	heute_slave_2	Der Slave 2	Use livestatus Proxy-Daemon		no	10 sec	no	Slave, EC	<button>Logout</button>
   	heute_slave_3	Der Slave 3	Use livestatus Proxy-Daemon		no	10 sec	no	Slave, EC, MKPs	<button>Logout</button>








# Distributed Monitoring

## #8359













### - MKP's now manageable in WATO

Extension Packages - Installed Packages omdadmin (admin) 14:56

 No changes  Main Menu  Unpackaged Files  Upload Package

 Create Package

Installed Extension Packages

▶ Actions	Name	Version	Alias	Author	Req. Version	Contents
   	werk_3883	1	Kentix LAN devices	omdadmin	1.2.8	Check Plugins: 2
   	werk_4619	1	veeam_client: Backup Host information	omdadmin	1.2.8	Agents: 1, Check Plugins: 1
   	werk_3612	1.1	Performance data for nfsmounts checkplugin	omdadmin	1.2.8	Check Plugins: 2, GUI Extensions: 1



# Distributed Monitoring

#2879

#3658

- Replication of local files and MKPs to slaves
- LDAP can be configured per site



# Werks #2879 #3658

## ▼ Configuration Replication (Distributed WATO)

Replication method .....	Slave: push configuration to this site▼
Multisite-URL of remote site .....	http://localhost/heute_slave_3/check_mk/
WATO .....	<input checked="" type="checkbox"/> Disable configuration via WATO on this site
SSL .....	<input type="checkbox"/> Ignore SSL certificate errors
Direct login to Web GUI allowed .....	<input checked="" type="checkbox"/> Users are allowed to directly login into the Web GUI of this site
Sync with LDAP connections .....	Sync with the following LDAP connections ▼ <input checked="" type="checkbox"/> ldap_01 (ldap)
Event Console .....	<input checked="" type="checkbox"/> Replicate Event Console configuration to this site
Extensions .....	<input checked="" type="checkbox"/> Replicate extensions (MKPs and files in ~/local/)



# Werk #8359

## Extension Packages - Installed Packages

omdadmin (admin) 14:56



No changes



Main Menu



Unpackaged Files















Upload Package



Create Package

### Installed Extension Packages

▶ Actions	Name	Version	Alias	Author	Req. Version	Contents
   	werk_3883	1	Kentix LAN devices	omdadmin	1.2.8	Check Plugins: 2
   	werk_4619	1	veeam_client: Backup Host information	omdadmin	1.2.8	Agents: 1, Check Plugins: 1
   	werk_3612	1.1	Performance data for nfsmounts checkplugin	omdadmin	1.2.8	Check Plugins: 2, GUI Extensions: 1



CHECK\_MK  
CONFERENCE #3

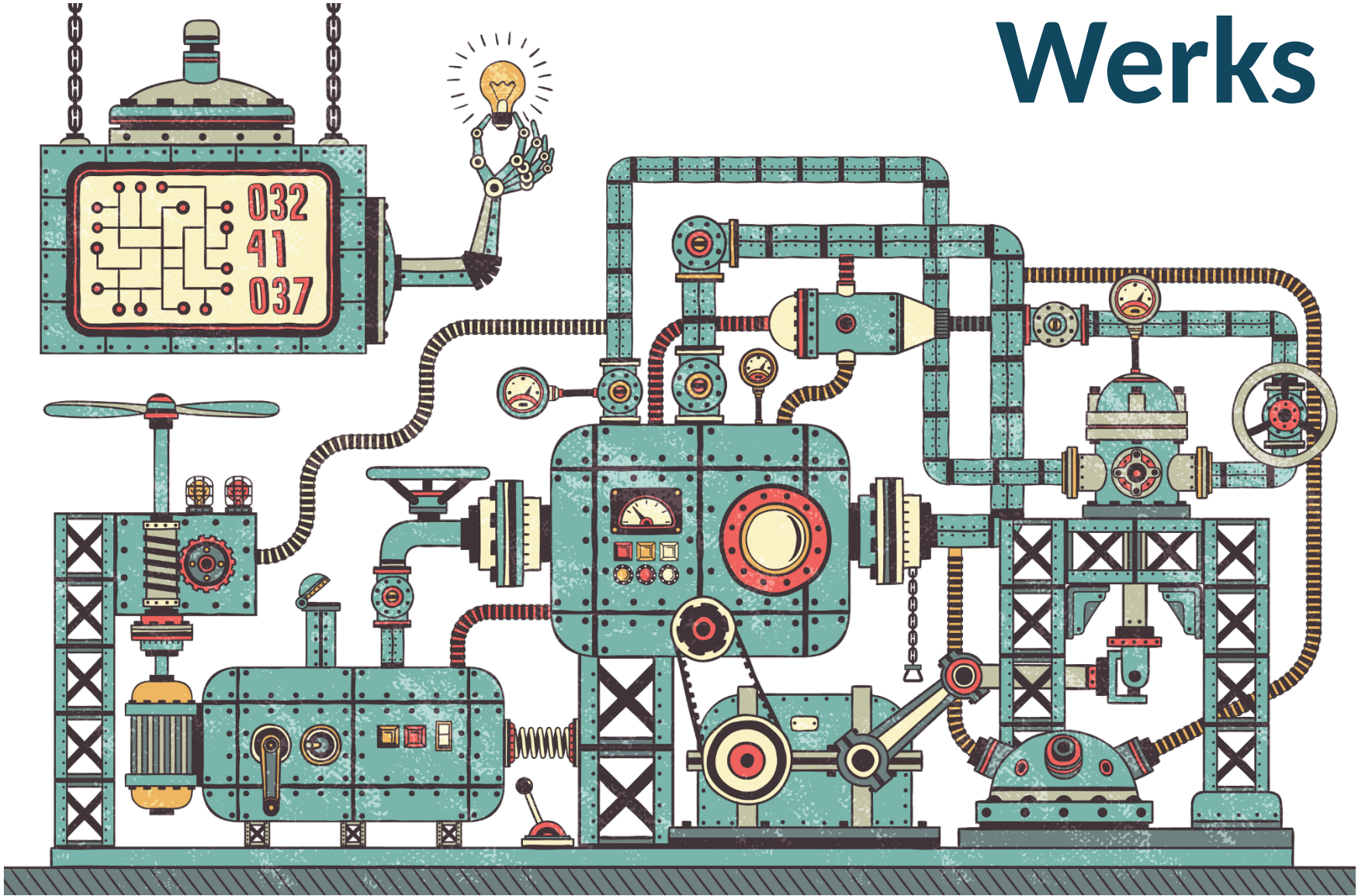
# New in the Alert Handlers

Mathias Kettner





# Werks



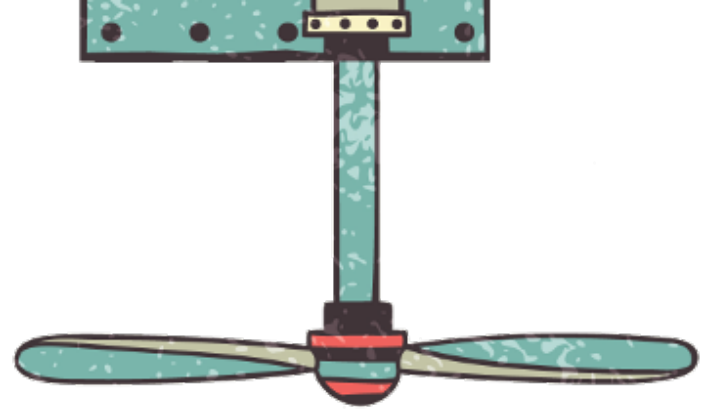
# New Feature-Werks

#8621

#4497 #8611







# Werk #8612

# Linux Remote

# Handlers



# Werk #8612

New alert handler for safely executing remote commands on Linux hosts

- Uses SSH with command restriction
- No code injection possible
- Completely bakeable with Agent bakery
- Automatic setup of SSH keys





# Werk #8611






# Monitoring History



# Werk #8611

Alert handlers now log success or failure to monitoring history



	Time	Event	Type
	<b>13 sec</b>	SERVICE NOTIFICATION	ALERTHANDLER (CRITICAL)
	<b>13 sec</b>	SERVICE ALERT HANDLER STOPPED	
	<b>15 sec</b>	SERVICE ALERT HANDLER STARTED	
	<b>15 sec</b>	SERVICE NOTIFICATION	CRITICAL
	<b>15 sec</b>	SERVICE ALERT	HARD

#### Check output

Warning: Permanently added '127.0.0.1' (ECDSA) to the list of known hosts.  
 /usr/lib/check\_mk\_agent/alert\_handlers/restart\_foo: line 4: /etc/init.d/foo: No such file or directory  
 Could not restart FOO.

Warning: Permanently added '127.0.0.1' (ECDSA) to the list of known hosts.  
 /usr/lib/check\_mk\_agent/alert\_handlers/restart\_foo: line 4: /etc/init.d/foo: No such file or directory  
 Could not restart FOO.

Manually set to Critical by omdadmin

Manually set to Critical by omdadmin



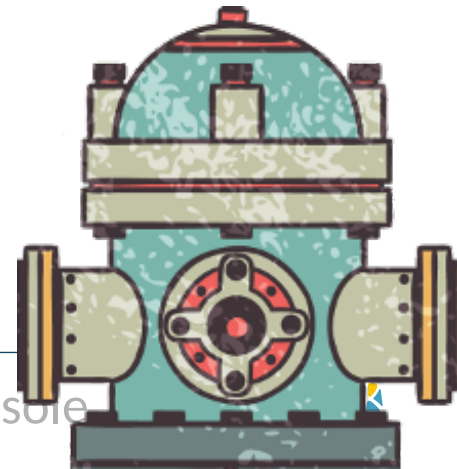
- Logs start and end of execution
- Makes failures visible
- Allows **notifications** about successful and / or failed alert handlers!



# Werk #4497 Match Conditions

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Check\_MK Conference #3 - News in the Event Console



# Werk #4497

Added several missing match conditions:

- Exclude list of services
- Check type
- Plugin output
- Contacts
- Contact groups
- Service level
- Matching during timeperiod





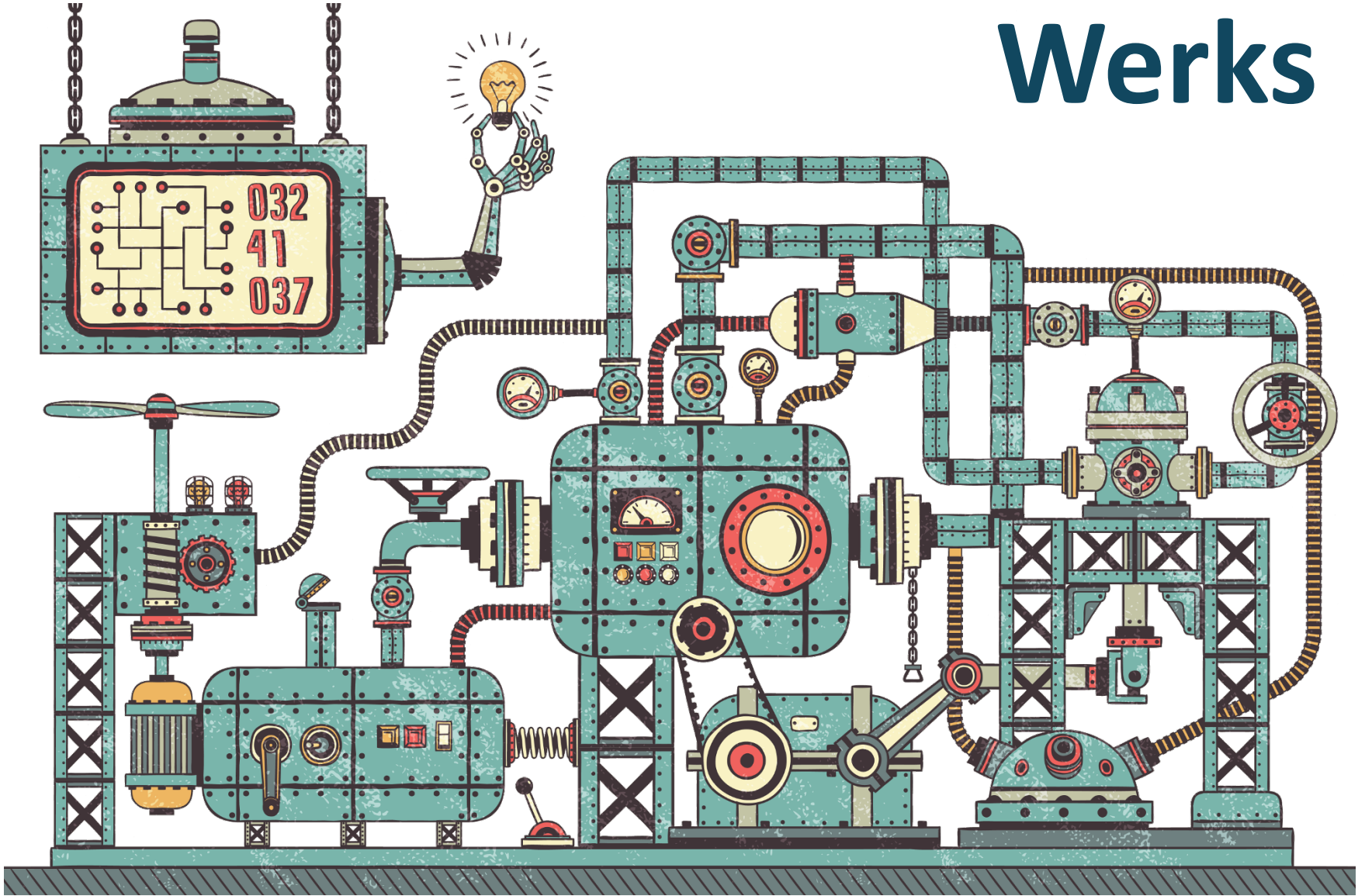
CHECK\_MK  
CONFERENCE #3

# Appliance News

Lars Michelsen



# Werks



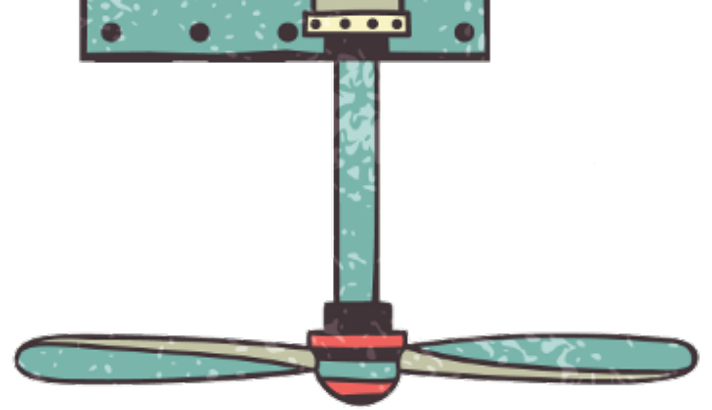
# New Feature Werks

#9243 #9192 #9191

#9210 #9244 #9285 #9229

#9296 #9218 #9176 #9261 #9295 #9245  
#9278 #9277 #9194 #9211 #9195 #9174  
#9239 #9259 #9168 #9196 #9197 #9260  
#9221 #9181 #9217 #9271 #9281 #9298  
#9231 #9240 #9230 #9186 #9246 #9179  
#9202 #9262 #9172 #9170 #9263





# Update rail2 Mark I



# Check\_MK rail2 Mark I

- Modern 64-bit platform
  - Q7 E3845 1.91GHz
  - 4GB RAM
  - 2 x GB LAN
  - SD card as usual
- Monitors 4000 services





# Update rack1 Mark II



# Check\_MK rack1 Mark II

- Differences to Check\_MK rack1 Mark I
  - Intel Xeon E3-1200 v5 (4 Cores)
  - 16GB RAM, ECC
  - 2x 1TB HDD
- Monitors 50.000 services
- Future: Extending HDDs (RAID-10)





# More power!

## rack4 Mark I





# Specs

- 2x E5-2650v4 (24 Cores, Hyper Threading)
- 64 GB RAM, ECC
- 2x 480GB SSD (6GB/s)
- 4x 10GBit LAN
- 2 Rack units
- Redundant PSU



# Options

- Option: Bigger SSDs
  - even more services
- Future: Extending HDDs (RAID-10)



# Measured: 500GB SSD (Standard setup)

- 5.000 Hosts, 400.000 Services @ 60 sec

CPU load: 15

Memory: 25% used

Disk write: 80 MB/s    Disk space: 60 GB free

Check latency: 1 sec

→ Disk space is the limit!



# Measured: 1TB SSD setup

- 10.000 Hosts, 800.000 Services @ 60 sec

CPU load: 36

Memory: 31% used

Disk write: 90 MB/s    Disk space: 20 GB free

Check latency: 20 sec

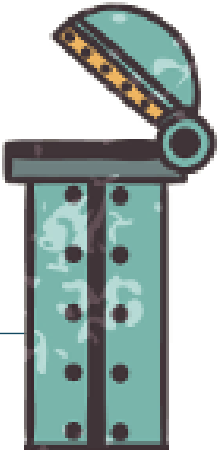
→ Would need Check\_MK tuning



# Werk #9192 64-bit Platform

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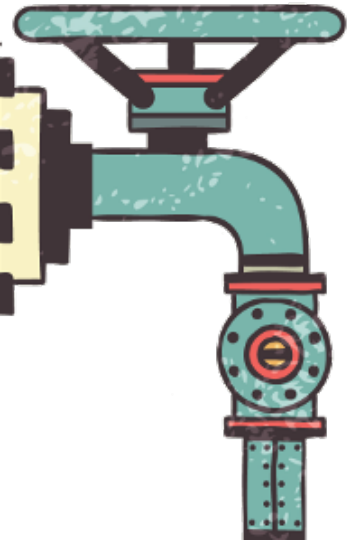
Check\_MK Conference #3 – Appliance News



# 64-bit Platform since 1.3

- Transparent update
- From **1.2.1** or newer 1.2
- Install 64 bit Check\_MK version
- RRDs are converted
- Manual steps needed for own binaries





# Werk #9243 Backup



# Appliance Backup





- Backup module in the GUI
- Concept
  - Online backup
  - Multiple backup targets
  - Multiple jobs (Timing, encryption, type)
  - One generation per job






# Backup – Job status

State	Finished
Runtime	Started at 2017-04-26 08:51:07, Finished at 2017-04-26 08:51:07 (Duration: 0:00:14)
Output	<pre>2017-04-26 08:51:07 --- Starting backup (Check_MK_Appliance-c 2017-04-26 08:51:07 Performing system backup (system.tar) 2017-04-26 08:51:07 Performing system data backup (system-dat 2017-04-26 08:51:21 Verifying backup consistency 2017-04-26 08:51:21 --- Backup completed (Duration: 0:00:14,</pre>

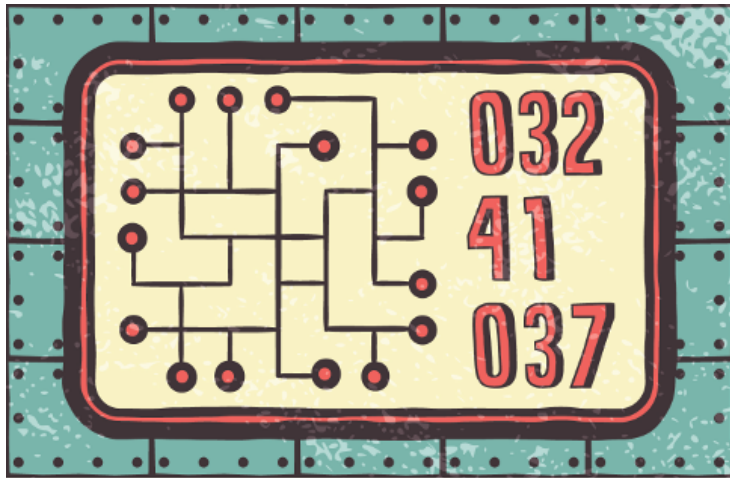
Actions	Name	State	Runtime	Next run
   	Device backup	Finished	Started at 2017-04-26 08:51:07, Finished at 2017-04-26 08:51:07 (Duration: 0:00:14, Size: 298.22 MB, IO: 34.36 MB/s)	2017-05-01 00:00



# Backup – Job details

Unique ID .....	system
Title .....	Device backup
Target .....	Local system backup
Schedule .....	Schedule execution
	Disable <ul style="list-style-type: none"><li>Currently disable scheduled execution of this job</li></ul>
	Period <ul style="list-style-type: none"><li>Every week on... Monday</li></ul>
	Time of day to start the backup at <ul style="list-style-type: none"><li> 00:00</li><li>Add new time</li></ul>
Compression .....	<ul style="list-style-type: none"><li>Compress the backed up files</li></ul>
Encryption .....	Do not encrypt the backup
Exclude sites .....	<ul style="list-style-type: none"><li></li></ul>



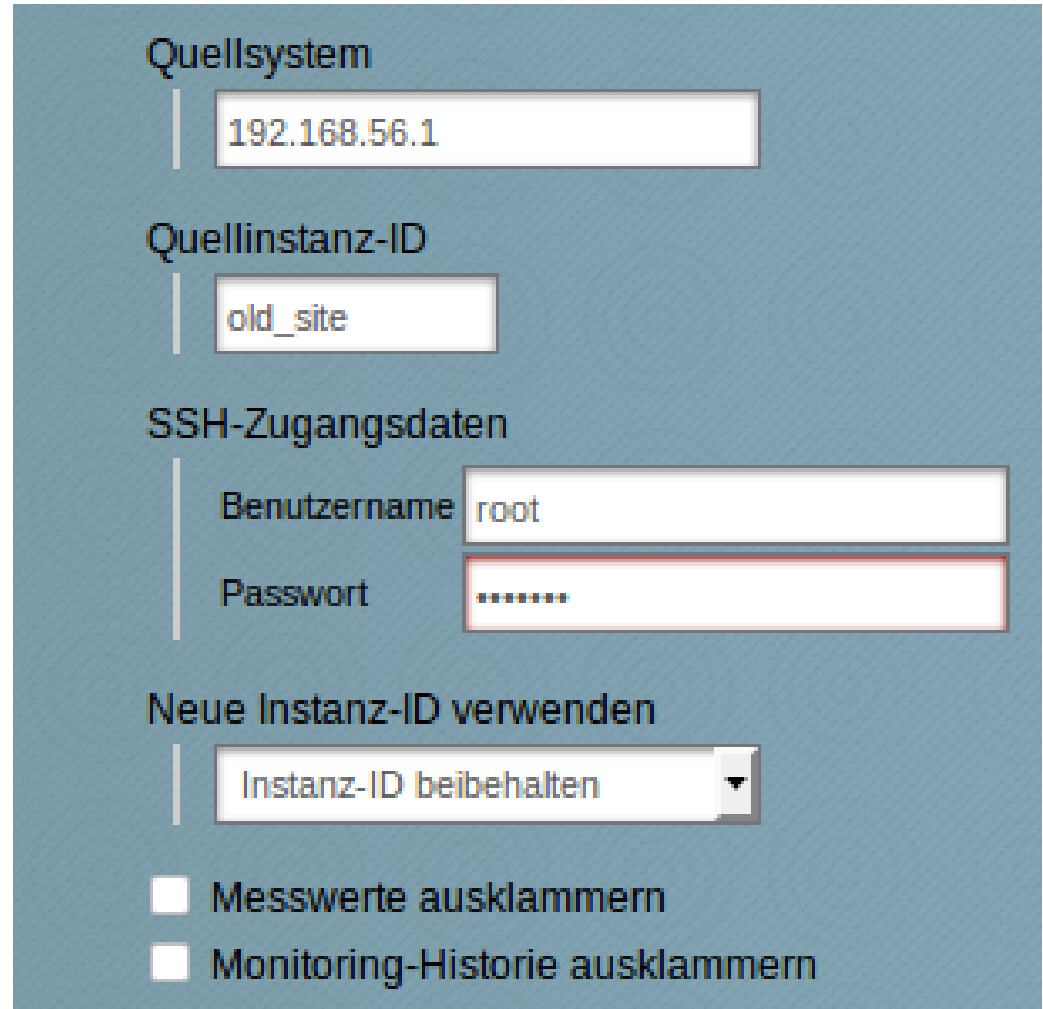


# Werk #9191 Site Migration



# Migrate existing sites (#9191)

- Full or partially
- Via SSH
- Opt. site rename



The screenshot shows a web-based migration interface for Check\_MK. It features several input fields and checkboxes on a light blue background. The 'Quellsystem' field contains the IP address '192.168.56.1'. The 'Quellinstanz-ID' field contains 'old\_site'. Under 'SSH-Zugangsdaten', the 'Benutzername' is 'root' and the 'Passwort' is masked with dots. The 'Neue Instanz-ID verwenden' dropdown is set to 'Instanz-ID beibehalten'. At the bottom, there are two unchecked checkboxes: 'Messwerte ausklammern' and 'Monitoring-Historie ausklammern'.

Quellsystem  
192.168.56.1

Quellinstanz-ID  
old\_site

SSH-Zugangsdaten  
Benutzername root  
Passwort .....

Neue Instanz-ID verwenden  
Instanz-ID beibehalten ▼

☐ Messwerte ausklammern  
☐ Monitoring-Historie ausklammern





# Werk #9229

# VLAN support



# Interfaces with VLANs (#9229)

- Switch from one IP per Interface via GUI
- Use as many VLANs as you need

Use tagged VLANs (IEEE 802.1Q)

VLAN ID

1

IP Configuration

IP-Address

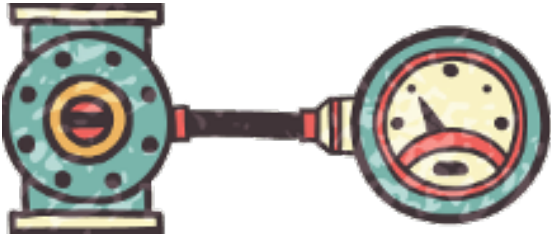
192.168.1.22

Netmask

255.255.255.0

▪ Default-Gateway





## Further Werks (1)

- #9245 Cloning and renaming sites
  - #9296 System log is reboot persistent  
(Except Check\_MK rail)
  - #9186 Custom entries in /etc/fstab are  
now persisted
- ... and more ...



CHECK\_MK  
CONFERENCE #3



# Thanks for listening!

YOUR FEEDBACK IS WELCOME