



# Checkmk BI Made Easy

From Monitoring to Business Value



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# A story



# A story



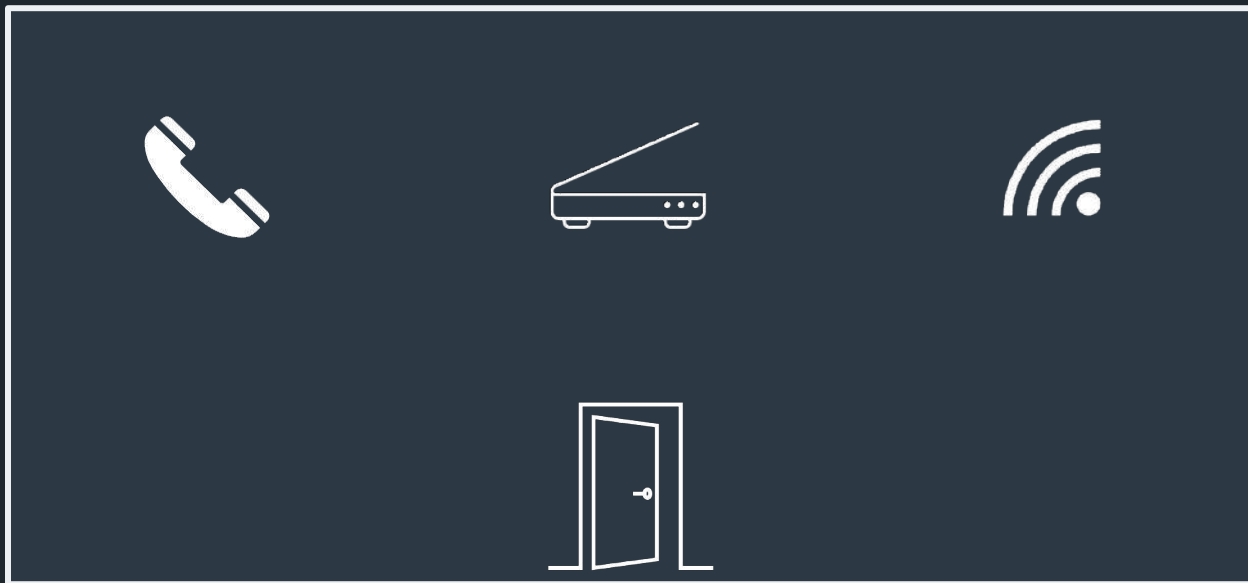
# A story



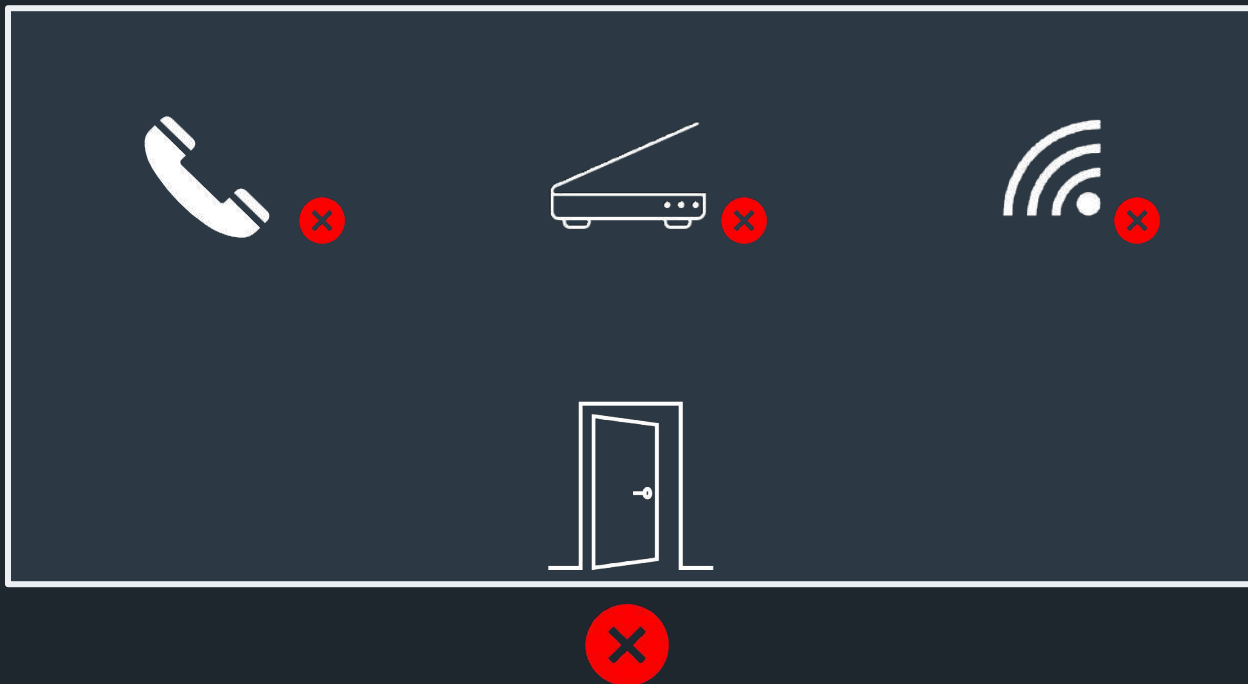


# MONITOR WHAT YOU WANT TO KNOW

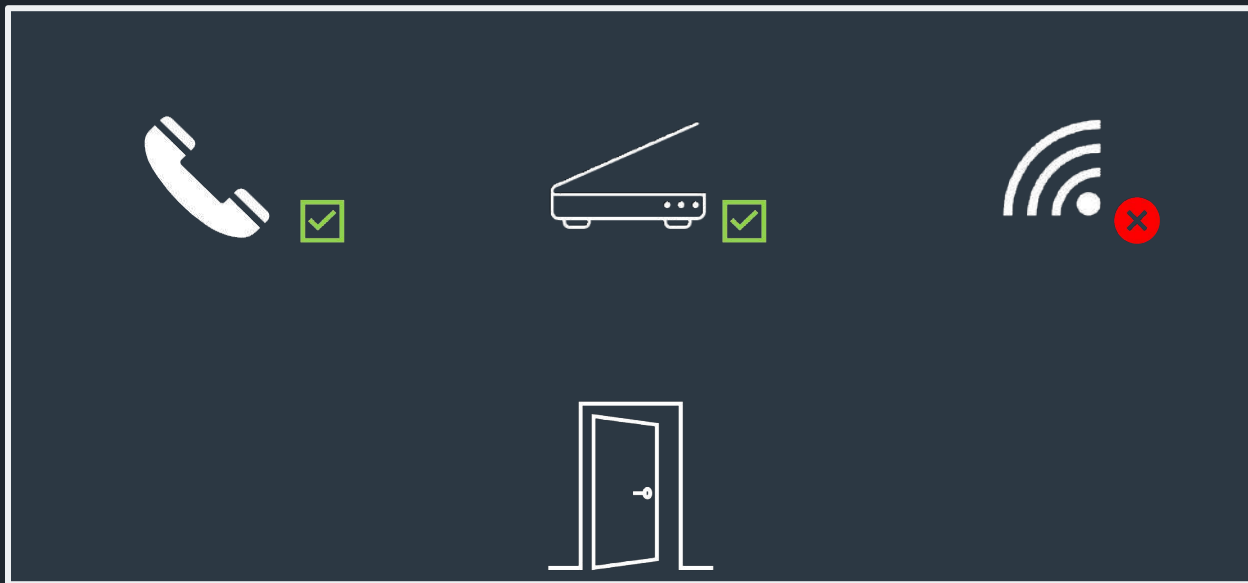
# How do we monitor a room?



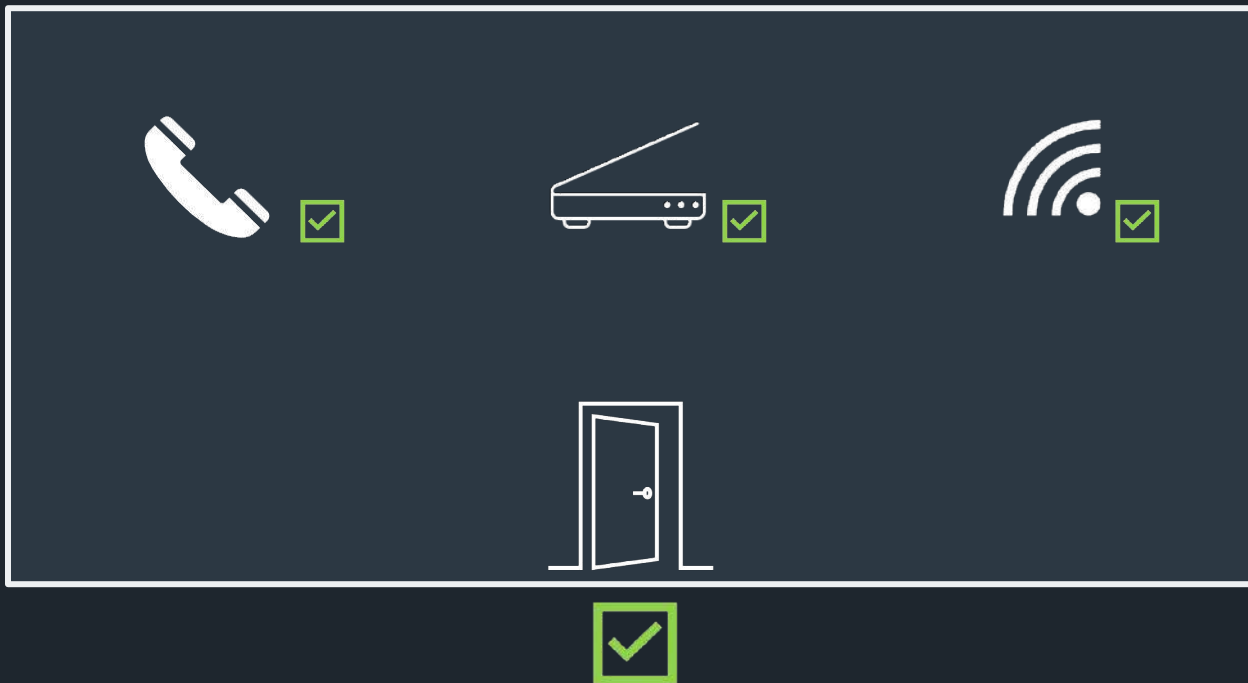
# How do we monitor a room?



# How do we monitor a room?



# How do we monitor a room?





**This is a perfect use case for  
Checkmk Business Intelligence!**

# The idea



Structure the data

Display the data

Configure notifications

# Structure the data

## Business intelligence

### Asset Definition

Which hosts and services are in my scope?

### BI Rules

What rules do I need to create?

### BI Aggregations

How do I display the results of the applied rules?



# Structure the data

## Business intelligence

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# Structure the data

## Business intelligence

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How do I display the results of the applied rules?

**Are my devices  
operational?**



## Add BI Rule

Setup > Business Intelligence > Business Intelligence > Network rules - Rules > Add BI Rule

## Add BI Rule

Rule ID (required) .....	system_status
Rule Title (required) .....	system_status \$HOSTNAME\$
Documentation URL .....	

Rule pack

Parameter definition

### Rule Properties

Rule ID (required) ..... system\_status

Rule Title (required) ..... system\_status \$HOSTNAME\$

Documentation URL .....

Parameters ..... HOSTNAME

## Add BI Rule

**Service States**

### Child Node Generation

Aggregated nodes (required) .....

State of a host ▼

+ X Host: (required)

\$HOSTNAME\$

State of a service ▼

+ X Host: (required)

\$HOSTNAME\$

Service Regex:

.\*

Add child node generator

- checkmk
- Search
- Monitor
- Customize
- Setup
- Changes
- Help
- User
- Sidebar

## Add BI Rule

Rule Display Help

Create

Network rules - Rules

### Rule Properties

Rule ID (required) ..... system\_status

Rule Title (required) ..... system\_status - HIGH SEVERITY

show more

### Aggregation Function

### Behavior

Aggregation Function .....

Worst - take worst of all node states ▼

Take n'th worst state for n = 1


Restrict severity to at worst CRIT ▼

Help

User

Sidebar

**Is the meeting  
room operational?**



## Edit Rule meetingraum\_paris

Setup > Business Intelligence > Business Intelligence > Network rules - Rules > Edit Rule meetingraum\_paris

### Edit Rule meetingraum\_paris

Aggregated nodes (required) .....

Create nodes based on a host search ▼

#### Conditions

Folder

└ Paris ▼

Host tags



Add tag condition

Host labels



Add to condition

Filter host

All hosts ▼

Host Definition

Toggle Search Preview



Host: (required)

Switch23

# Edit Rule meetingraum\_paris

Rule Display Help

Save

Network rules - Rules

Child Node Generation

Aggregated nodes (required) .....

Toggle Search Preview

Create nodes based on a host search

**Rule to Call**

Refer to:

The found hosts themselves

Call a Rule

Nodes to create

Rule:

Network rules (network\_rules)

system\_status \$HOSTNAME\$ (system\_status)

Arguments:

\$1\$

The found hosts themselves

Call a Rule

Nodes to create

Rule:

Network rules (network\_rules)

system\_status \$HOSTNAME\$ (system\_status)

Arguments:

\$1\$

State of a service

Host: (required)

Switch23



## Edit Rule meetingraum\_paris

Rule Display Help

**Service states**

State of a service ▼

Host: (required)

Switch23

Service Regex:

Interface 000023

State of a service ▼

Host: (required)

Switch38

Service Regex:

Interface 38

## Edit Rule meetingraum\_paris

Rule Display Help

Save

Network rules - Rules

### Child Node Generation

Aggregated nodes (required) .....

Create nodes based on a host search

Toggle Search Preview

**Behavior**

### Aggregation Function

Aggregation Function .....

Worst - take worst of all node states

Take n'th worst state for n = 1

Restrict severity to at worst CRIT

Call a Rule

Rule: Network rules (network\_rules) system\_status \$HOSTNAME\$ (system\_status)

Nodes to create Arguments: \$1\$

State of a service

Host: (required)

Switch23

# Structure the data properly

## Business intelligence

### Asset Definition

Which hosts and services are in my scope?



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What rules do I need to create?



### BI Aggregations

How do I display the results of the applied rules?

# Structure the data

## Business intelligence

### Asset Definition

Which hosts and services are in my scope?



### BI Rules


What rules do I need to create?



### BI Aggregations

How do I display the results of the applied rules?

**How do I display  
my data?**

A decorative graphic on the right side of the slide, consisting of a grid of small, overlapping diamond shapes. The diamonds are arranged in a pattern that tapers from the top right towards the bottom left. The color of the diamonds transitions from a light teal at the top to a darker blue at the bottom.

# Add Aggregation

Monitor ▼ **Aggregation Properties** show less ⋮

Aggregation ID (required) ..... aggr\_meetingraum\_paris

Aggregation groups (required) ..... + × Group name ▼ meetingraum

**Rule to Call**

**Add new element**

Call a Rule ▼

Rule: Network rules (network\_rules) ▼ Meetingraum Paris (meetingraum\_paris) ▼

Arguments: HOSTNAME

**Help**

**User**

**BI Visualization** ..... **Base layout**

Default (Hierarchy) ▼

Currently disable this aggregation

**Freeze aggregations**

New aggregations are frozen

**Use Hard States**

Base state computation on hard states

**Aggregation of downtimes**

Escalate downtimes based on aggregated WARN state



checkmk

# Single aggregation Meetingraum Paris

Monitor > Business Intelligence > Single aggregation Meetingraum Paris

Commands BI Aggregation Export Display Help ^

Acknowledge problems

Schedule downtimes

Filter

Show checkboxes

Monitor



Customize



Setup

Links

State

Tree

OK

Meetingraum Paris

OK

> system\_status Airplay-Paris

OK

> system\_status Bewegungsmelder-Paris

OK

> system\_status Devio-Paris

OK

> system\_status Raumanzeige-Paris

OK

> system\_status Switch23

OK

> System\_status Touchpanel-Paris

OK

> system\_status Engine-Paris

OK

Switch23 + Interface 000023 + [DISPLAY Paris, gigabitethernet1/19], (up), MAC: [REDACTED], Speed: 100 MBit/s, In av

OK

Switch38 + Interface 38 + [DISPLAY-Paris, GigabitEthernet6/0/46], (up), MAC: [REDACTED], Speed: 1 GBit/s, In averag



OK

# Structure the data

## Business intelligence

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Which hosts and services are in my scope?



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How do I display the results of the applied rules?



# The idea



Structure the data

**Display the data**

Configure notifications



# LOOK AT WHAT YOU WANT TO SEE

# Display the data

## Checkmk dashboards



Heidi: which rooms can I use?

---



IT Support: are all devices online and healthy?

# Display the data

## Checkmk dashboards



Heidi: which rooms can I use?

---



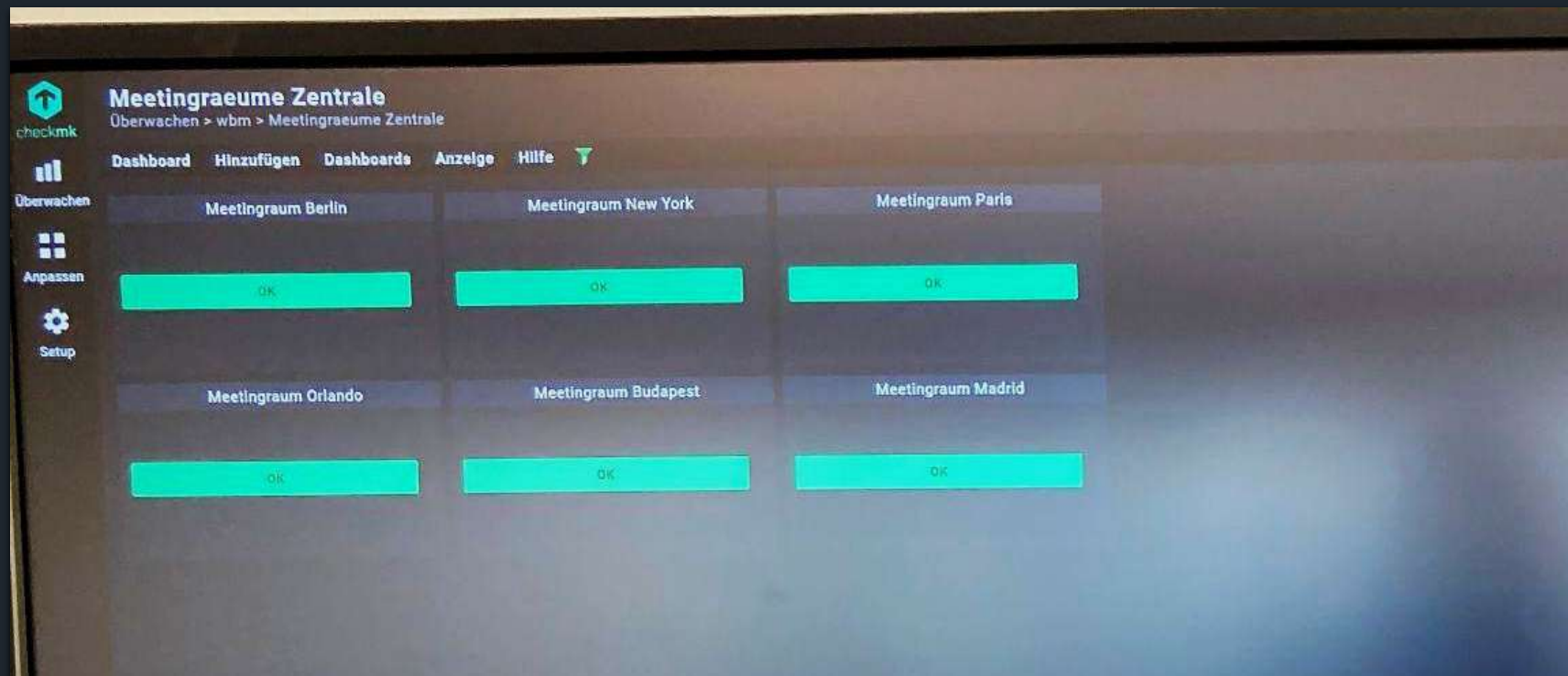
IT Support: are all devices online and healthy?

# Meetingraeume Zentrale

Monitor > wbm > Meetingraeume Zentrale

Meetingraum Berlin	Meetingraum New York	Meetingraum Paris
OK	OK	OK
Meetingraum Orlando	Meetingraum Budapest	Meetingraum Madrid
OK	OK	OK

# Monitor in a public location



# Display the data

## Checkmk dashboards



Heidi: which rooms can I use?



IT Support: are all devices online and healthy?

# Display the data practically

## Checkmk dashboards



Heidi: which rooms can I use?



IT Support: are all devices online and healthy?

# Meetingraum Paris

Monitor > wbm > Meetingraum Paris

Dashboard Add Dashboards Display Help

Paris Gesamt

OK

Raumanz. Port

OK

Zuleitung Switch38

OK

Uptime Switch23

223 d

0 s

1 min 40 s

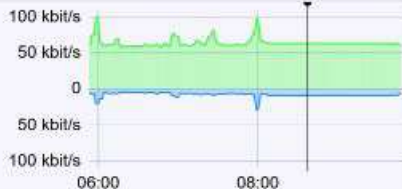
Raum Systeme Online

7/7

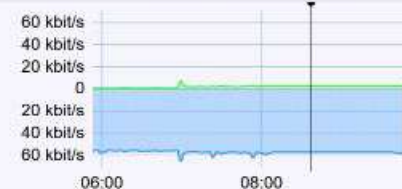
Raumswitch Ports Online

7/7

RS Port 1 Bandbreite Raumanzeige



RS Port 2 Bandbreite Raumdisplay



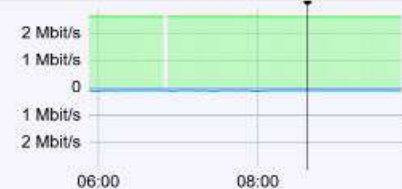
RS Port 3 Bandbreite Airplay



RS Port 4 Bandbreite Devio



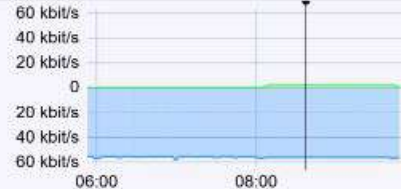
RS Port 5 Bandbreite Engine



RS Port 6 Bandbreite Touchpanel



RS Port 7 Bandbreite Bewegungsmelder



RS Port 8 Bandbreite

No data was found with the current parameters of this dashlet.



# Display the data

## Checkmk dashboards



Heidi: which rooms can I use?



IT Support: are all devices online and healthy?



# The idea



Structure the data

Display the data

Configure notifications



**GET NOTIFIED ABOUT WHAT IS  
IMPORTANT TO YOU**

# Notify purposefully



Conversion of  
Aggregation into  
Service

Notification  
Rule

Jira Ticket

# Notify purposefully



Conversion of  
Aggregation into  
Service

Notification  
Rule

Jira Ticket

Rule Related Display Help

Save Cancel BI Aggregations

# Rule Definition

## Edit rule: BI Aggregations

Setup > Agents > Other integrations > BI Aggregations > Edit rule: BI Aggregations

Rule activation ..... do not apply this rule  
Rule ID ..... b70db6af-129e-4a86-8b78-12eb33710a91  
Ruleset name ..... special\_agents:bi

BI Aggregations

### Rule properties

Description ..... meetingraeume als Service Checks

Comment .....

Documentation URL .....

Conditions

Condition type ..... Explicit conditions  
Folder ..... Main  
Host tags ..... Add tag condition  
Host labels ..... Add to condition  
Explicit hosts ..... x meetingraum-zentrale-dummy (Select hostname)  
Negate: make rule apply for all but the above hosts





## Edit rule: BI Aggregations

Setup > Agents > Other integrations > BI Aggregations > Edit rule: BI Aggregations

Monitor



Rule Rel

Save



Customize

Rule pro



Setup

Description

Comment

Documenta

Rule activa

Rule ID .....

Ruleset nam

BI Aggre

Condition

Condition ty

Folder .....

Host tags ..

Host labels ..

Explicit hosts



Help



User



Sidebar

### BI Aggregations

#### Site connection (required)

Connect to the local ...

#### Filter aggregations

By aggregation name (exact match)

By aggregation group prefix

meetingraum



Add new group

#### Aggregation assignment

Assign to the querying host

Assign to the affected hosts

Assign via regular expressions

Additional options

## Assignment Options

Master control

Notifications

Service checks

Host checks

Flap detection

Performance data

Alert handlers

Quicksearch

Service Speed-O-Meter



meetingraum-zentrale-dummy (select hostname)

Negate: make rule apply for all but the above hosts



Dummy Host

## Conditions

Condition type Explicit conditions

Folder Main

Host tags

Host labels

+ Add to condition

Explicit hosts meetingraum-zentrale-dummy (Select hostname)

Negate: make rule apply for all but the above hosts

Condition type Explicit conditions

Folder Main

Host tags Add tag condition

Host labels + Add to condition

Explicit hosts meetingraum-zentrale-dummy (Select hostname)

Negate: make rule apply for all but the above hosts





checkmk



Monitor



Customize



Setup

# Services of host meetingraum-zentrale-dummy

Monitor > Overview > All hosts > meetingraum-zentrale-dummy > Services of host

Commands Host Services Export Display Help

Acknowledge problems

Schedule downtimes

Filter

Show checkboxes

meetingraum-zentrale-dummy

## meetingraum-zentrale-dummy

State	Service	Icons	Summary
OK	Check_MK		[special_bi] Success, [piggyback] Success (but no data found for this host), execution time 0.6 sec
OK	Check_MK Discovery		Services: all up to date, Host labels: all up to date, execution time 0.0 sec
OK	Aggr Meetingraum Paris		Aggregation state: Ok, In downtime: no, Acknowledged: no
OK	Aggr Meetingraum Madrid		Aggregation state: Ok, In downtime: no, Acknowledged: no
OK	BI Datasource Connection		No connection problems
OK	Events		OK - no events for meetingraum-zentrale-dummy/



# Services of host meetingraum-zentrale-dummy

Monitor > Overview > All hosts > meetingraum-zentrale-dummy > Services of host

Commands Host Services Export Display Help ^

Acknowledge problems Schedule downtimes Filter Show checkboxes meetingraum-zentrale-dummy

## meetingraum-zentrale-dummy

State	Service	Icons	Summary
OK	Check MK		[special_bi] Success, [piggyback] Success (time 0.6 sec
OK	Aggr Meetingraum Paris		Aggregation state: Ok, In downtime: no, Acknowledged: no
OK	Aggr Meetingraum Madrid		Aggregation state: Ok, In downtime: no, Acknowledged: no
OK	Aggr Meetingraum Madrid		Aggregation state: Ok, In downtime: no, Acknowledged: no
OK	BI Datasource Connection		No connection problems
OK	Events		OK - no events for meetingraum-zentrale-dummy/

Aggregation Services

# Notify purposefully



Conversion of  
Aggregation into  
Service



Notification  
Rule

Jira Ticket

# Jira Connector

## Edit notification rule 31

Setup > Events > Notifications > Edit notification rule 31

# Event Types

Host events ⓘ

Service events ⓘ

- State change ▼ From OK ▼ to WARN ▼
- State change ▼ From OK ▼ to CRIT ▼
- State change ▼ From WARN ▼ to CRIT ▼

+ Add event

Service groups (regex) ⓘ

Exclude service groups

Exclude service groups (regex) ⓘ

Services ⓘ

Aggr.\*

Exclude services ⓘ



### 1 Triggering events

Define any events you want to be notified about.

Specific events All events

### 2

## Filter for hosts/services

Apply filters to specify which hosts and services are affected by this notification rule.

#### Host filters

Host tags

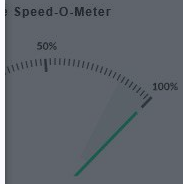
Host labels *i*

Host groups

Hosts

meetingraum-zentrale-dummy

Affected Host



### 2 Filter

- App...
- Host...
- Service...
- Service groups
- Service groups (regex) *i*
- Exclude service groups
- Exclude service groups (regex) *i*
- Services *i* Aggr.\*
- Exclude services *i*

## 1 Triggering events

Define any events you want to be notified about.

Specific events All events

Host events

Service events State change From OK to WARN

State change From OK to CRIT

State change From WARN to CRIT

Add event

## 2 Filter

App

Services

Host groups

Hosts meetingraum-zentrale-dummy

Exclude hosts

Service filters

Service labels

Service groups

Service groups (regex)

Exclude service groups

Exclude service groups (regex)

Services Aggr.\*

Exclude services

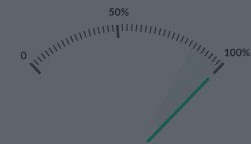
Affected Services

Aggr.\*

Quicksearch

Search input field

Service Speed-O-Meter



# Notify purposefully



Conversion of  
Aggregation into  
Service



Notification  
Rule



Jira Ticket

checkmk  
Setup > Events > Notifications > Test notifications

Test notifications Related

Analyze recent notification

Test notifications on Host (required) Service (required) Simulate Plug-in output

Advanced condition simulation

Global notification rules

Actions

0 1 2 3 4

Help User

Sidebar

# Test notifications

Setup > Events > Notifications > Events > Test notifications

Test Parameter

Test notifications Related Display Help Find on this page ...

Analyze recent notifications Notifications

Test notifications on **Host** **Service**

Host (required) meetingraum-zentrale-dummy

Service (required) Aggr Meetingraum Paris

Simulate Status change

From OK to CRIT

Plug-in output This is a notification test

Trigger notification for a specific method

Advanced condition simulation

Event date and time 08 . 04 . 2026 10 : 38 [UTC+02:00] Server time (currently: 04/0

Notification number 1

Test notifications Reset

Master control

Notifications Service checks Host checks Flap detection Performance data Alert handlers

Quicksearch

Service Speed-O-Meter

0 50% 100%

+

- Notifications
- Service checks
- Host checks
- Flap detection
- Performance data
- Alert handlers

Test notifications Related Display Help Find on this page ...

Analyze recent notifications

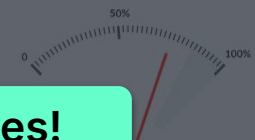
Notifications

14	HTML Email	down test	• email addresses: support@someco...	Match host event type: any ► UP, any ► DOWN, any ► UNREACHABLE Restrict to notification number: 1, 1
15	JIRA (Commercial editions only)	JIRA Notification - ORA Systeme direkt	• all contacts of the notified object	> 2 conditions
16	JIRA (Commercial editions only)	Printer offline	• all contacts of the notified object	> 3 conditions Match host tags: Tags / System Type is, Drucker Exclude hosts: test23 Match host event type: UP ► DOWN
17	JIRA (Commercial editions only)	JIRA Notification - HTTPS Certs	• all contacts of the notified object	> 3 conditions
18	JIRA (Commercial editions only)	JIRA Notification - ORA Systeme direkt	• all contacts of the notified object	> 2 conditions

Quicksearch

Search input field

Service Speed-O-Meter



**It matches!**

30

JIRA (Commercial editions only)

JIRA Notification - Meetingraum

24	HTML Email	some rule prio 1	• users: Servicedesk	> 4 conditions
25	HTML Email	Some Rule Text	• email addresses: manager@somecompany.de	> 3 conditions
26	JIRA (Commercial editions only)	Some Rule Text	• all contacts of the notified object	> 2 conditions
27	JIRA (Commercial editions only)	Some Rule Text	• all contacts of the notified object	> 2 conditions
28	JIRA (Commercial editions only)	Some Rule Text	• all contacts of the notified object	> 2 conditions
29	JIRA (Commercial editions only)	Some Rule Text	• all contacts of the notified object	> 2 conditions
30	JIRA (Commercial editions only)	JIRA Notification - Meetingraum	• email addresses: support@somecompany.com	> 4 conditions

Match hosts:	meetingraum-zentrale-dummy
Match services:	Aggr.*
Match only during time period:	Werktags - Werktags von 7:00 bis 19:00 Uhr
Match service event type:	OK ► WARN, OK ► CRIT, WARN ► CRIT



# Meetingraum-Ausfall: Aggr Meetingraum Paris- CRIT

Sub-Task erstellen
Formular hinzufügen
Erstellen ▾
 Add Checklist

**Service User CMK** hat diese Anfrage erstellt über Jira

## Beschreibung

Aggregation state: Critical(!), In downtime: no, Acknowledged: no

Root cause (migrated)

Kein Wert

Workaround (migrated)

Kein Wert

**Ähnliche Anfragen**
▾

## Aktivität

Anzeigen: Kommentare ▾

Kommentare zusammenfassen
⇅

Internen Hinweis hinzufügen / Kunden antworten
@

**Expertentipp:** Drücken Sie **M**, um einen Kommentar zu schreiben.

**Service Mitarbeiter** 12. März 2026 um 15:59 🔒 Interner Hinweis
  
 I will take care of it
   
 Regards
   
 Max Mustermann

🗨️
🔒
👁️ 2
👍
🔄
⋮

Abgeschlossen ▾
✓ Fertig
⚡ Automatisierung ▾

### Details

Zugewiesene Person	Nicht zugewiesen
Autor	Service User CMK
Anfragetyp	Keine
Organisationen	Keine
Wissensdatenbank	Keine ähnlichen Artikel ▾
Sprache anfordern	Englisch
Komponenten	Keine
Priorität	👉 Zurückgestellt
Stichwort	<span>checkmck</span>
Product categorization (migrated)	Some Issue
Operational categorization (migrated)	Some Category
CMK_SVC_FIEL D	744.821

> **Mehr Felder** Anfrageteilnehmer, Approvers (migrated), Auswirkung, Dri...

> **Automatisierung** ⚡ Regelausführungen

Ticket Content

## Meetingraum-Ausfall: Aggr Meetingraum Paris- CRIT

Sub-Task erstellen

Formular hinzufügen

Erstellen ▾

Add Checklist



Service User CMK hat diese Anfrage erstellt über Jira

### Beschreibung

Aggregation state: Critical(!!), In downtime: no, Acknowledged: no

Internen Hinweis hinzufügen / Kunden antworten

Expertentipp: Drücken Sie **M**, um einen Kommentar zu schreiben.



Service Mitarbeiter 12. März 2026 um 15:59 Interner Hinweis

I will take care of it

Regards

Max Mustermann

CMK\_SVC\_FIEL  
D 744.821

Mehr Felder Anfrageteilnehmer, Approvers (migrated), Auswirkung, Dri...

Automatisierung ⚡ Regelausführungen

# Notify purposefully



Conversion of  
Aggregation into  
Service



Notification  
Rule



Jira Ticket



# Summary



**Define scope**

**Create BI Rules**

**Create Aggregation**

**Visualize Results**

**Convert Into Services**

**Configure Notifications**

# Checkmk #12

Conference