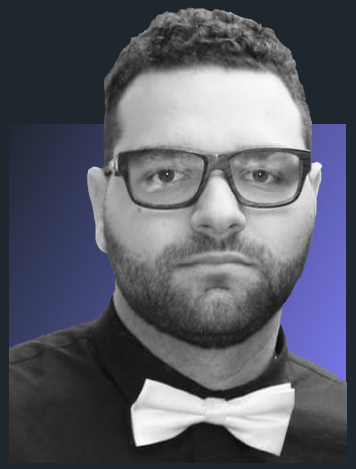
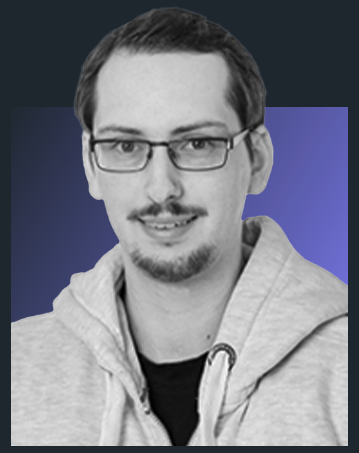
Checkmk Conference #9

Automated System Updates as a Self-Service



Cosimo Russo
IT Business Consultant
comNET GmbH



Fabian Binder
IT Business Consultant
comNET GmbH

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Self Service Updates with Checkmk & Netbox

Cosimo Russo & Fabian Binder

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THE COMPANY

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- IT systems provider
- est. 1991
- Checkmk partner since 2014
- Gold partner status

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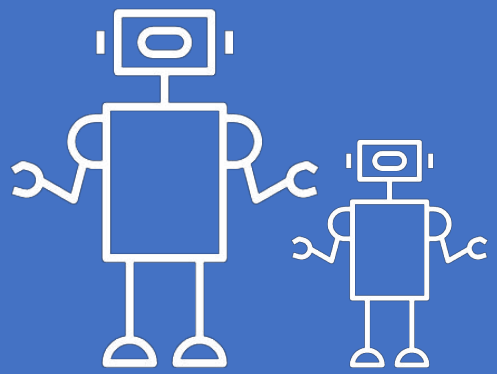
INTRODUCTION



- **Cosimo Russo**
- IT Business Consultant
- 30 years young
- Short career path to comNET GmbH

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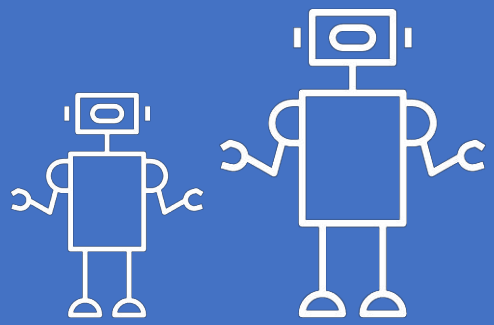
INTRODUCTION



- **Fabian Binder**
- IT Business Consultant
- Also quite young
- In comNET GmbH‘s monitoring team since 2015

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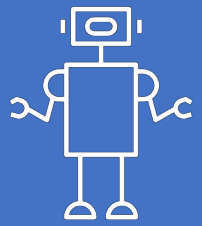

The Problem

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CYBER
SECURITY
dark web
corporations
servers
internet
wikileaks
backdoor
remote administration tools
SSL
government
trojan
bitcoin
porn
adwares
root
data
spoofing
data dump
keylogger
antivirus
privacy
blackhat
database
whitehat
information technology
cross site scripting
social engineering
financial institutions
denial of service
cyberspace
anonymous
hackers
firewall
worms
script kids
malwares
distributed denial of service
defacement
encryption
world wide web
surveillance
stuxnet
warez
access
activism

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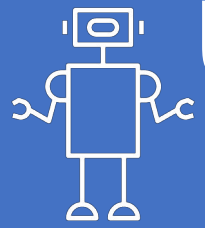

Updates are Important!
…but also a hassle

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WHAT´S WRONG WITH UPDATING?

- Several different responsible parties
- Updates need planning
- IT Admins don’t have much time
- Not all updates can be done at once

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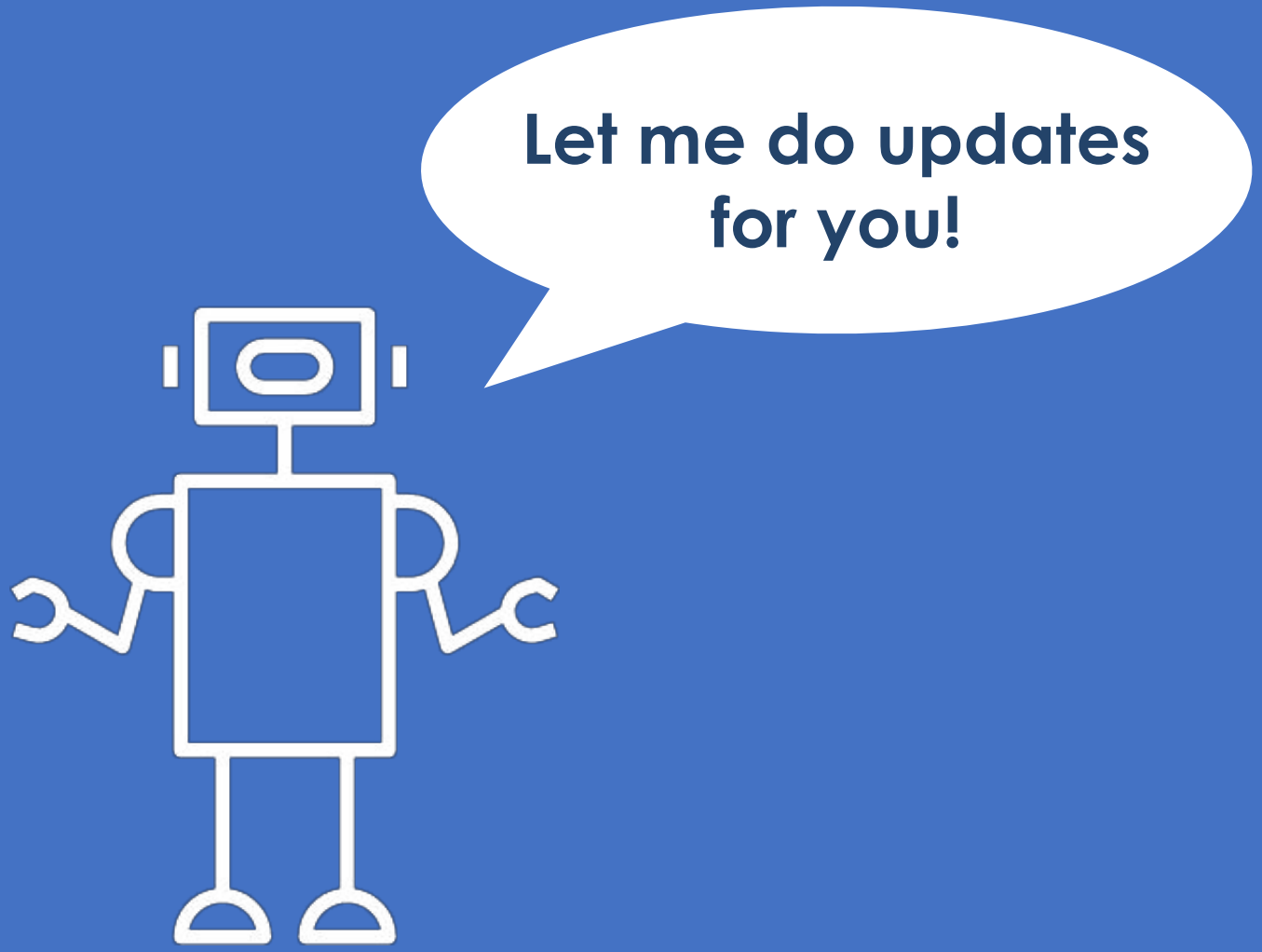
THE SOLUTION



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Automated updates as a SELF-SERVICE

- Trusted responsible
- Easy preparation & planning
- Full control
- Easy to use: Just one click

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What is NETBOX?

- Open Source DCIM and IPAM tool
- Written in Python
- Easily extensible

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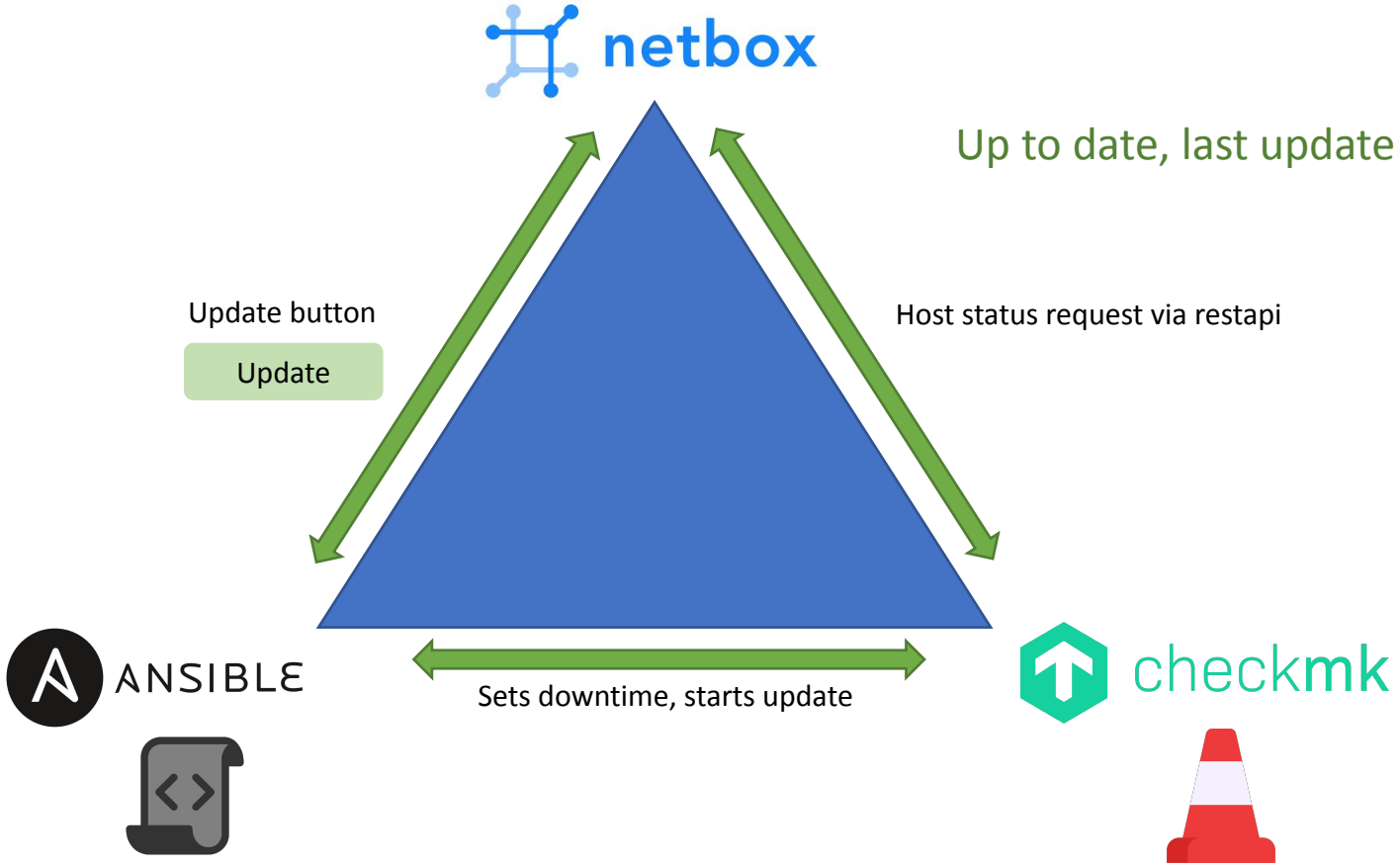
HOW?


netbox
Up to date, last update on xx/xx/xxx, yy:yy
Update button
Update
Host status request via restapi
ANSIBLE
Sets downtime, starts update
checkmk

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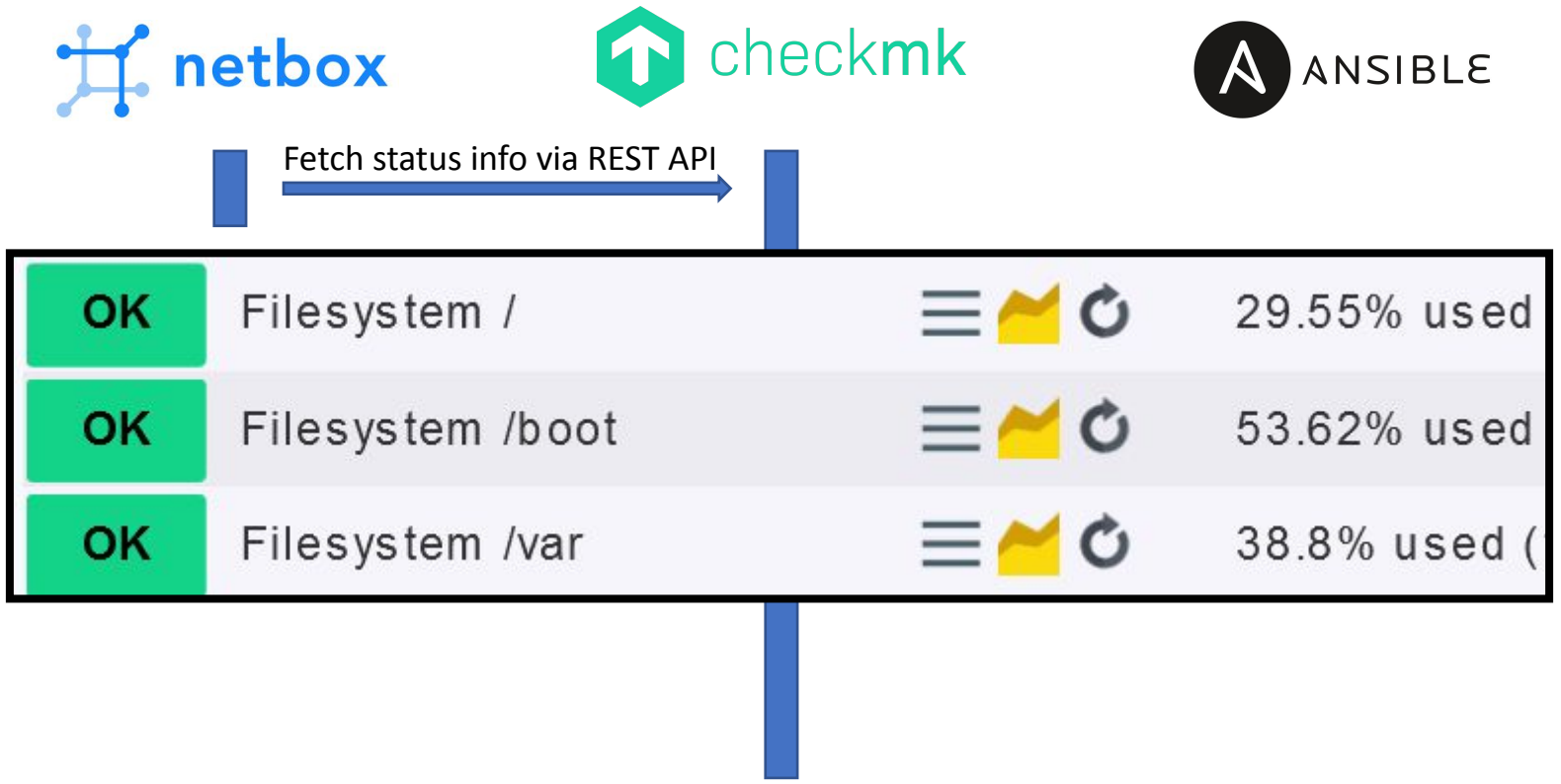
HOW?


netbox
checkmk
ANSIBLE
Fetch status info via REST API
OK
Filesystem /
29.55% used
OK
Filesystem /boot
53.62% used
OK
Filesystem /var
38.8% used (

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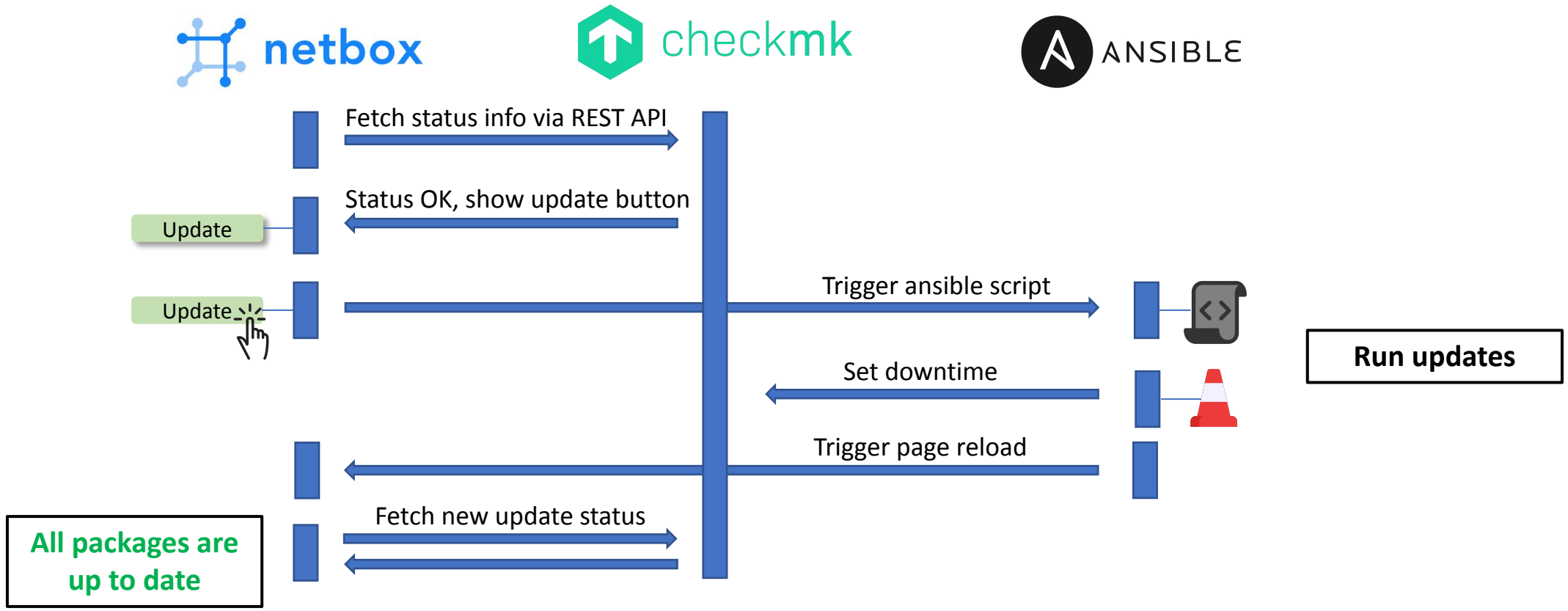
HOW?


netbox
checkmk
ANSIBLE
Fetch status info via REST API
Status OK, show update button
Update
Update
Trigger ansible script
Set downtime
Trigger page reload
Fetch new update status
Run updates
All packages are up to date

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HOW?

Host

- CPU
- Filesystem
- Memory
- Uptime
- YUM Updates

Update

Update button

Sets a downtime
Starts the update

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HOW?

checkmk

Host

- CPU ✓
- Filesystem ✗
- Memory ✓
- Uptime ✓
- YUM Updates ✓

netbox

Update

Update button not clickable

ANSIBLE

✗

Can´t start the update

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DEMONSTRATION TIME!

Let's have a look!

Organization
Devices
Connections
Wireless
IPAM
Overlay
Virtualization

VIRTUAL MACHINES
Virtual Machines
Interfaces

CLUSTERS
Clusters
Cluster Types
Cluster Groups

Circuits
Power
Provisioning
Customization
Operations

Virtual Machine | Interfaces 1 | Config Context | Journal | Changelog

Virtual Machine

Name	rocky-vm
Status	Active
Role	—
Platform	—
Description	—
Tenant	—
Primary IPv4	192.168.56.2
Primary IPv6	—

Tags

No tags assigned

Comments

None

System Update

1 update available, last update was run at Mar 08 2023 20:01:00

Run System Update

Tags

No tags assigned

Comments

None

Cluster

Site	cmkconf
Cluster	local
Cluster Type	VMware vsphere
Device	—

Resources

Virtual CPUs	—
Memory	—
Disk Space	—

Services

Name	Parent	Protocol	Ports	Description

— No services found —

+ Add a service

Contacts

None

+ Add a contact

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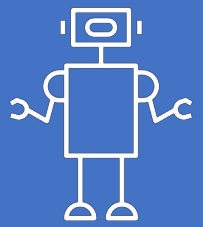
Final thoughts:



Updates are finally easy to use… for everyone!

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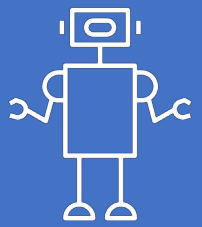

Final thoughts:

What else could we automate?

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Any questions?

Thanks for your attention!

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