

10th Swiss Service
& Infrastructure
Management
User Conference

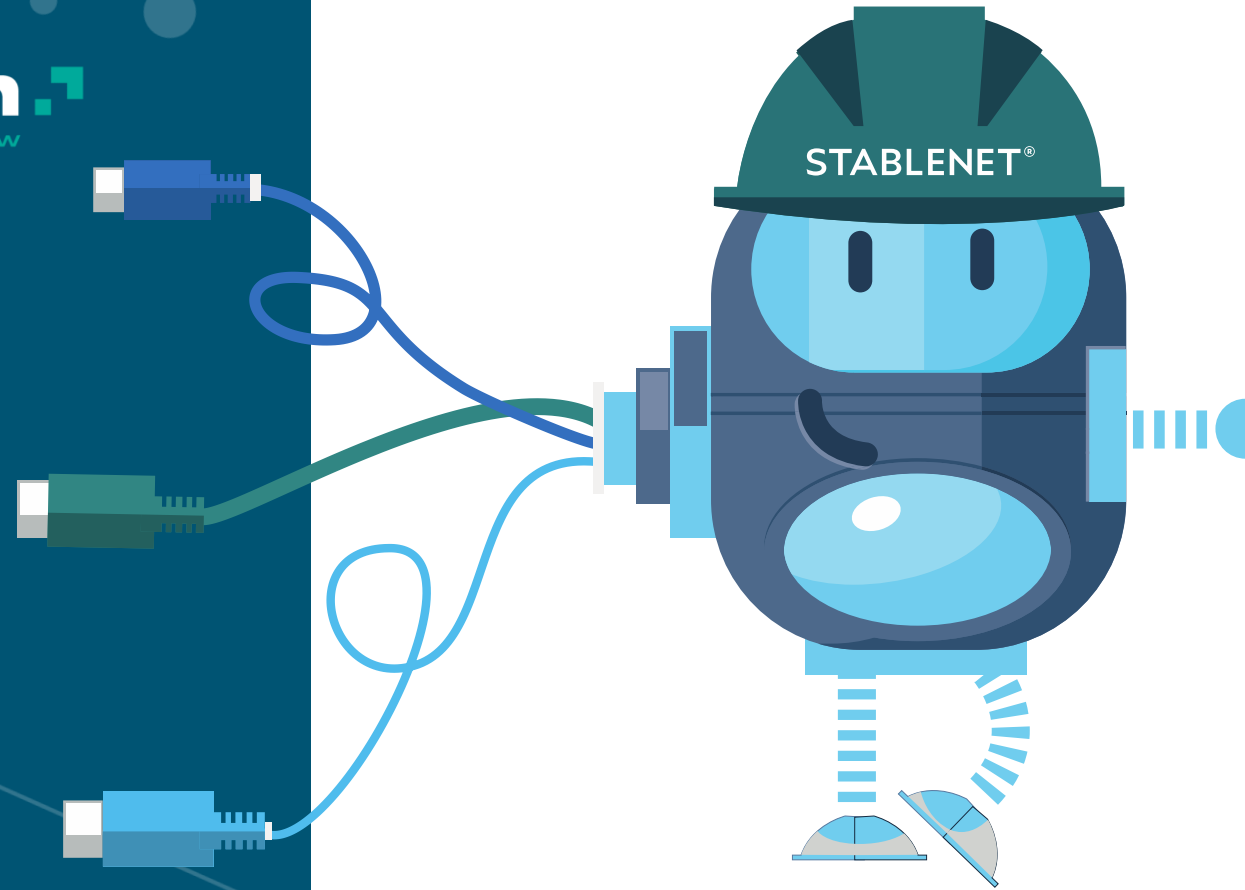
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Positive digital flow

Dr. David Hock

Partnerreferat Infosim

Intelligente Automatisierung –

Heute und Morgen



Dr. David Hock

Director of Research at Infosim®



1&1 Versatel

BMW

LIDL + SCHWARZ IT GRUPPE

COMMERZBANK

SUNRISE

M-NET

Pyur (Tele Columbus Gruppe)

Vodafone UK

Mehr Referenzen auf Anfrage



Privatunternehmen

- gegründet 2003 aus Spin-Off der Uni Würzburg

Zielmarkt für StableNet®

- Große Netze/IT-Installationen – Dienstleister, Unternehmen und Verticals
- Vertrieb - Weltweit über Partner

Unsere Strategie

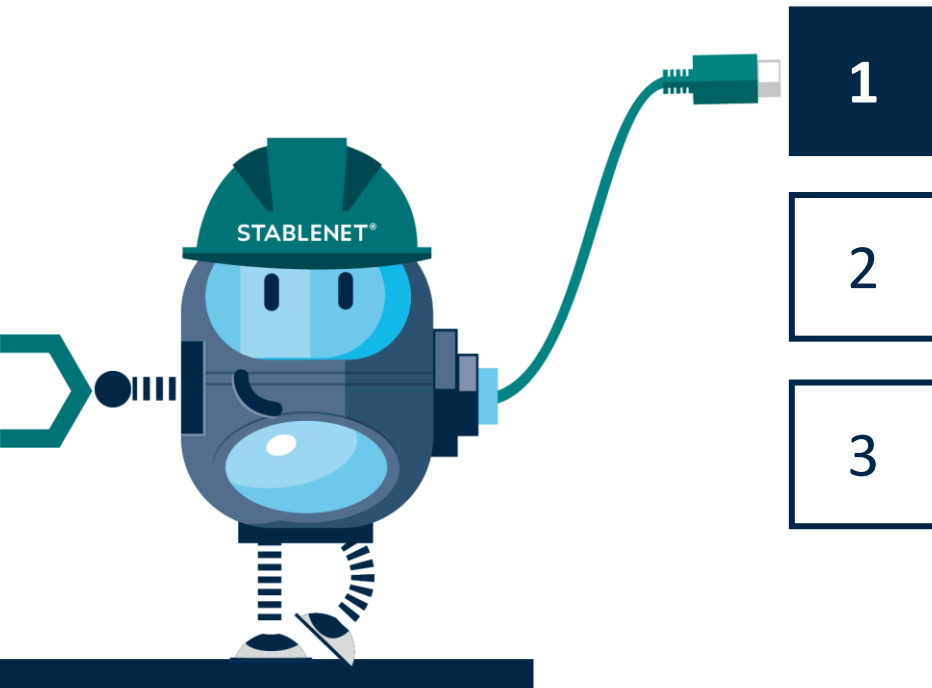
- Software und Services “Made in Germany”

Standorte

- Deutschland (Würzburg (HQ) und Münster)
- USA (Austin, TX)
- Singapur

Größe

- weltweit über 100 Mitarbeiter



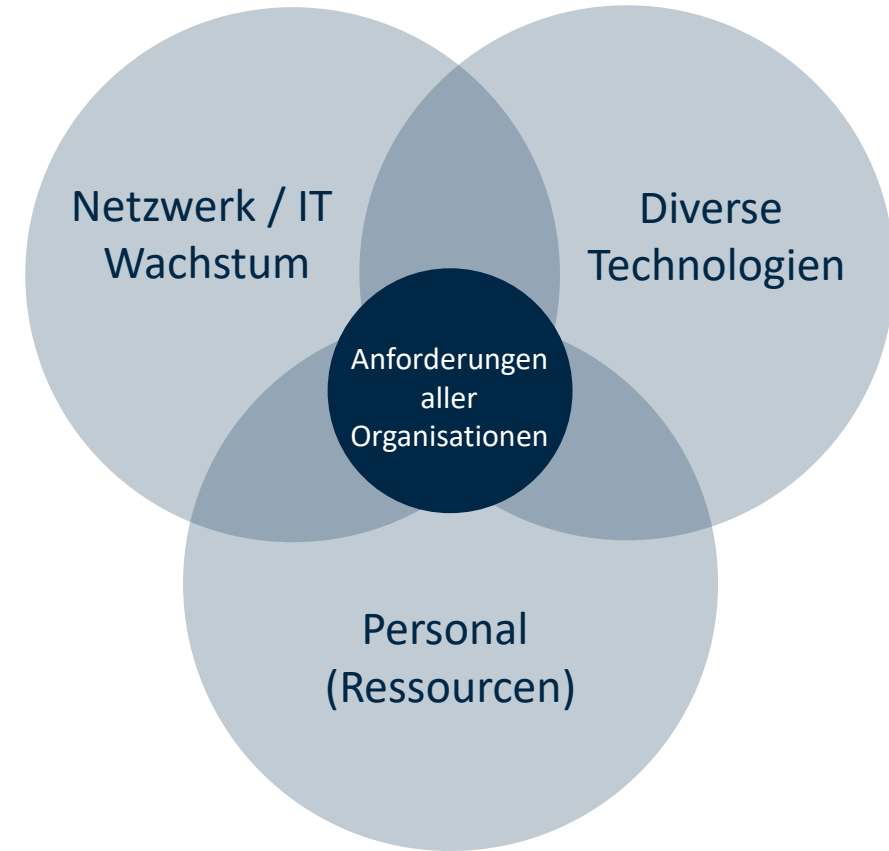
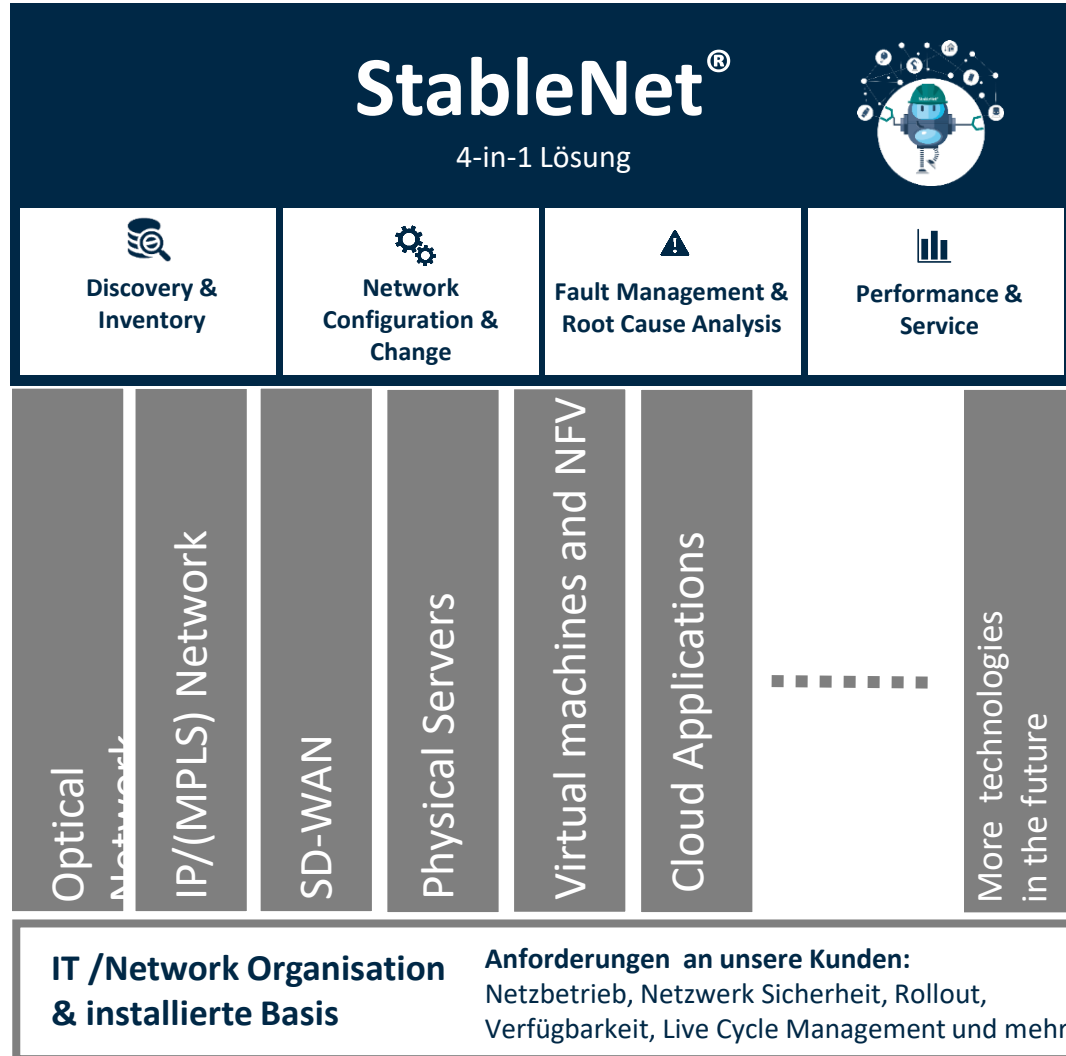
Kurz-Rückblick SSIMUC 2021: 1&1 Versatel – Strategische Kooperation im Monitoring-, Konfig.- und Kapazitätsmgmt

Automated Network & Service Management 2022 –
Ausgewählte Beispielfunktionen

Quo Vadis? – Einblick in zukünftige Themen & Forschung

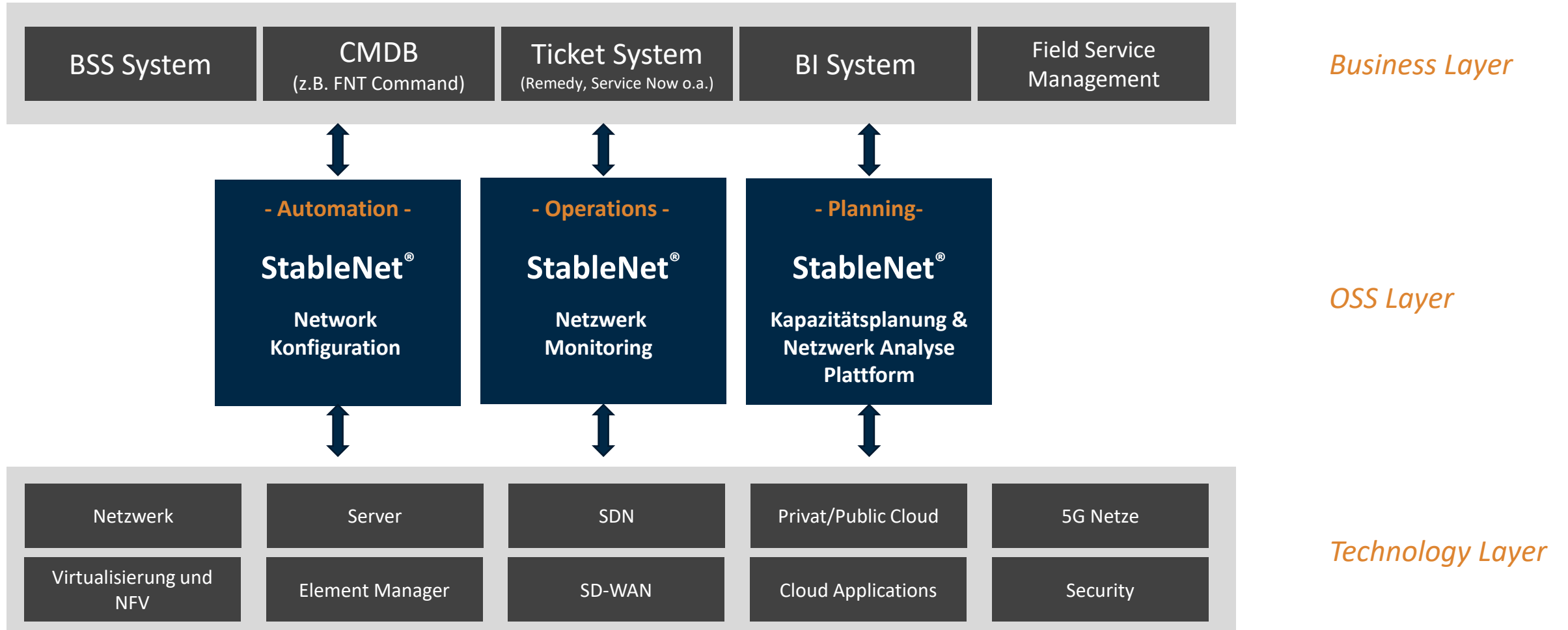


Dr. Stefan Köhler
@SSIMUC 2021



Wir sind überzeugt, dass die Vielfalt der Technologien auf NMS-Ebene sinnvoll harmonisiert werden muss

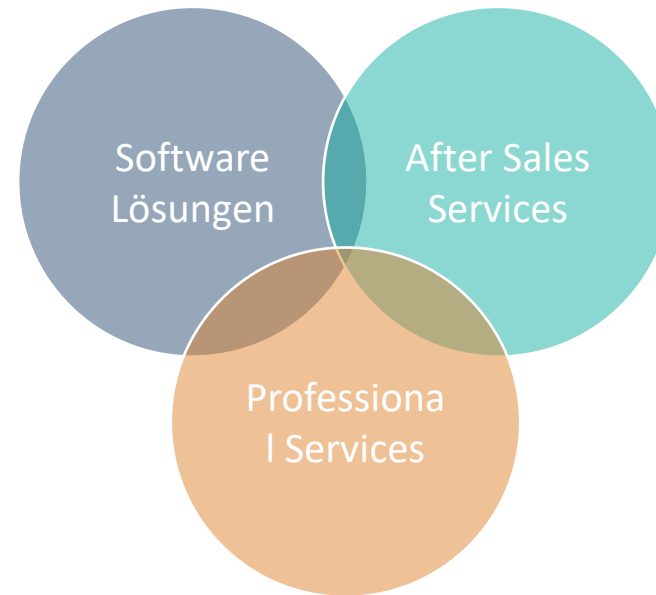
Einsatz von StableNet® bei Service Providern



- Lieferung von StableNet® Standard Modulen
- Kundenspezifische Konzeption von Software Modulen nach Anforderungen der 1&1 Versatel

- Lieferung von 1st, 2nd und 3rd Level Produkt Support
- Lieferung von 1st und 2nd Level Applikation Operation
- Lieferung von Applikation Management
- Services SLA basierend (SLAs 5x8 und 24/7)

- StableNet® Integration mit externen Systemen (z.B. FNT)
- Beratungsleistungen und Anforderungsanalyse
- Betriebshandbücher und andere Dokumentation



Warum Infosim® ?

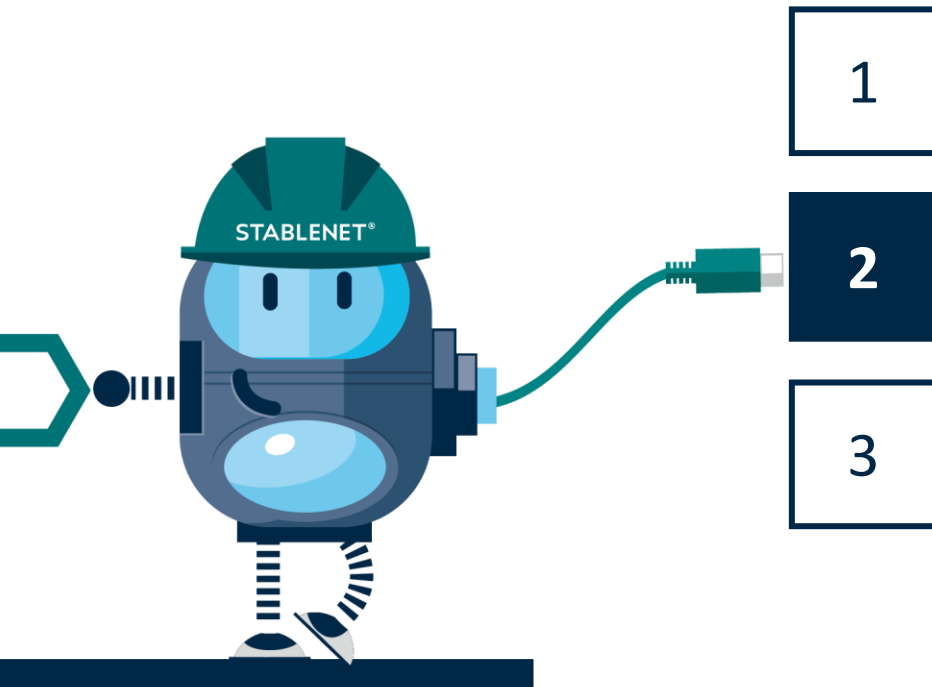
- Kurze Wege
- Direkte und kompetente Ansprechpartner
- Flexibilität und Schnelligkeit
- Unterstützung in allen Bereichen (Produkt, After Sales und Professional Services)
- Vertrauen

Vortrag Versatel/Infosim @ FNT Network'22

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**Automated Network & Service Management 2022 –
Ausgewählte Beispielfunktionen**

Quo Vadis? – Einblick in zukünftige Themen & Forschung

Device Compliance Check & Automated Config Fix Workflow

Step 1: Backup Job

- Backup devices via CLI and store current configuration

Step 2: Policy Check Job

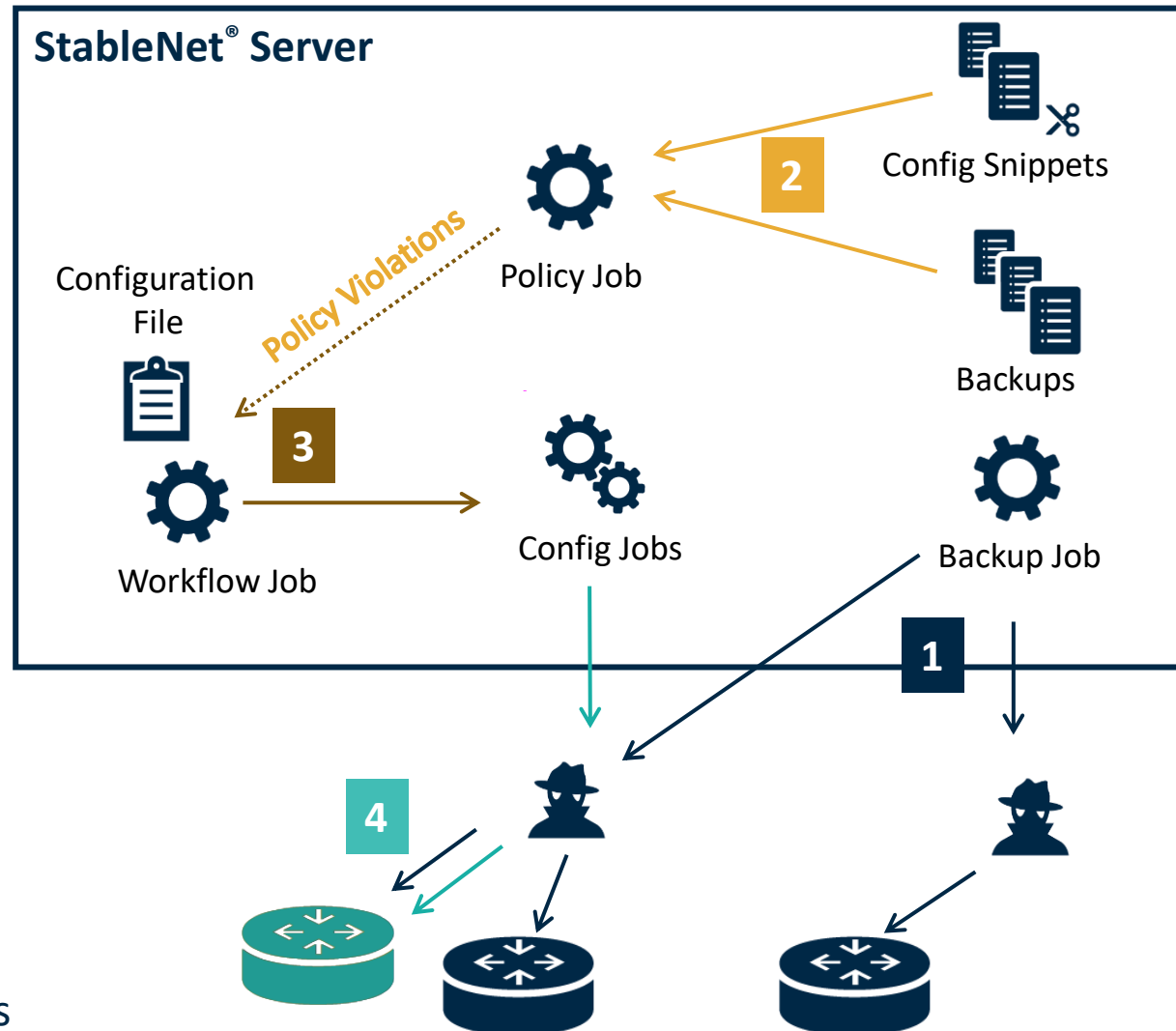
- Policy Checks check the stored configuration for compliance using the defined Snippets
- Create Policy Violations

Step 3: Policy Config Workflow Job

- Controls the workflow using REST API
 - Logic defined in configuration file
 - Reads Policy Violations
 - Execute Config Jobs for devices with policy violations

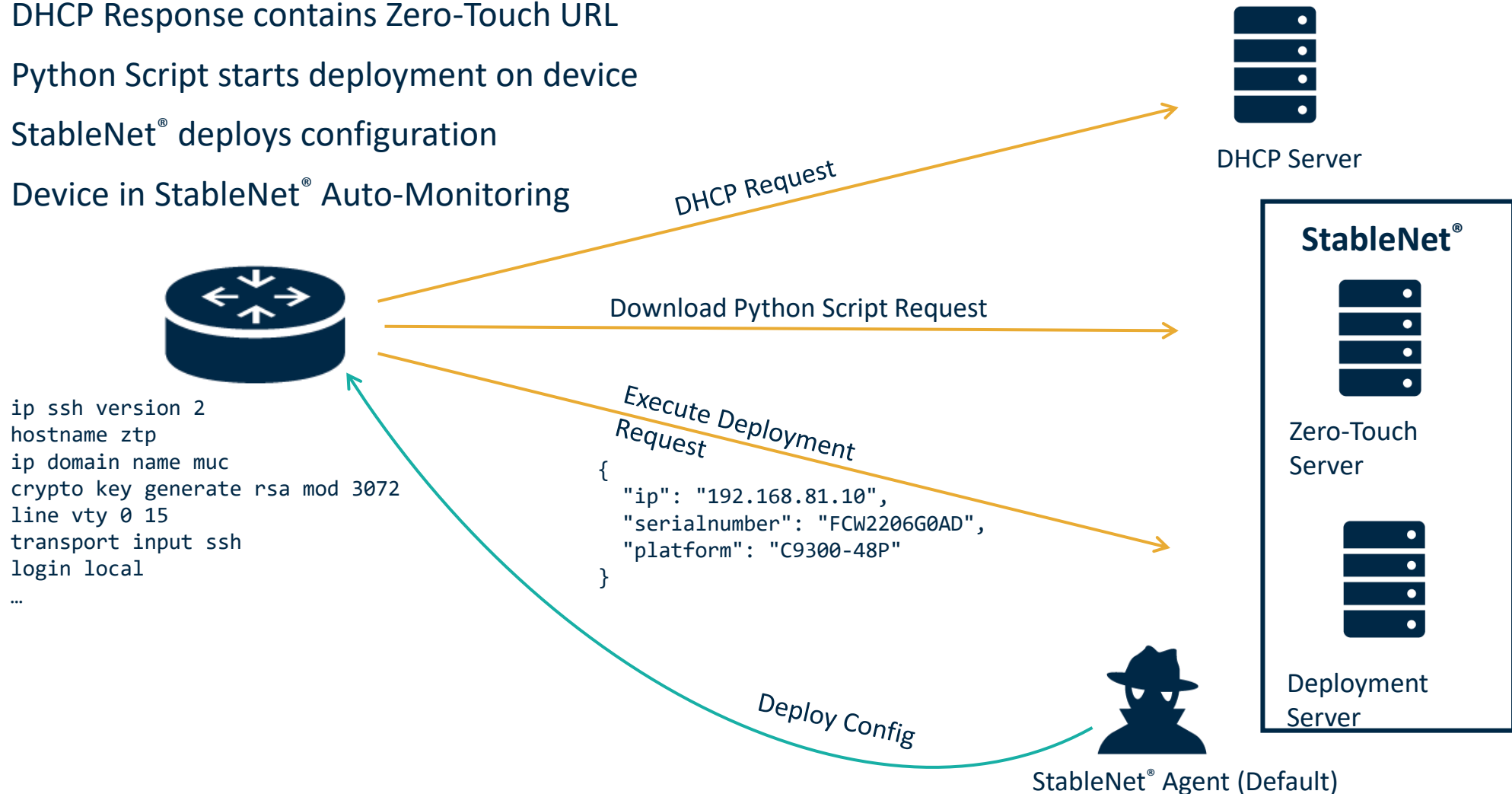
Step 4: Config Jobs

- Corrects device configurations
- Usually one job for one or more policies



Zero-Touch Workflow

- Step 1: DHCP Response contains Zero-Touch URL
- Step 2: Python Script starts deployment on device
- Step 3: StableNet[®] deploys configuration
- Step 4: Device in StableNet[®] Auto-Monitoring



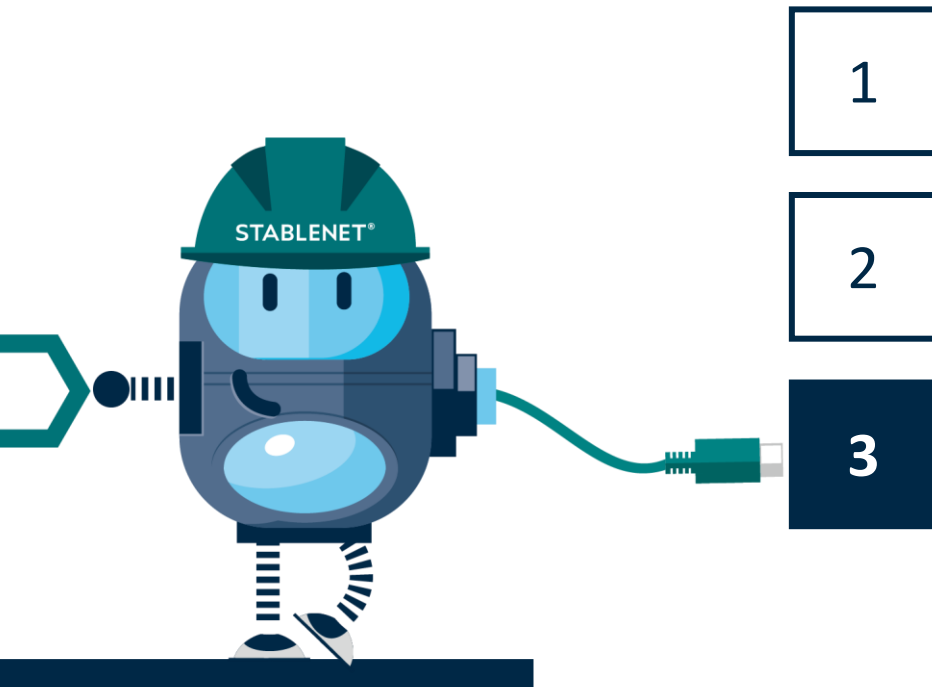
Mehr Infos: Infosim® Youtube Channel

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The screenshot displays the Infosim YouTube channel page. At the top, the channel name 'Infosim' is shown with 262 subscribers. The navigation bar includes 'ÜBERSICHT', 'VIDEOS', 'PLAYLISTS', 'KANÄLE', and 'KANALINFO'. The main content area is divided into three sections:

- Quick Overview of Infosim®'s activities**: A row of five video thumbnails. The first video, 'Infosim®'s CEO Dr. Stefan Köhler introduces...', has 283 views. Other videos include 'Dr. David Hock explains the importance of research in...' (228 views), 'Unique StableNet® solution explained by Dr. David...' (215 views), 'StableNet® Roadmap' (229 views), and 'Infosim StableNet® Working together with Deutsche...' (99 views).
- StableNet® Tutorials**: A row of six video thumbnails. The first is 'Tutorial StableNet® Installation' (712 views). Other tutorials include 'Automated EoX & Vulnerability' (384 views), 'StableNet® Analyzer, Group...' (386 views), 'Key Functionalities of StableNet® Rich Client GUI' (599 views), 'Flexible Options for Reporting' (220 views), and 'NCCM Use Case Examples explained' (162 views).
- StableNet® Snapshot Series**: A row of six video thumbnails. The first is 'Snapshot Weathermap Extensions' (13:18). Other snapshots include 'Multiple Monitor Thresholds' (5:47), 'Web Portal' (9:21), 'Grafana Implementation' (7:43), 'Updated Automated...' (17:30), and 'Orchestrating StableNet®...' (10:56).

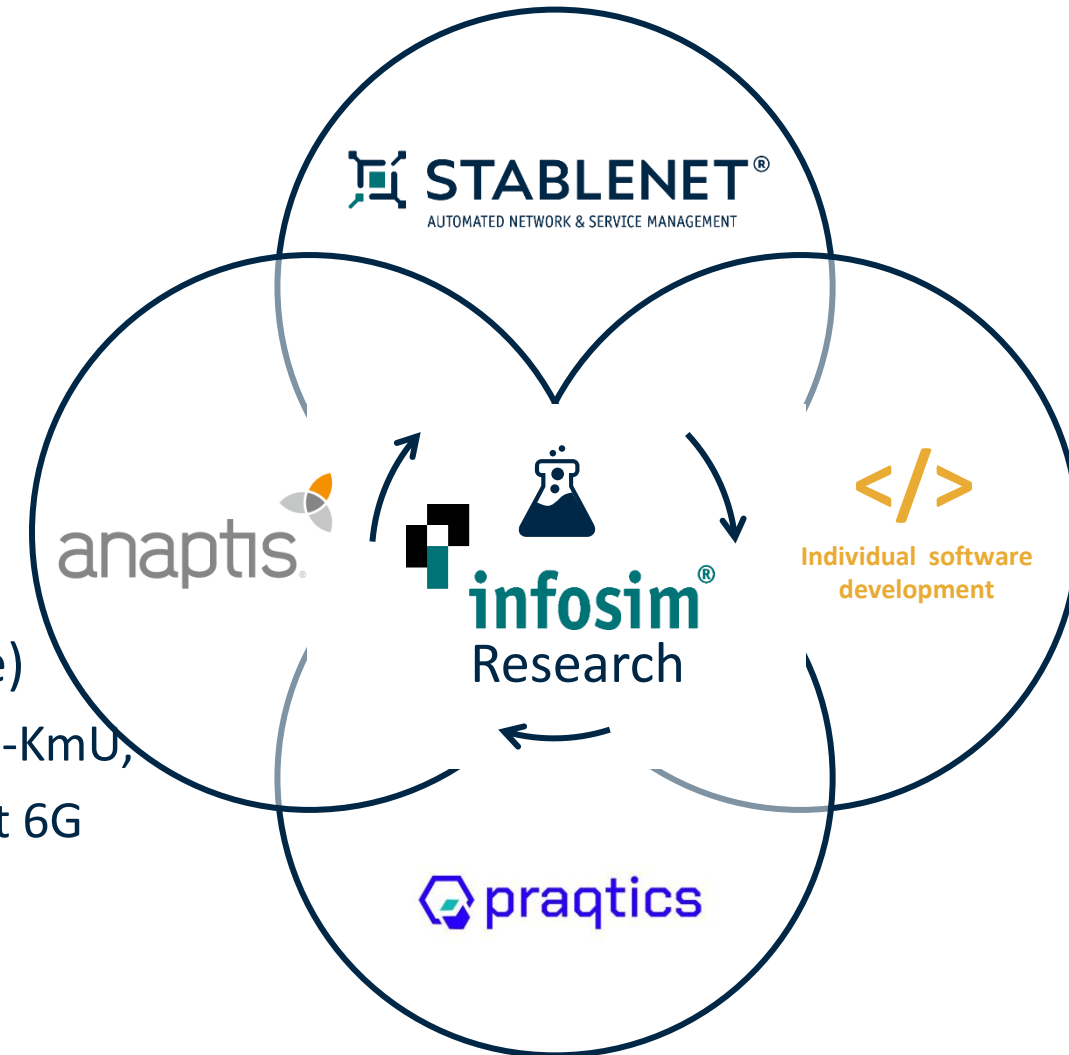


1 Kurz-Rückblick SSIMUC 2021: 1&1 Versatel – Strategische Kooperation im Monitoring-, Konfig.- und Kapazitätsmgmt

2 Automated Network & Service Management 2022 – Ausgewählte Beispielfunktionen

3 Quo Vadis? – Einblick in zukünftige Themen & Forschung

- Cooperation with industry and academia partners
- Activities spanning across all parts of Infosim[®] Group
- Continuously working on innovation
 - Currently 11 running funded projects
 - Further proposals submitted/ongoing
- Cooperation networks (education & technical exchange)
ESF-ZDEX, ESF-PROMPTNET, ESF-FRISCHNET, CAIRO, KI-trifft-KmU,
KI-HUB Bayern/Nordbayern, ZDI, Bayern.Innovativ, Thinknet 6G
- Topics from A like Automation to Z like Zero-Touch



Selected projects: Communication Networks



- **KICK (2020 – 2022)**
AI/ML, Management of 5G Campus networks
- **AI-NET (2021 – 2024)**
AI/ML, Network streaming telemetry, Flow based analysis, Capacity planning
- **5GQMON (2021 – 2024)**
QoE, Crowdsourcing, 5G, LTE
- **KOSINU5 (2021 – 2024)**
Campus 5G, Time-Sensitive Networks
- **QuNET+ML (2022 – 2024)**
Quantum communication, QKD
- **ZinsVis (2022 – 2025)**
Automated visualization, Layouting in 2D & 3D
- **QuINSiDa (2022 – 2025)**
Quantum communication, QKD, LiFi
- **6G-NETFAB (2022 – 2025)**
6G Backbone, SDN, disaggregated open optical transport switches (DOTS)

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on the basis of a decision by the German Bundestag

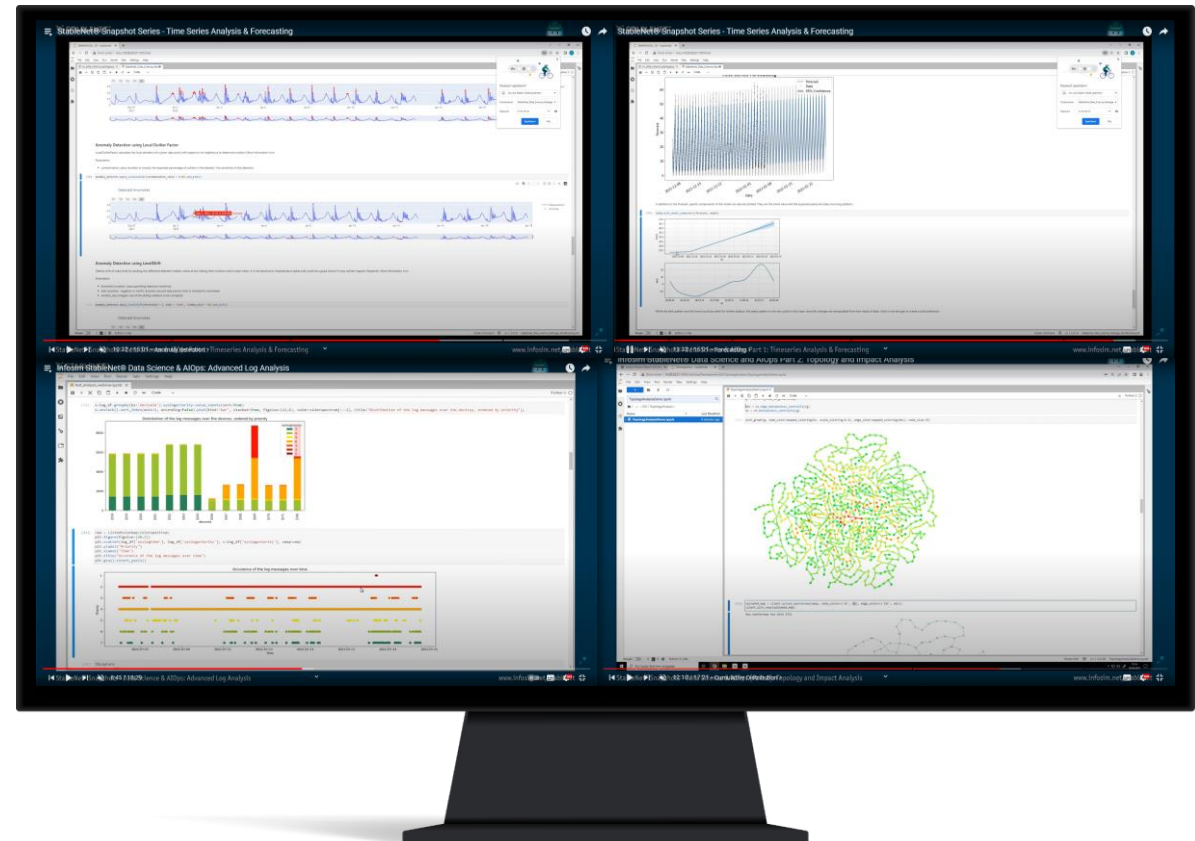
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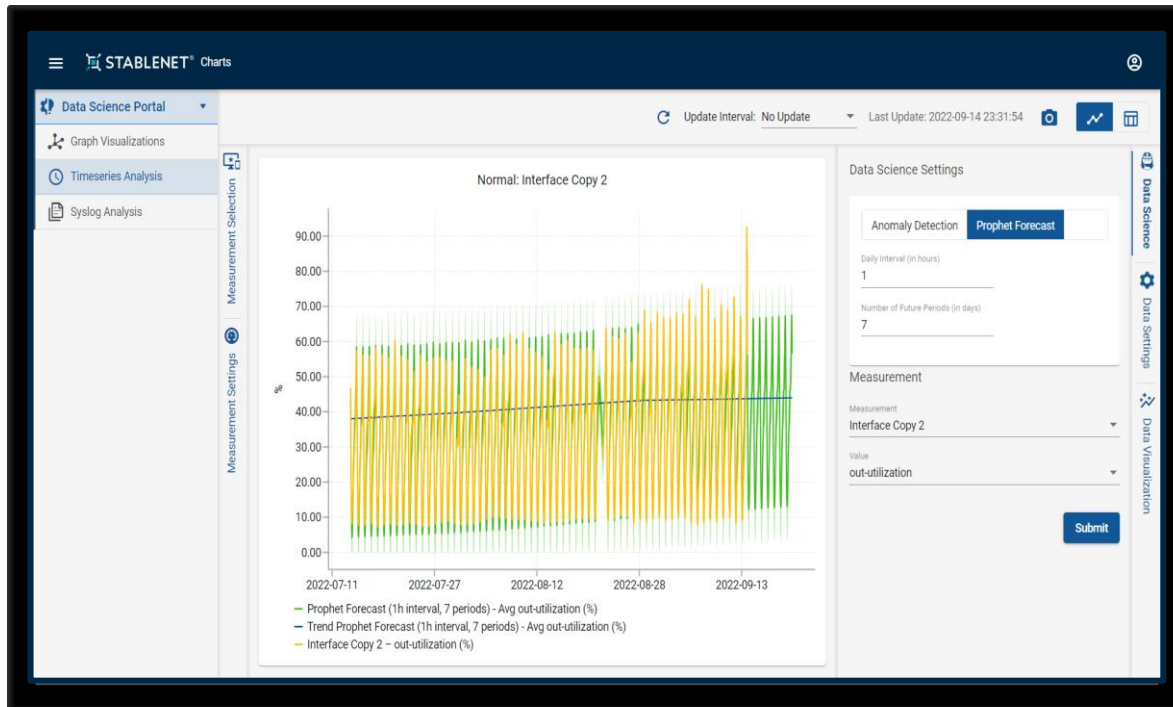
Bavarian Ministry of Economic Affairs, Regional Development and Energy



- **Why?**
 - Increasing complexity and size of networks
 - Intelligent insights needed for automation, e.g. anomaly detection, forecasting, impact analysis
- **How?**
 - Make use of the various types of information StableNet[®] can offer, e.g. topology information, time series data, syslogs + meta-info (tags)
 - Provide easy and convenient access to data and algorithms → cover large variety of use cases
- **What?**
 - Interactive Python notebooks with code examples for various use cases
 - Readily-available connection points to corresponding StableNet[®] APIs to quickly apply the analysis to your own StableNet[®] system



Data Science & AIOps – Zwei Usability Ansätze...



Simplified usability

Data Science Portal

Selected option range

→ Current work in progress



Full option range

Interactive Notebooks

some Python needed

→ More insight: Infosim® Snapshot Webinars on YouTube

Feedback gefragt! Was interessiert besonders?

The screenshot shows a web page for a survey titled "Feedback on Artificial Intelligence (AI) and StableNet®". The page includes a header with the StableNet logo and navigation links (Downloads, FAQ, Partner, Customer, Links, User). The main content area has a dark blue header with the survey title. Below this, there is a "Thanks for your help!" section with a paragraph of text and two contact photos: Stefan Füller (R&D Engineer, email: fueller@infosim.net) and Dr. David Hock. A form section follows, starting with a note "Fields marked with an * are required". The form contains two sections of checkboxes: "With regard to AI, I am particularly interested in the following topics related to StableNet: * ⓘ" with options for "Advanced Log Analysis", "Time Series Analysis and Forecasting", and "Topology and Impact Analysis"; and "Regarding the above mentioned topics, I am interested in... *" with options for "a more technical and flexible solution based on Jupyter notebooks" and "a web portal solution". A large QR code is positioned to the right of the form.

Danke

