

Fortinet Webinar

28. März 2023

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Fortinet SD-WAN Zero Touch Provisioning

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Agenda

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- Fortinet Secure SD-WAN
- SD-WAN HUB/Spoke Architektur
- Notwendige Komponenten
- Herausforderungen
- Zero Touch Provisioning (ZTP)
- ZTP Grundprinzip
- FortiZTP Portal
- Fortinet "Toolbox" für ZTP SD-WAN Deployments
- ZTP Demo

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Fortinet Secure SD-WAN

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Underlay

Choose the WAN links to use



Overlay

Choose the desired topology to interconnect your sites



Routing

Choose how to propagate routes between your sites



Security

Choose how to protect each of the available paths



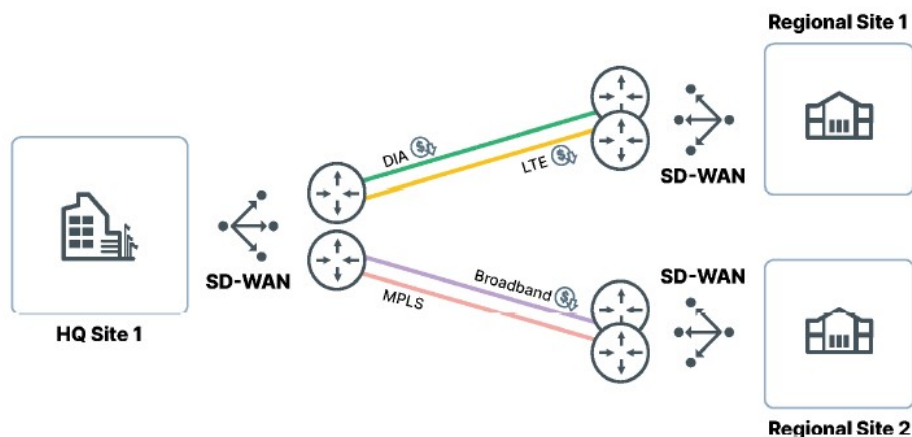
SD-WAN

Choose the strategy to pick one of the available paths

- Mehrere Netzwerkverbindungen (Verbindungspfade) wie z.B. Internet-, MPLS-, 4/5G Links und VPN/GRE Tunnels.
- Nahtlos nutzen von mehreren Underlay- und Overlay-Netzwerken
- Dynamisches Routing
- Keine Kompromisse bei der Security
- Traffic Steering basierend auf Performance SLA's
- Fortinet vereint Security und SD-WAN

SD-WAN HUB/Spoke Architektur

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Notwendige Komponenten



- Underlays (ISP, MPLS, 4/5G)
- Overlays (IPSec VPN mit IKEv2)
- Routing (iBGP mit Route Tags)
- Traffic Steering (Performance SLA's)
- Security Policies und -Profile

Herausforderungen



- Komplexität / verschiedene Technologien
- Unterschiedliche Gegebenheiten (Standorte/Leistungsarten und -qualitäten)
- Vielzahl an Parametern und Konfigurationsbereichen
- Logistik (HW Shipping, Inbetriebnahme, Hands-on Skills)

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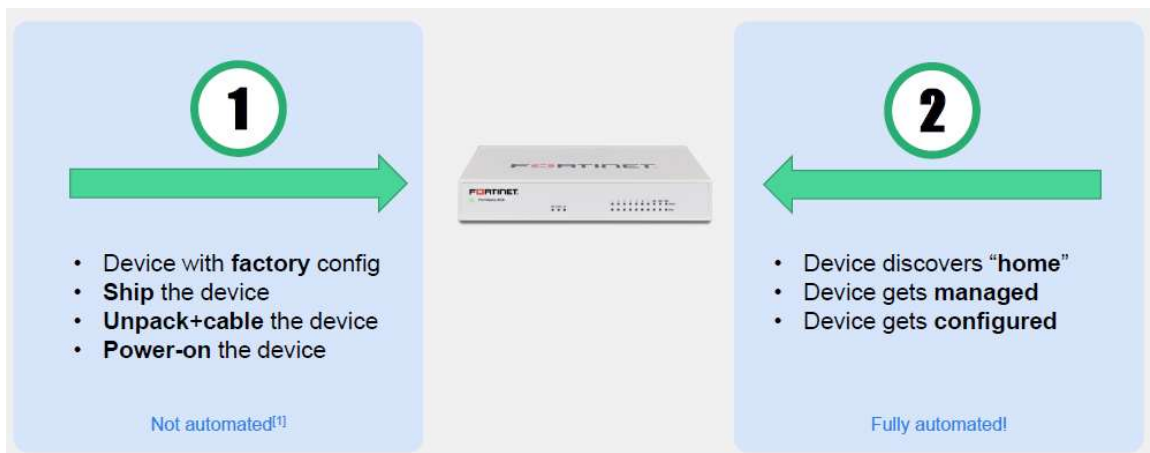
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Zero Touch Provisioning (ZTP)



- Ein automatisiertes Deployment von SD-WAN Branches nach dem "Plug and Play"-Prinzip

ZTP Grundprinzip



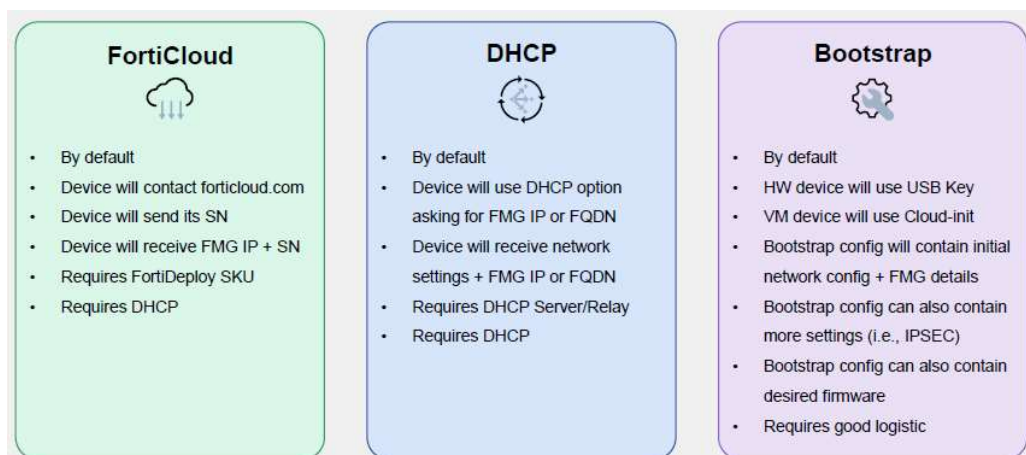
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ZTP Grundprinzip

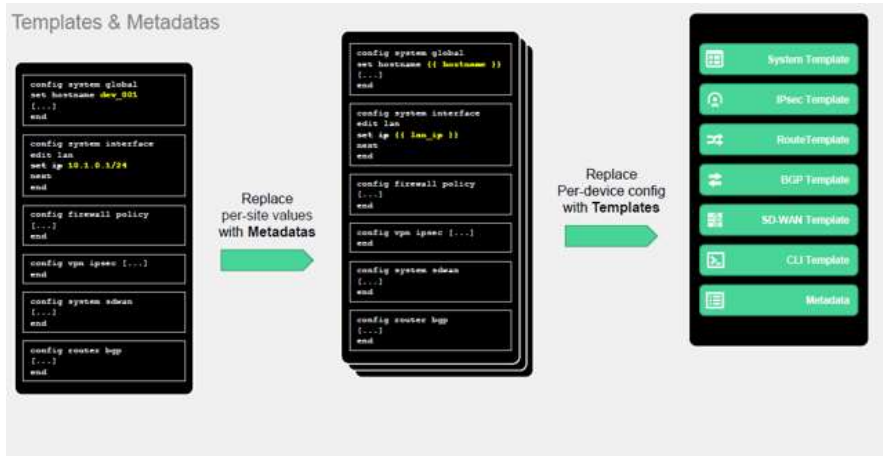


Wie findet ein Gerät seine Konfigurationen



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Konfigurationsmodellierung



Templates & Metadaten



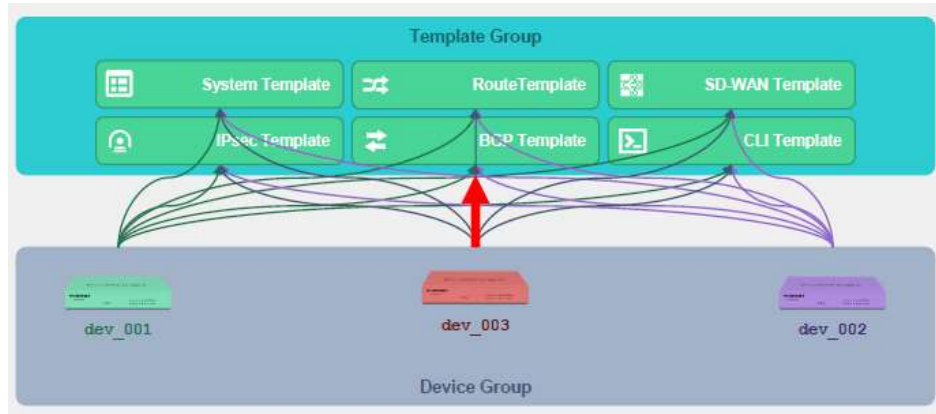
GUI-based Templates & CLI/Jinja-based Templates

This section shows the integration of GUI and CLI templates. On the left is a screenshot of the 'Edit IPsec Tunnel' GUI, showing fields for Tunnel Name, Network, Routing, Remote Device, and Phase2 Interface. In the center is a vertical menu of template options: System Template, IPsec Template, RouteTemplate, BGP Template, SD-WAN Template, CLI Template, and Metadata. On the right is a Jinja2 code snippet for configuring an interface, using variables like `{ intf.name }`, `{ intf.mode }`, and `{ intf.allowaccess }` to dynamically generate configuration commands.

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Template Zuweisung



FortiZTP Portal



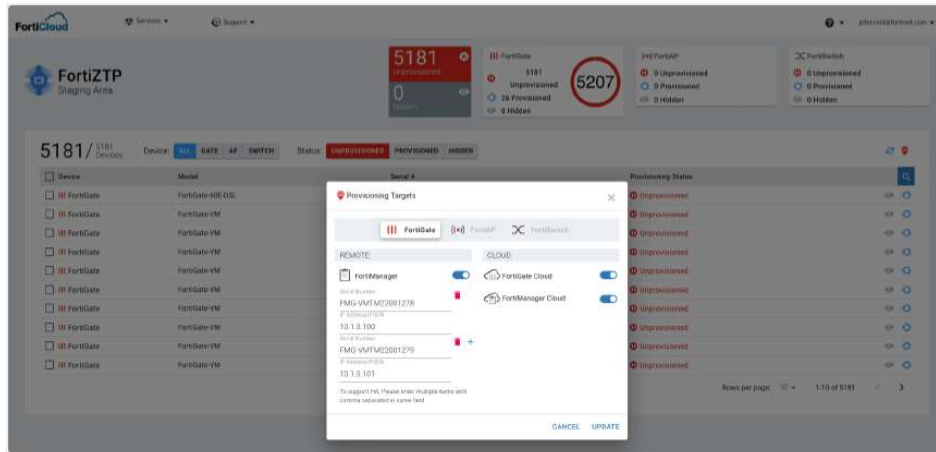
FortiCloud interface showing FortiZTP Staging Area. Summary: 3081 Unprovisioned, 0 Hidden, 3095 Provisioned. Filter: FortiGate, FortiAP, FortiSwitch.

Device	Model	Serial #	Provisioning Status	Provisioning Location	Provisioning Date
FortiGate	FortiGate-60E-POE	EG60E2TK18005850	Provisioned	FortiManager (10.210.35.112)	12/14/2021, 12:04:00 PM
FortiGate	FortiGate-60E-DSL	EG60E2TK20000926	Provisioned	FortiManager (10.210.35.200)	11/24/2020, 04:33:00 PM
FortiGate	FortiGate-60F	EGT60FETX19000130	Provisioned	FortiManager (10.210.35.112)	02/03/2022, 02:32:00 PM
FortiGate	FortiGate-51F	EGT61EETX19000164	Provisioned	FortiManager (10.210.35.112)	02/11/2022, 02:46:00 PM
FortiGate	FortiGate-VM	EGV16V7M20000029	Provisioned	FortiManager (10.210.35.112)	02/28/2022, 06:56:00 PM
FortiGate	FortiGate-VM	EGV16V7M20000031	Provisioned	FortiManager (10.210.35.112)	02/03/2022, 02:37:00 AM
FortiGate	FortiGate-VM	EGVAM01000153994	Provisioned	FortiGateCloud (europe)	12/20/2018, 09:26:00 AM
FortiGate	FortiGate-VM	EGVAMALTM19001576	Provisioned	FortiGateCloud (global)	03/10/2020, 01:45:00 PM
FortiGate	FortiGate-VM	EGVAMALTM19001578	Provisioned	FortiManager (10.210.35.112)	12/17/2021, 01:35:00 PM
FortiGate	FortiGate-VM	EGVAMALTM20000581	Provisioned	FortiManager (10.210.35.200)	07/07/2020, 03:33:00 PM

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FortiZTP Portal



Fortinet «Toolbox» für ZTP SD-WAN Deployments



- FortiZTP Portal
- FortiManager
- Provisioning Templates
- Scripts/CLI Templates
- Meta Fields
- FortiManager API für Orchestrierung

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ZTP Demo

