

LANCOM

Systems

SD-WAN MADE IN GERMANY

SIMPLIFY DIGITAL TRANSFORMATION.

SECURE. NETWORKS.



AGENDA

- Networks in transition
- The solution: SD-WAN
- Use cases SD-WAN
- The strengths of LANCOM SD-WAN



NETWORKS IN TRANSITION

ADVANCING DIGITALIZATION

- › Business processes in companies are increasingly digital
 - COVID-19 is a massive driver and catalyst
- › More and more data sources and information are interconnected
 - Real-time communication and AI are on the rise



NETWORKS IN TRANSITION

ADVANCING DIGITALIZATION

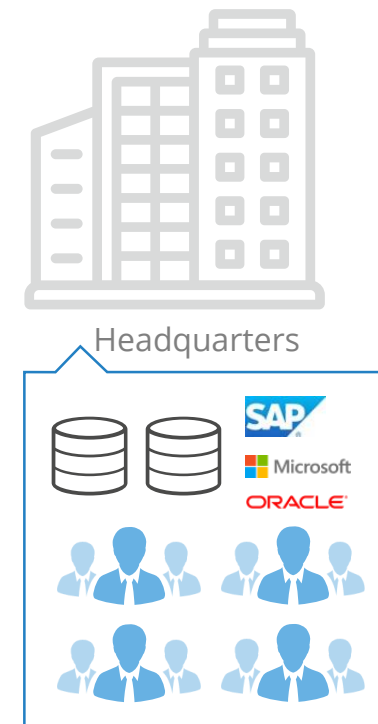
- Traditional structures and workflows are under pressure and going through change
 - ➔ Working from home, distributed teams, locations, and branches all over the world
- Applications are increasingly moving from “on premises” to “in the cloud”
 - ➔ Hybrid or cloud-only solutions are replacing traditional “on premises” software



NETWORKS IN TRANSITION

TRADITIONAL

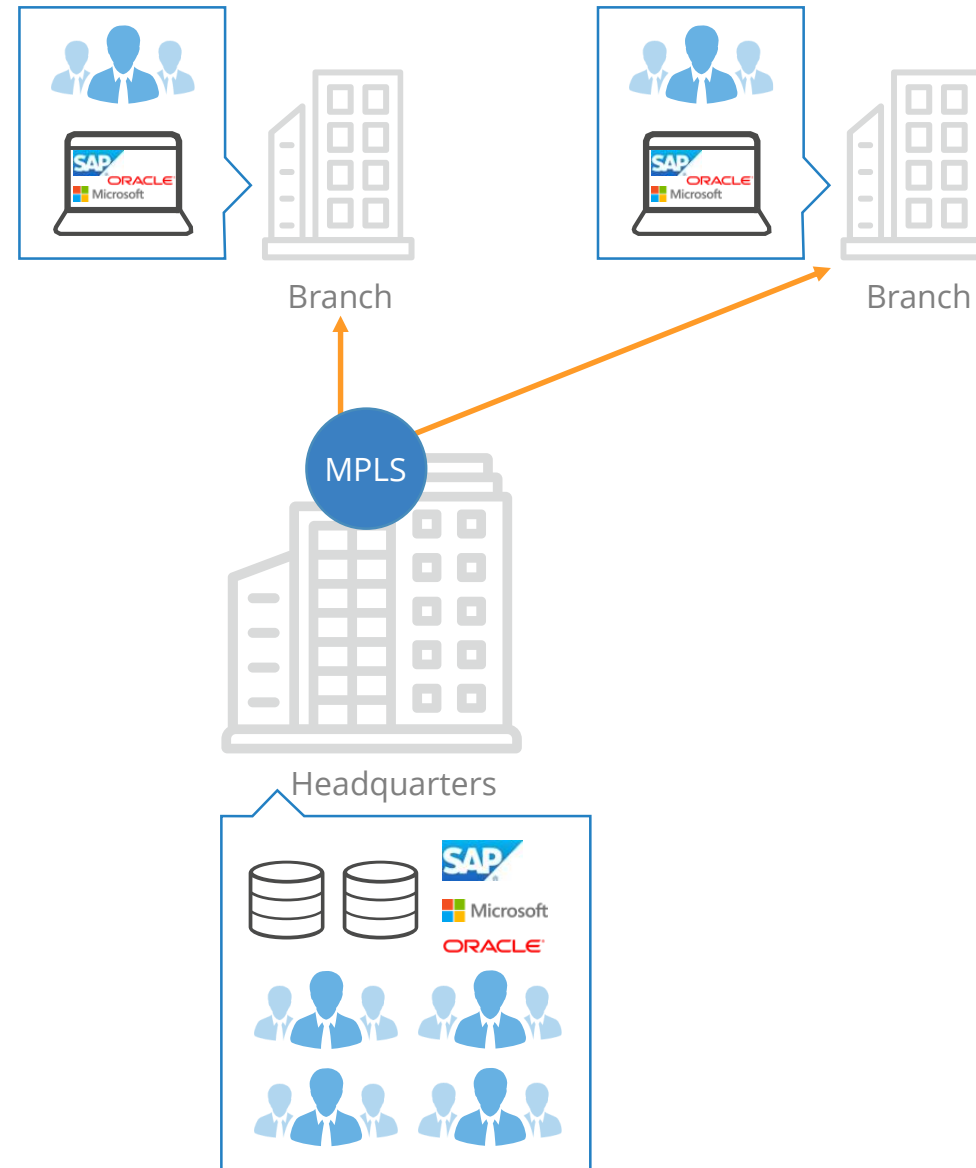
- › Services & databases (ERP/CRM) hosted in the data center of the headquarters (on premises)



NETWORKS IN TRANSITION

TRADITIONAL

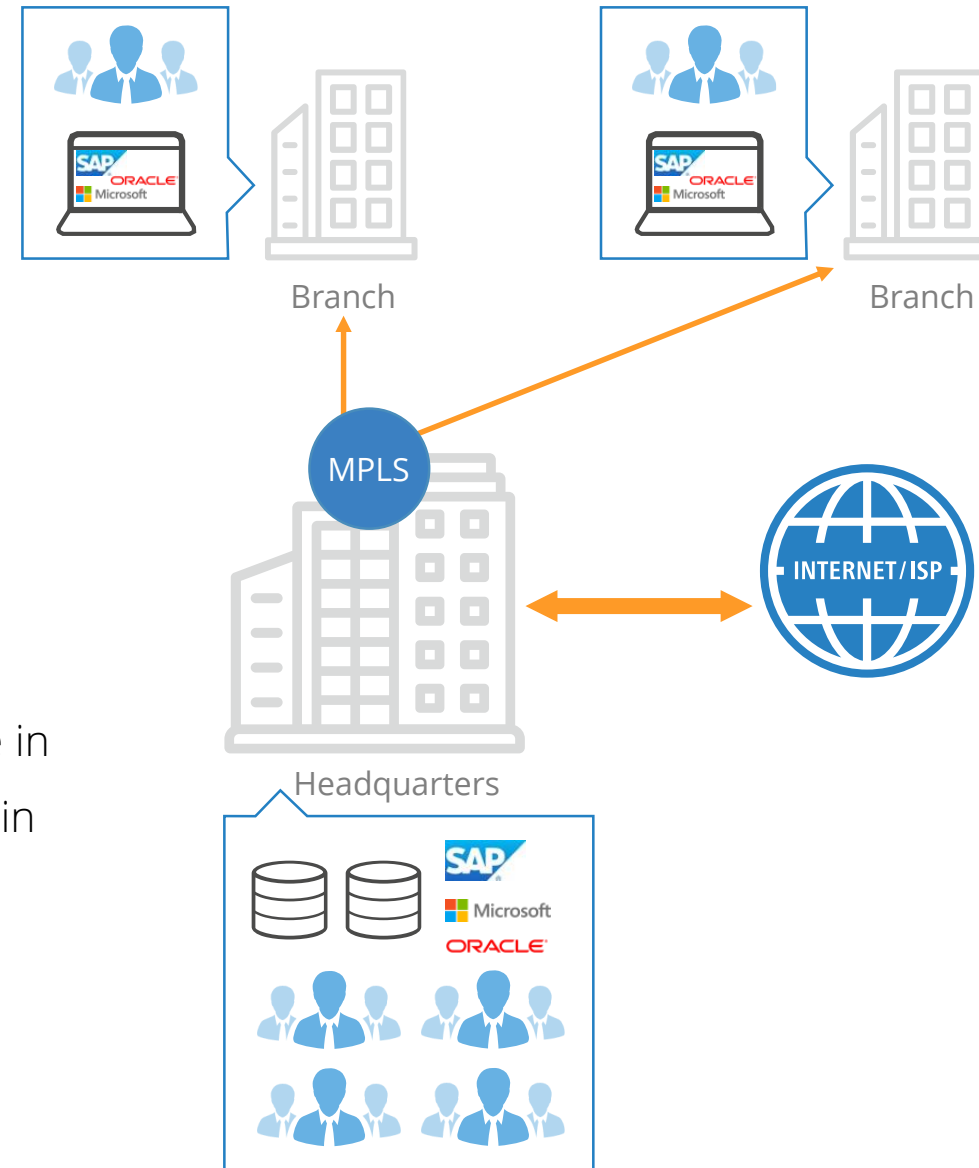
- › Services & databases (ERP/CRM) hosted in the data center of the headquarters (on premises)
- › Employees access the services from different locations, often via static MPLS lines



NETWORKS IN TRANSITION

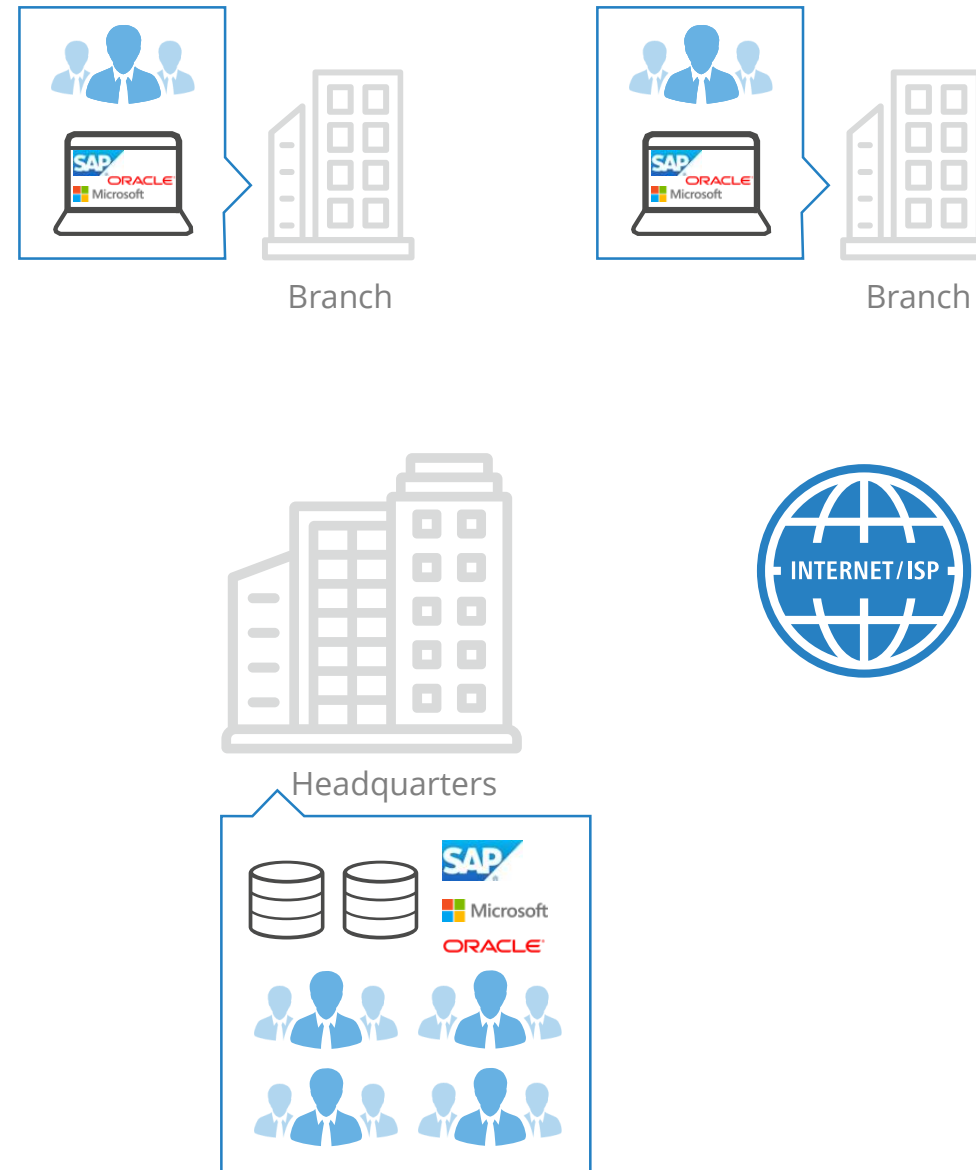
TRADITIONAL

- › Services & databases (ERP/CRM) hosted in the data center of the headquarters (on premises)
- › Employees access the services from different locations, often via static MPLS lines
- › This results in a very high load and high data volume in the headquarters, which leads to long latency times in application usage



NETWORKS IN TRANSITION

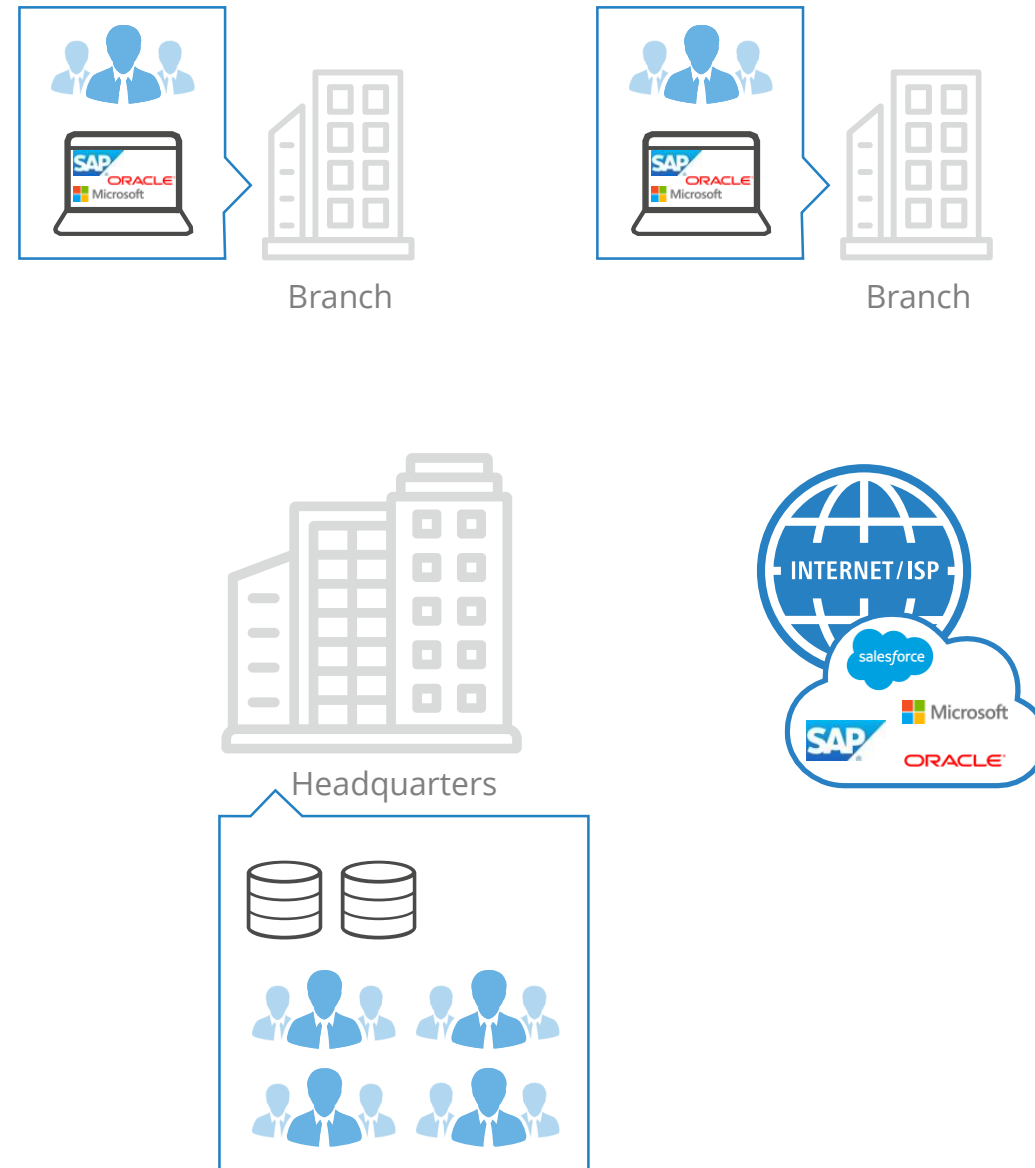
AGILE / FLEXIBEL / RELIABLE



NETWORKS IN TRANSITION

AGILE / FLEXIBEL / RELIABLE

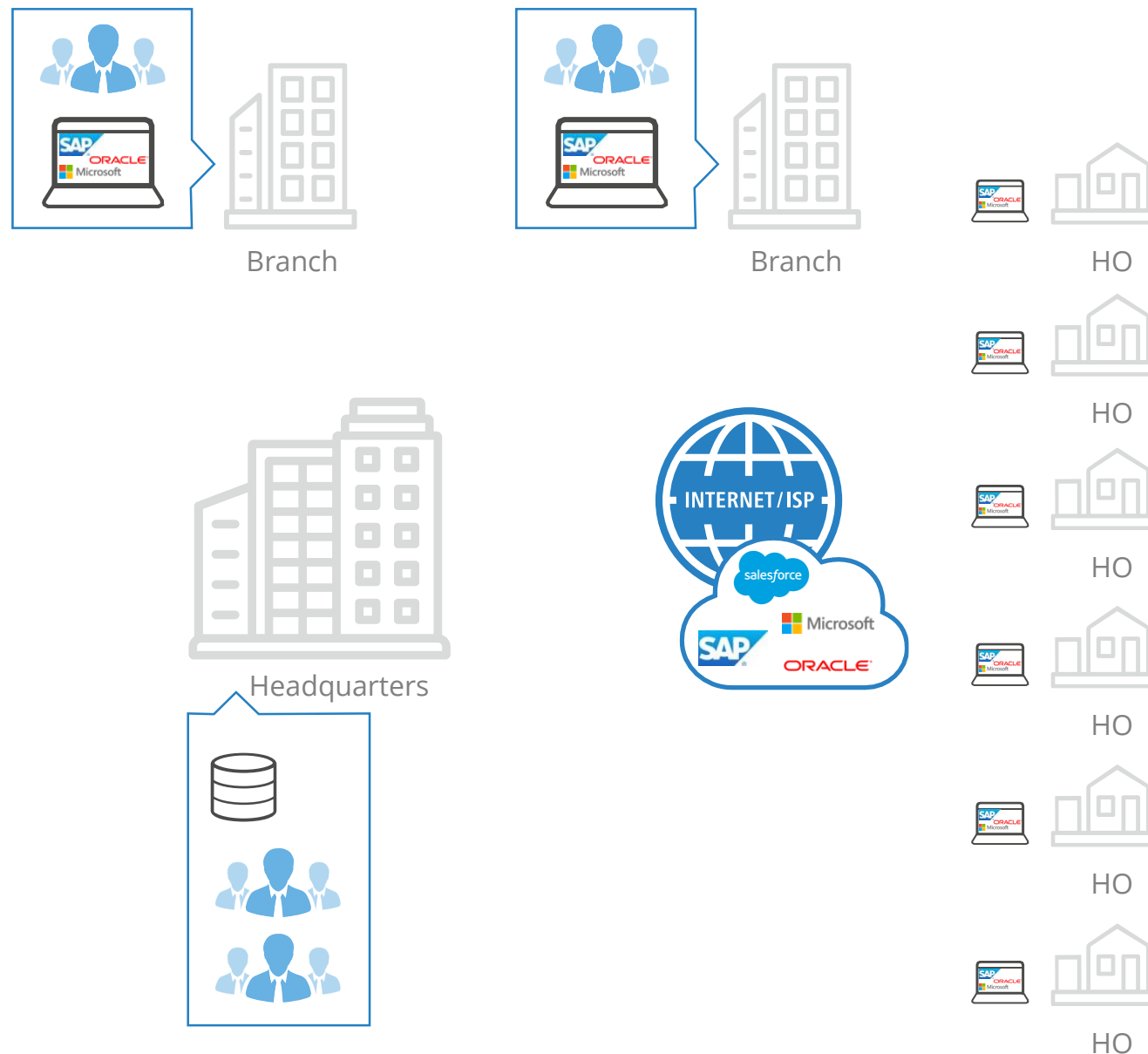
- Applications and services are increasingly being outsourced to the cloud



NETWORKS IN TRANSITION

AGILE / FLEXIBEL / RELIABLE

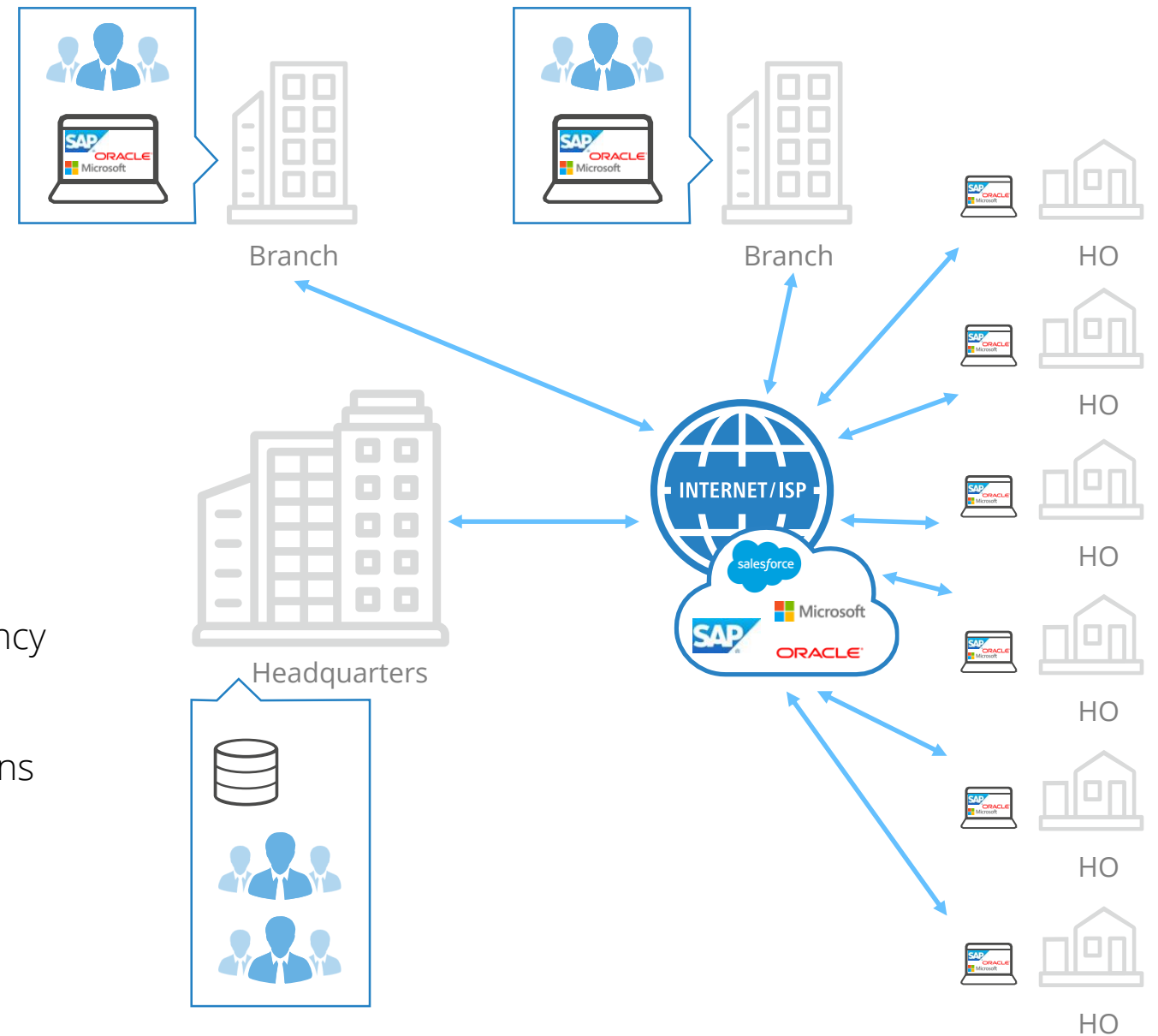
- Applications and services are increasingly being outsourced to the cloud
- An increasing number of employees work from the home office



NETWORKS IN TRANSITION

AGILE / FLEXIBEL / RELIABLE

- Applications and services are increasingly being outsourced to the cloud
- An increasing number of employees work from the home office
- Leaner network architecture: Significantly lower latency times by reducing the load on the headquarters and shortening the paths from the user to the applications



MODERN NETWORKS

TODAY REQUIRE:

- Maximum agility & performance
- Speed & reliability
- Highest cost savings & automation
- Maximum security & legal compliance



THE SOLUTION: **SD-WAN**

NEXT-GENERATION NETWORKS / MODERN SITE CONNECTIVITY

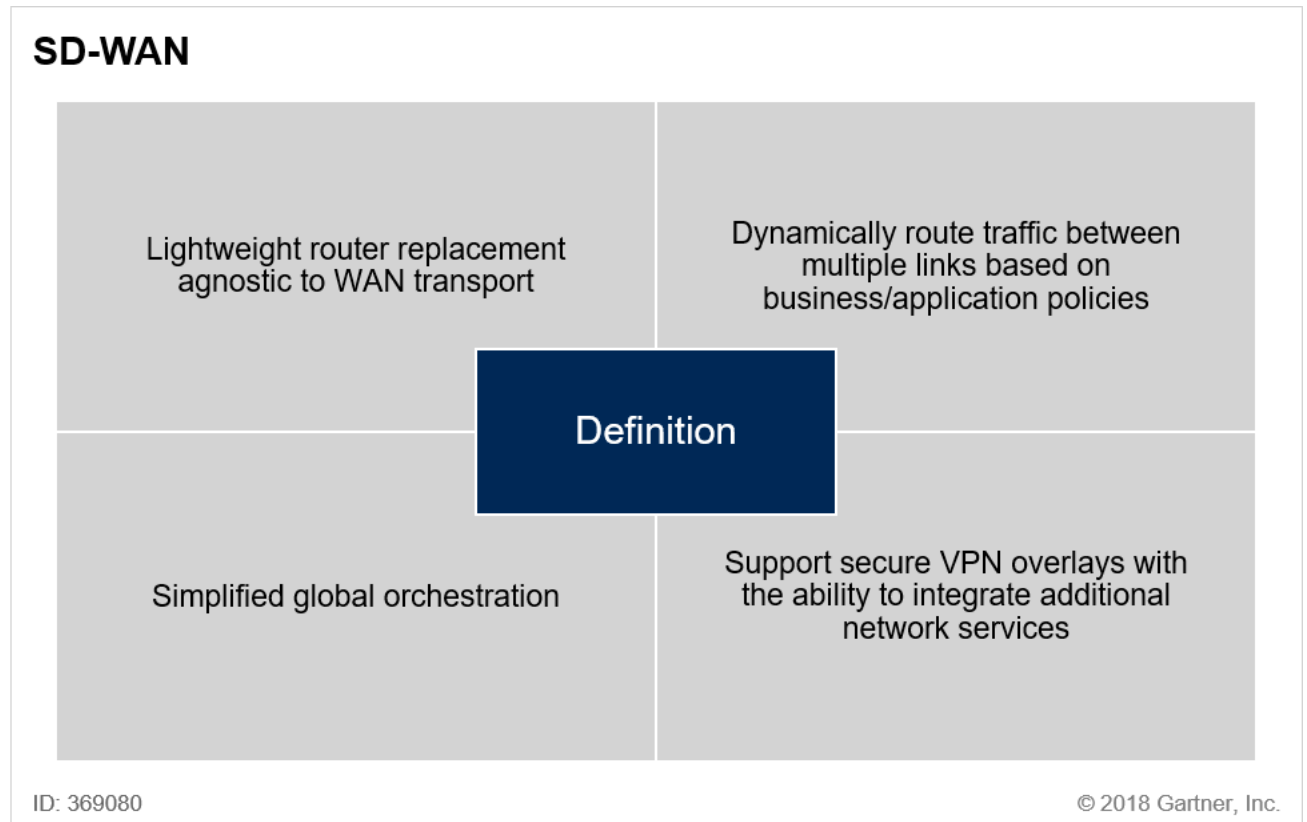


WHAT IS SD-WAN?

CENTRALIZED WAN CONTROL

- SD-WAN solutions replace traditional WAN routers and are WAN-transport-technology agnostic.
- They offer dynamic, policy-based selection of the application path over multiple WAN connections, and they support service chaining for additional services such as WAN optimization.

Gartner



ADVANTAGES OF SD-WAN

MAXIMUM AGILITY & PERFORMANCE

- Automated and location-independent provisioning of new applications, workplaces, and branches
- Flexible application prioritization
- State-of-the-art WAN optimization



ADVANTAGES OF SD-WAN

SPEED & RELIABILITY

- Rapid detection and proactive resolution of network errors and causes
- Increased bandwidth by utilizing all available lines at the site
- Maximum reliability



ADVANTAGES OF SD-WAN

HIGHEST COST SAVINGS & AUTOMATION

- Replacement / supplementation of expensive MPLS lines with cost-effective Internet lines
- Zero-touch WAN provisioning
- Regular feature updates



TYPICAL USE CASES

EXAMPLES

- › Dynamic site networking
- › Multi-cloud connectivity
- › Secure Internet access
- › Automatic optimization of WAN capacity (load balancing)
- › High-performance applications
- › Visibility of network and data traffic
- › Geographical expansion



SIMPLIFY DIGITAL TRANSFORMATION.

SD-WAN MADE IN GERMANY



SIMPLIFY DIGITAL TRANSFORMATION.

WHAT CHARACTERIZES A LANCOM SD-WAN?



MAXIMUM SCALABILITY AND SECURE SEPARATION

- The basis of the LANCOM SD-WAN architecture:
High Scalability VPN (HSVPN)
- Multiple digital applications are provisioned
through a single VPN tunnel ("Secure Tunneling")
- Advantage: Reduced recovery times in case of
failover



EFFICIENT UTILIZATION OF ALL AVAILABLE CONNECTIONS

- WAN-agnostic – supports all connections
- Fully automatic configuration and commissioning by zero-touch provisioning
- Provision of virtual routers in seconds



TRUSTED AND LEGALLY COMPLIANT

- Trusted cloud “made and hosted in Germany”
- LANCOM, a German manufacturer: Full compliance with applicable European security regulations (GDPR)
- Compared to non-EU competition: No commitment to obligations like the CLOUD ACT



HIGH RESPONSIVENESS TO MARKET REQUIREMENTS

- Agile development in Germany and fast reaction to local market requirements
- Regular software updates for the entire SD-WAN architecture
- Technical manufacturer support



PUBLIC OR PRIVATE CLOUD

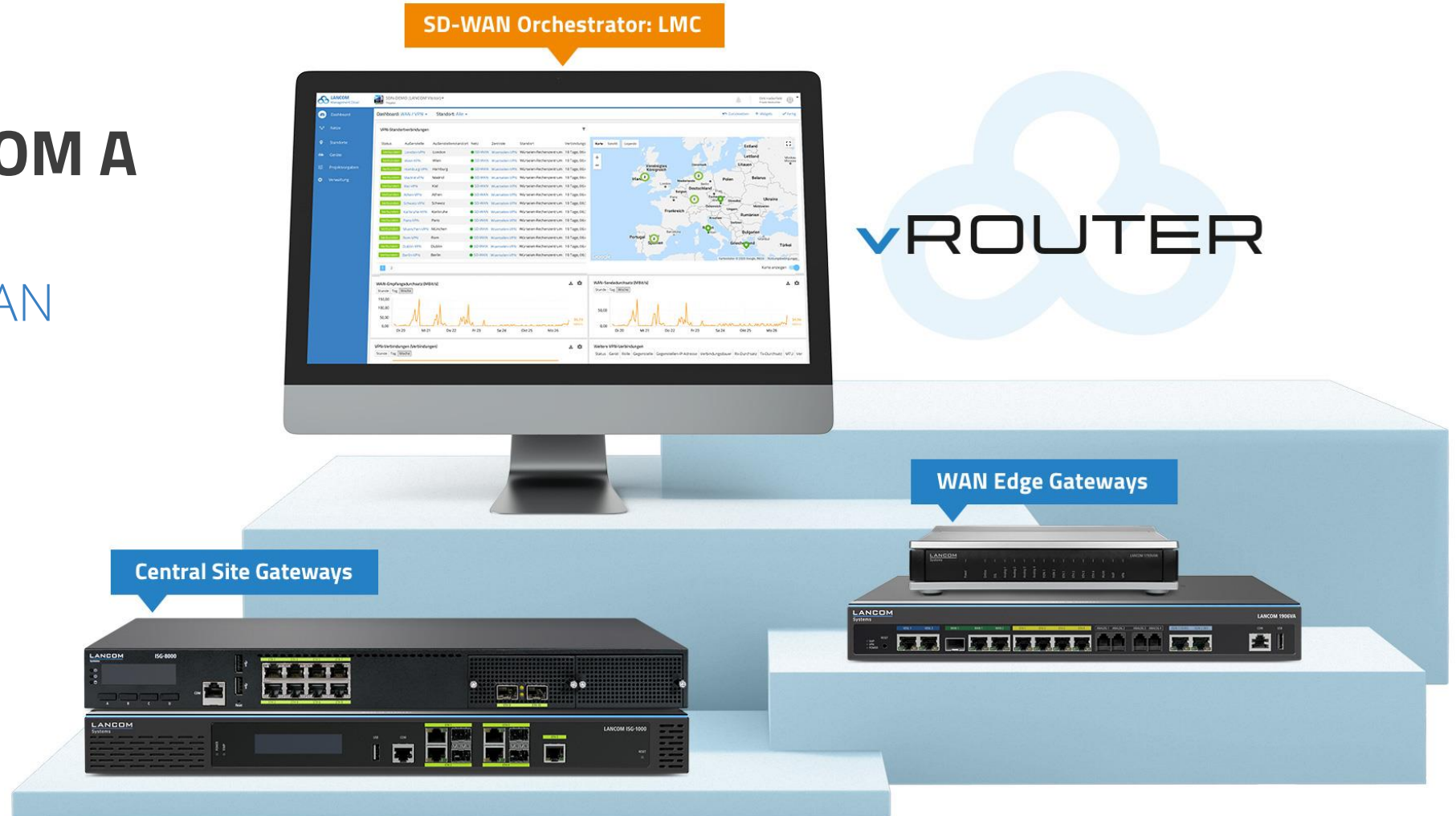
YOU DECIDE

- Central and secure hosting in Germany
- Guaranteed maximum scalability
- Data security for all sizes of installation
- Alternative hosting as a private cloud variant in a data center of your choice



EVERYTHING FROM A SINGLE SOURCE

THE LANCOM SD-WAN PORTFOLIO



SD-WAN COMPONENTS

GATEWAYS FOR EVERY APPLICATION

SecurITy
made
in
Germany

EXTERNAL SERVICES

ADSL / VDSL / (Super)Vectoring
Fiber optics / G.Fast (FTTH / FFTB)
1G / 10G Ethernet (ext. modem)
4G / 5G (from 2021)

BACKUP SERVICES

ADSL / VDSL
Vectoring / Super Vectoring
Fiber optics / G.Fast (FTTH / FFTB)
4G / 5G (from 2021)

CERTIFICATES

BSI TR router
TechConsult PUR Award
• "VPN Champion" 2017– 2020
• LMC in category "Network Management & Monitoring", 2020

GUARANTEES

Backdoor free
GDPR compliance
Free firmware updates
SDN / cloud management

INTERNAL SERVICES

1G / 10G Ethernet
Analog (a/b) / ISDN
WLAN
VoIP / SBC

VARIANTS

Dedicated (embedded) HW
Standard (x86) HW
SW routers / gateways
Cloud management location:
Public / Private / on premises



SD-WAN FEATURE SET

Features / functions / applications		Customer advantage with LANCOM
WAN Edge Gateway	✓	Connection of MPLS / xDSL / Supervectoring / fiber optics / G.Fast (FTTH / FFTB) / 1G / 10G Ethernet (ext. modem) / 4G / 5G (in planning)
Transport flexibility	✓	Advanced routing & forwarding (VLAN/QoS over WAN) and WAN optimization (application-based and quality-based routing, local Internet breakout) for multiservice networks with tens of thousands of VPN connections (IPSec/Internet)
Network segmentation	✓	LANCOM ARF network separation and maximum performance through its secure and highly scalable protocol (HSVPN/IKEv2)
WAN optimization	✓	Application-based routing: dynamic traffic steering Active/Active connection management / load balancing Quality-based routing: dynamic path selection
High level of automatization	✓	Zero-touch provisioning, BNG support, REST API deployment, bulk import
Network Functions Virtualization (NFV)	✓	LANCOM vRouter/ vGateway, Hypervisor support: VMware, Hyper-V, KVM, Support of Azure and AWS (in planning)
Central management	✓	SD-WAN orchestration with LANCOM Management Cloud (LMC) No "single point of failure" through central SD-WAN controller "Single pane of glass": design, monitoring, reporting, alerting

WE KNOW WHAT WE'RE TALKING ABOUT.

OVER TWO DECADES OF COMPETENCE IN NETWORKING

- Hundreds of thousands of networked locations
- Trustworthiness is our top priority
- LANCOM SD-WAN solutions are compliant and meet the highest standards of quality and security



EUROPE'S LARGEST SD-WAN PROJECT

8,800 GATEWAYS



SD-WAN MADE IN GERMANY

- 1** – HIGHEST SCALABILITY AND SECURE SEPARATION OF APPLICATIONS
- 2** – EFFICIENT USE OF ALL CONNECTIONS AVAILABLE AT THE LOCATION
- 3** – FULL COMPLIANCE WITH EUROPEAN SECURITY REGULATIONS (GDPR)
- 4** – FASTEST RESPONSIVENESS TO MARKET REQUIREMENTS

SecurITy
made
in
Germany

INDIVIDUAL ADVICE

WE ARE PLEASED TO HELP!



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LANCOM SD-WAN

SO YOU CAN CONCENTRATE FULLY ON YOUR BUSINESS!



THANK YOU
FOR YOUR TIME
