

Feature UP - the new exciting cloud services made by IONOS

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IONOS Cloud Platform Feature Ecosystem

Compute	Network	Traffic Processing	Storage	Data	Platform	Security	Al	Partner Solutions
Dedicated Cores	IPv4 / IPv6	HTTP Load Balancer	Network Block Storage	PostgreSQL	Kubernetes	MFA	Multimodal Model Hosting	VMware Private Cloud
Virtual CPUs	DNS	Layer 4 Load Balancer	Local Block Storage	MongoDB	Container Registry	Audit Log	Vector DB	Managed Stackable
Cubes (VPS)	DDoS Protection	VPN Gateway	Object Storage	MariaDB	Logging aaS	Network Flow Logs	VM GPUs	Managed GitLab
Public & Private Images	Cross Connect	API Gateway	Backup	Redis	Monitoring aaS	Container Scanning	Kubernetes GPUs	Partner Store
VM Autoscaling	NAT Gateway	CDN	File Storage (NFS)	Kafka	Send Email Service	Identity & Access Mgt.		
CPU & GPU Bare Metal	Network Security Groups	Web Applica- tion Firewall		Full Text DB (e.g. OpenSearch)		Key Mgt. Service		
Confidential Computing		Global Load Balancer		Time Series DB (e.g. InfluxDB)				

Factsheet 1/50: Managed Network Load Balancer

IONOS SUMM!T

- The Managed Network Load Balancer (NLB) is a pre-configured <u>VDC</u> element that provides connection-based layer 4 load balancing features and functionality.
- It is fully managed by IONOS, deeply integrated into our Software-Defined Networking (SDN) stack, deployed in a highly available setup, and offers robust security features required for fault-tolerant applications.
- NLB serves as a single entry and exit point for all client traffic. Connection requests are accepted by the listener, and according to the defined forwarding rules, the sessions are distributed for parallel processing across multiple compute resources (targets). NLB keeps active sessions mapped to the same targets (sticky sessions), performs health checks, and routes traffic only to healthy targets.
- NLB is a proxy <u>load balancer</u>, client connections are terminated at the balancer and mapped 1:1 to connections that the balancer initiates to targets. This is called two-arm load balancing because the load balancer has two arms (interfaces) - one facing clients and the other facing targets.

- NLB provides the following features:
 Performance, Scalability, Redundancy and fault tolerance, Deployment flexibility, Reduced or zero downtime, Fully-managed service, High throughput low latency, Health monitoring, Sticky sessions,
- In NLB, you can enable Proxy Protocol for targets, to provide enhanced flexibility and compatibility in handling incoming connections.

High Availability.

- Network Address Translation (NAT): NAT modifies
 IP header network address information to direct traffic as
 it moves from public to private address space. In the
 context of the Managed Network Load Balancer, this
 means that client connections are terminated on the load
 balancer, and the load balancer initiates a dedicated
 connection with the backend target servers.
- NLB performs destination NAT (DNAT) to map (connect) the clients to the targets. Source NAT (SNAT) is not supported; targets cannot initiate network connections through the load balancer.



DANGER - #1 Vendor Lock-IN

IONOS SUMM!T

VMware-Konditionen bringen User in Bedrängnis

IT-Business

Computerwoche

Auskunftsersuchen wegen VMware: EU untersucht Broadcoms Lizenzpraktiken Europäische Cloud-Betreiber: Broadcoms Verhalten ist fast schon Erpressung Heise online

Broadcom ditches VMware Cloud Service Providers

The Register

"If you integrate your cloud workloads with the services on an AWS Cloud, Azure or Google Cloud, you almost automatically slip into a kind of vendor login," states Büst. "Basically, you are then no longer able to simply move these workloads to another cloud."

Rene Buest, Principal Analyst Cloud at Gartner

DANGER - #2 geopolitical threats







Studie Techconsult

IONOS SUMM!T

Self-determined acting

79 %

Data sovereignty

78 %

Control over data flows and access

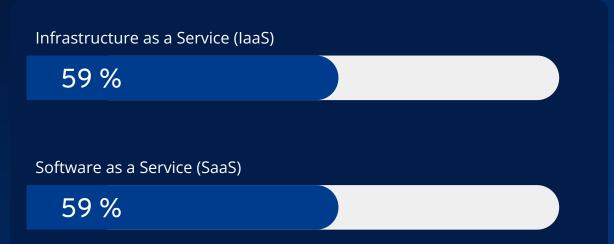
77%

Source: Techconsult, 2024

Studie Techconsult

IONOS SUMMIT

78 percent of companies that state that they are dependent on non-EU providers aim to become more independent.



Source: Techconsult, 2024

Sovereignty is a "bunch of flowers"



No free lunch - joint responsibility

IONOS SUMM!T

Our Responsibility

- 1 Understand demands
- 2 Create a seamless eco-system
- 3 Multi-Vendor-Strategy

Your Responsibility

- 1 Investment
- 2 Set-up the strategy
- 3 Make use of our offerings

Benefit of both
Resilience, Security, Efficiency

Our part of the investment

IONOS as sovereign and powerful service provider

1 Open Source

2 Strong Legislation of Data Protection & Privacy

3 Multi-Vendor-Strategy

Our part of investment - IONOS as a sovereign and powerful CSP

IONOS SUMM!T

Statement of the CEO: "What we can develop we should develop!"

- > 1.500 IT-Engineers
- 32 data centers up to tier 5 certification
- > 100.000 servers in production from different vendors and partly self engineered
- 24/7 Support in local languages
- brought service range across all levels laaS / PaaS / SaaS

















Recent proof points of trust

IONOS SUMM!T

"IONOS hat ein überzeugendes Angebot für den Betrieb der On-Premise-Cloud des Bundes vorgelegt, eines der wichtigsten Projekte im Rahmen unserer Multicloud-Strategie"

Christine Serrette,
Technische Vizedirektorin des ITZBund





Feature up - the universe is constantly growing

GΑ

IONOS SUMM!T

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VM Autoscaling	NAT Gateway	CDN	File Storage (NFS)	Kafka	Send Email Service	Identity & Access Mgt.	Jupyter Notebooks	
CPU & GPU Bare Metal	Network Security Groups	Web Applica- tion Firewall		Full Text DB (e.g. OpenSearch)	Notification Service	Key Mgt. Service	ML Model Fine Tuning	
Confidential Computing	Egress Gateway	Global Load Balancer		Time Series DB (e.g. InfluxDB)	Service Discovery	Secrets Management		
Function- as-a-Service	Routers	Bastion Host		Msg. Broker (e.g. RabbitMQ)	Virtual Desktop	Security Scanning		
Container Instances						TLS Certificates		

Further roadmap

2025

Let's change the world like this kiss has film history.



Thank you!



Section title one of Summit slide deck



Hosting with cloud power

The way of modern swoop







Die fünf wichtigsten Learnings

Erfolgreiche Migration unseres Shop Monolithen in Cloud Architektur

- 1 Open Source
- 2 Strong Legislation of Data Protection & Privacy
- 3 Multi-Vendor-Strategy
- 4 Unterschätzt eure Legacy nicht
- 5 Kontinuierliche Erneuerung

Another Section title of Summit slide deck



