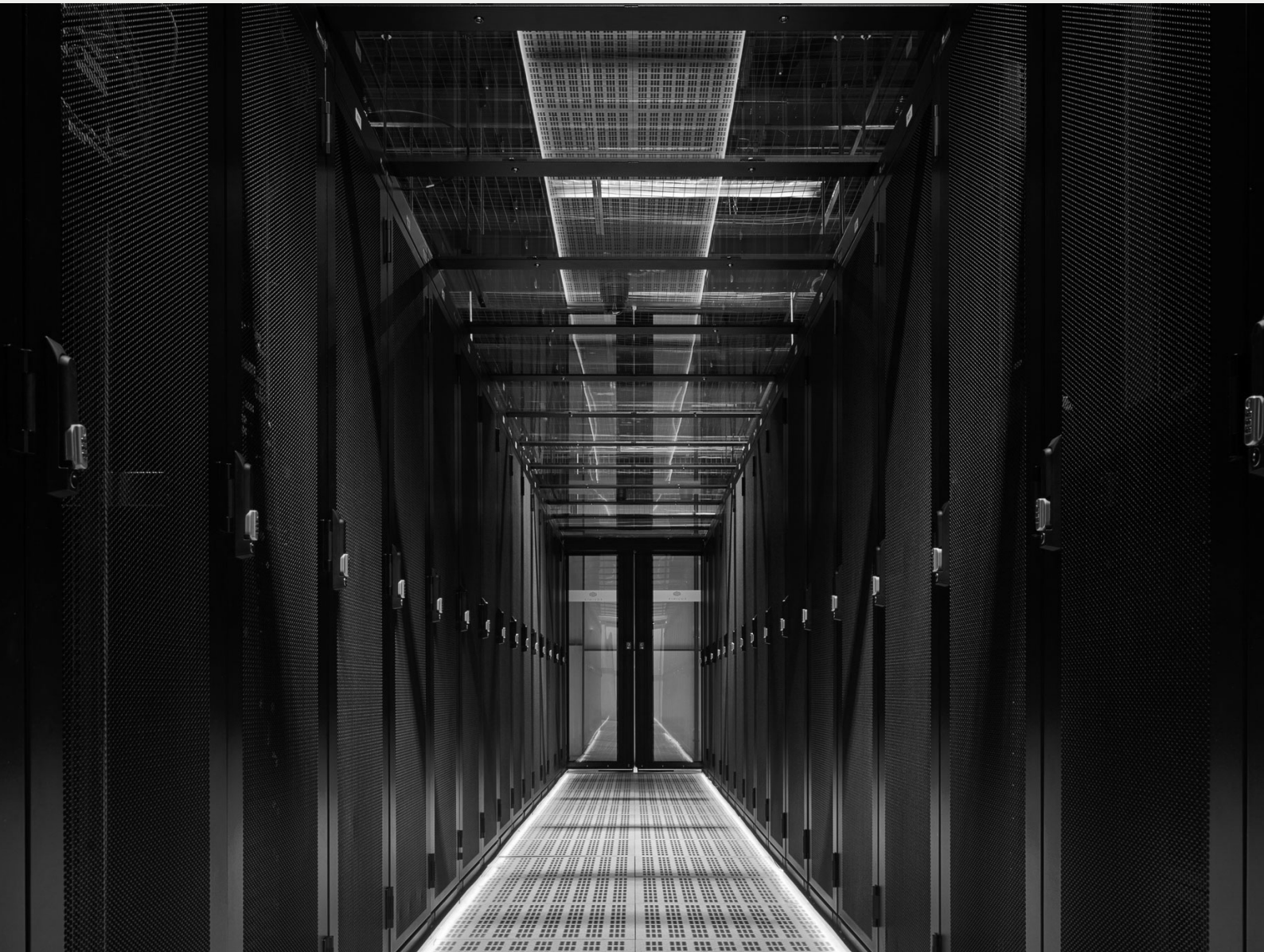# Bare-metal servers

Fully configurable, high-performance bare-metal servers with 24/7 monitoring and KVMoIP administration through LOM interface. Ability to boot/installation via PXE.

Resources of exclusive use by the customer

Stackscale's bare-metal servers are designed for deploying infrastructures with any virtualization system or without virtualization accessing to the LOM interface, while benefiting from the advantages of our service and expertise.

Our bare-metal servers line is **powered by 2nd generation Intel® Xeon® Scalable processors**. Based on the latest Cascade Lake microarchitecture from Intel®; the first one to introduce in-hardware mitigations for the notorious Meltdown and Spectre vulnerabilities. All servers include two SSD disks and a hardware RAID controller. Besides, up to 8 additional local storage disks can be installed.

Our solutions enjoy **a bottleneck-free oversized network** that connects every single physical computing node through 4x10 G bonded connections to different access switches. Every network layer is redundant from the core to the access with virtually no Single Point of Failure (SPOF-less) — and the same principle applies to the network storage.

Bare-metal servers start at 128 GiB of RAM and 12 physical cores, and go up to 768 GiB of RAM and 52 physical cores. We also have spare equipment with the same features to deliver to the customer so that he can install and restore its data in case of a physical server failure.

Additionally, the most critical environments can be replicated between Stackscale's data centers to protect them against a data center major failure and catastrophes.

Targeted to medium and large consumers of computing, storage and network resources. For instance:

- Web/app hosting providers
- eCommerce solutions providers
- Managed services
- Social networks
- High-traffic web portals
- VoIP providers
- Digital press
- Big Data
- Financial services
- IaaS, PaaS and SaaS providers

✓ Multi-100 G CORE network.

✓ 24/7 specialized technical support.

✓ 99,90% SLA Availability.

Advantages of Stackscale's Bare Metal
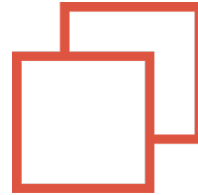
Single-tenant, bare-metal servers outperform traditional on-premises and public cloud solutions. Stackscale's bare-metal servers are fully configurable and offer a level of control that matches in-house solutions.

Bare-metal performance

- Predictable and consistent performance.
- Bottleneck-free 40 Gbps links.
- Multi-100 G CORE network.
- Intel® Xeon® Scalable processors.
- Next generation Dell PowerEdge® servers.

Fault-tolerance and redundancy

- Fault-tolerant service.
- N+1 power and cooling systems.
- Redundant 4x10 G network connections to each server.
- Fault-tolerant network storage.
- Geographic replication upon request.

Advantages of Stackscale's Bare Metal

Security and data protection

- Hosted in last generation data centers.

- 24/7 server monitoring for detecting hardware and connectivity failures.

- Private and isolated networks and storage volumes.

- Snapshot-based backups.

- Hourly replication to independent storage systems.

Transparency

Our customers known all the relevant detailsa bout our infrastructure:

- The hardware your applications are running on.

- The data centers where your environments are physically located.

- The network equipment and topology your environments are using.

Flexibility

- Server customization to match your workload requirements.

- Installation of Linux, FreeBSD or Windows straightaway from the LOM/DRAC.

- Total freedom when implementing hypervisors and orchestrators.

- High scalability with predictable costs.
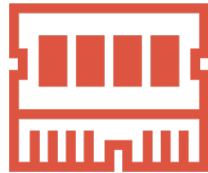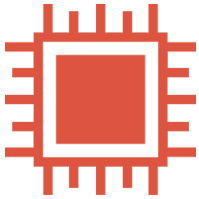
Bare-metal servers

Technical specifications

Bare-metal servers feature fast DRAM, CPU/FPU power, fast and redundant network connections and local ephemeral storage. Each server model shares the same hardware features: RAM size and speed, CPU type, network link speed, etc. Servers will be located in a specific data center or data center group as defined in the service order.

Currently, six different servers can be ordered: Server 128 M, Server 192 C, Server 384 M, Server 384 C, Server 768 M and Server 768 C.

CPU

Stackscale's bare-metal servers are powered by Intel ® Xeon® Scalable Processors. Besdides, specific processor models can be ordered subject to availability.

DRAM

Each model's name determines the equipped amount of RAM, that is 128, 192, 384 and 768 GB of DDR4 or faster DRAM. RAM oversubscription is possible though not recommended for mission-critical platforms.

Network uplink

Each bare-metal server is provided with four Ethernet 10 G ports that are connected to two different multi-chassis access switches. Storage traffic is isolated from the rest of the communications by using two bonded interfaces. This configuration allows traffic up to 20 Gbps with the storage network, and another 20 Gbps shared among the rest of private and public networks.

Local storage

Servers are provided with a minimum of 2x1 TB ephemeral RAID-1 SSD storage. Upon request, servers can be populated with up to 8 non-ephemeral local disks (SATA, SAS HDD/SSD; NVMe supported in some servers). It is important to remark that non-ephemeral local storage is not covered by the SLA as it cannot automatically recover after a severe hardware failure.

Server 128 M

Memory optimized

Server 128 M is one of Stackscale's memory optimized bare-metal servers. It features **128 GiB of RAM** and is powered by 2nd generation Intel® Xeon® Scalable Processors (formerly Cascade Lake).

Server

Dell PowerEdge®

CPU

1x Intel® Xeon® Silver 4214R

RAM

128 GiB RAM

Local storage

2x 1 TB SSD (exclusively used by the hypervisor in virtualized nodes and for customer use in bare-metal nodes).

NVRAM RAID

SSD Support

Up to 8 additional SATA/SAS local storage disks can be installed.

Network

40 Gbps in redundant MLAG: 20 Gbps storage and 20 Gbps private interconnection and Internet access.

Stackscale
Grupo Aire

Intel® Xeon®
Silver 4214R

CPU specifications

12 cores

24 threads

2,40 GHz base speed

3,50 GHz turbo speed

16.5 MB cache

2 UPI links

100 W TDP

Memory specifications

1 TB maximum capacity

DDR4-2400

Up to 6 memory channels

ECC memory supported ‡

✓ Direct access to 24/7 technical support.

✓ State-of-the-art data centers in Europe.

✓ 99,90% Availability by SLA.

Server 192 C

CPU optimized

Server 192 C is one of Stackscale's CPU optimized bare-metal servers. It features **192 GiB of RAM** and is powered by 2nd generation Intel® Xeon® Scalable Processors (formerly Cascade Lake).

Server

Dell PowerEdge®

CPU

1x Intel® Xeon® Gold 6208U

RAM

192 GiB RAM

Local storage

2x 1 TB SSD (exclusively used by the hypervisor in virtualized nodes and for customer use in bare-metal nodes).

NVRAM RAID

SSD Support

Up to 8 additional SATA/SAS local storage disks can be installed.

Network

40 Gbps in redundant MLAG: 20 Gbps storage and 20 Gbps private interconnection and Internet access.

Stackscale
Grupo Aire

Intel® Xeon®
Gold 6208U

CPU specifications

16 cores

32 threads

2,90 GHz base speed

3,90 GHz turbo speed

22 MB cache

0 UPI links

150 W TDP

Memory specifications

1 TB max. capacity

DDR4-2933

Up to 6 memory channels

Intel® Optane™ DC persistent memory and ECC memory supported ‡

✓ Direct access to 24/7 technical support.

✓ State-of-the-art data centers in Europe.

✓ 99,90% Availability by SLA.

Server 384 M

Memory optimized

Server 384 M is one of Stackscale's memory optimized bare-metal servers. It features **384 GiB of RAM** and is powered by 2nd generation Intel® Xeon® Scalable Processors (formerly Cascade Lake).

Server

Dell PowerEdge®

CPU

2x Intel® Xeon® Silver 4214R

24 real cores (48 threads via HT)

RAM

384 GiB RAM

Local storage

2x 1 TB SSD (exclusively used by the hypervisor in virtualized nodes and for customer use in bare-metal nodes).

NVRAM RAID

SSD Support

NVMe Support

Up to 8 additional SATA/SAS/NVMe U2 local storage disks can be installed.

Network

40 Gbps in redundant MLAG: 20 Gbps storage and 20 Gbps private interconnection and Internet access.

Stackscale
Grupo Aire

Intel® Xeon®
Silver 4214R

CPU specifications

12 cores

24 threads

2,40 GHz base speed

3,50 GHz turbo speed

16.5 MB cache

2 UPI links

100 W TDP

Memory specifications

1 TB maximum capacity

DDR4-2400

Up to 6 memory channels

ECC memory supported ‡

✓ Direct access to 24/7 technical support.

✓ State-of-the-art data centers in Europe.

✓ 99,90% Availability by SLA.

Server 384 C

CPU optimized

Server 384 C is one of Stackscale's CPU optimized bare-metal servers. It features **384 GiB of RAM** and is powered by 2nd generation Intel® Xeon® Scalable Processors (formerly Cascade Lake).

Server

Dell PowerEdge®

CPU

1x Intel® Xeon® Gold 6248R

RAM

384 GiB RAM

Local storage

2x 1 TB SSD (exclusively used by the hypervisor in virtualized nodes and for customer use in bare-metal nodes).

NVRAM RAID

SSD Support

Up to 8 additional SATA/SAS local storage disks can be installed.

Network

40 Gbps in redundant MLAG: 20 Gbps storage and 20 Gbps private interconnection and Internet access.

Stackscale
Grupo Aire

Intel® Xeon®
Gold 6248R

CPU specifications

24 cores

48 threads

3,00 GHz base speed

4,00 GHz turbo speed

35.75 MB cache

2 UPI links

205 W TDP

Memory specifications

1 TB max. capacity

DDR4-2933

Up to 6 memory channels

Intel® Optane™ DC persistent memory and ECC memory supported ‡

✓ Direct access to 24/7 technical support.

✓ State-of-the-art data centers in Europe.

✓ 99,90% Availability by SLA.

Server 768 M

Memory optimized

Server 768 M is one of Stackscale's memory optimized bare-metal servers. It features **768 GiB of RAM** and is powered by 2nd generation Intel® Xeon® Scalable Processors (formerly Cascade Lake).

Server

Dell PowerEdge®

CPU

2x Intel® Xeon® Gold 6230R

52 real cores (104 threads via HT)

RAM

768 GiB RAM

Local storage

2x 1 TB SSD (exclusively used by the hypervisor in virtualized nodes and for customer use in bare-metal nodes).

NVRAM RAID

SSD Support

NVMe Support

Up to 8 additional SATA/SAS/NVMe U2 local storage disks can be installed.

Network

40 Gbps in redundant MLAG: 20 Gbps storage and 20 Gbps private interconnection and Internet access.

Stackscale
Grupo Aire

Intel® Xeon®
Gold 6230R

CPU specifications

26 cores

52 threads

2,10 GHz base speed

4,00 GHz turbo speed

35.75 MB cache

2 UPI links

150 W TDP

Memory specifications

1 TB max. capacity

DDR4-2933

Up to 6 memory channels

Intel® Optane™ DC persistent memory and ECC memory supported ‡

✓ Direct access to 24/7 technical support.

✓ State-of-the-art data centers in Europe.

✓ 99,90% Availability by SLA.

Server 768 C

CPU optimized

Server 768 C is one of Stackscale's CPU optimized bare-metal servers. It features **768 GiB of RAM** and is powered by 2nd generation Intel® Xeon® Scalable Processors (formerly Cascade Lake).

Server

Dell PowerEdge®

CPU

2x Intel® Xeon® Gold 6248R

48 real cores (96 threads via HT)

RAM

768 GiB RAM

Local storage

2x 1 TB SSD (exclusively used by the hypervisor in virtualized nodes and for customer use in bare-metal nodes).

NVRAM RAID

SSD Support

NVMe Support

Up to 8 additional SATA/SAS/NVMe U2 local storage disks can be installed.

Network

40 Gbps in redundant MLAG: 20 Gbps storage and 20 Gbps private interconnection and Internet access.

Stackscale
Grupo Aire

Intel® Xeon®
Gold 6248R

CPU specifications

24 cores

48 threads

3,00 GHz base speed

4,00 GHz turbo speed

35.75 MB cache

2 UPI links

205 W TDP

Memory specifications

1 TB max. capacity

DDR4-2933

Up to 6 memory channels

Intel® Optane™ DC persistent memory and ECC memory supported ‡

✓ Direct access to 24/7 technical support.

✓ State-of-the-art data centers in Europe.

✓ 99,90% Availability by SLA.

Stackscale data centers in Europe

Stackscale AMS2
NorthC Almere
The Netherlands

Stackscale AMS5
Equinix AM5 Amsterdam
The Netherlands

POP Frankfurt
Equinix FR5
Germany

POP London
Equinix LD7
United Kingdom

POP Barcelona
Equinix BA1
Spain

Stackscale MAD2
Interxion MAD2 Madrid
Spain

Stackscale MAD3
Equinix MD2 Alcobendas
Spain

Stackscale MAD4
Interxion MAD3 Madrid
Spain

— 100 Gbps link
═ Multiple 100 Gbps links

Our services are located in data centers within the European Union and secured by its regulations.

We currently have data centers in Amsterdam, the Netherlands — Equinix AM5 and NorthC Almere — and Madrid, Spain — Interxion MAD2, Interxion MAD3 and Equinix MD2.

Stackscale's data centers fulfill **strict security, efficiency, redundancy and connectivity requirements**. Besides, diverse innovating techniques allow them to achieve exceptionally low PUE ratios.
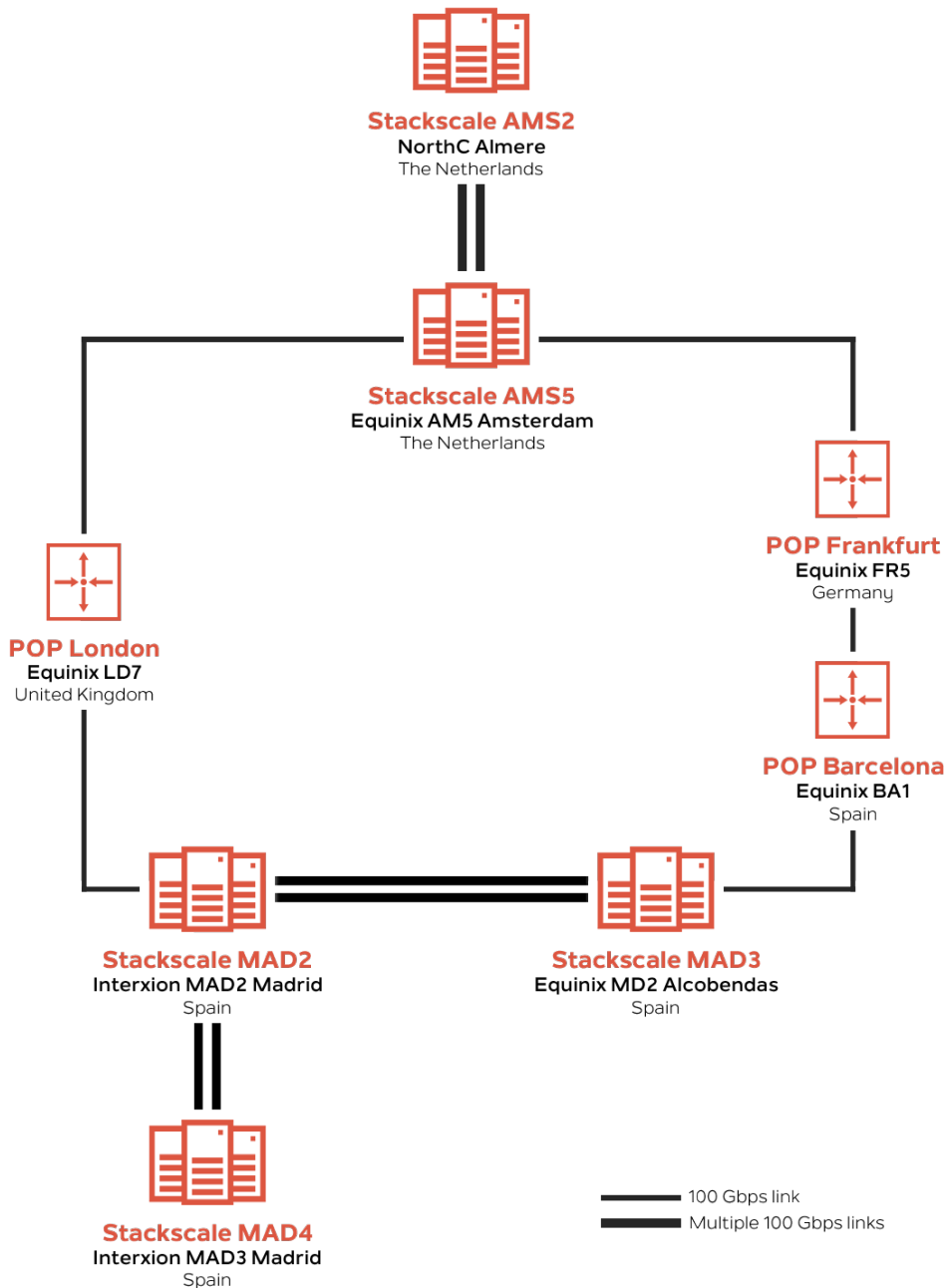
✓ Certified by international standards.

✓ Business continuity guarantees.

✓ Fault-tolerance.

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