

ERICSSON HYPERSCALE DATACENTER SYSTEM 8000

The Ericsson Hyperscale Datacenter System 8000 delivers a complete datacenter infrastructure for public, private, and hybrid cloud based on Intel® Rack Scale Design and powered by Intel® Xeon® Scalable Processor

HYPERSCALE DATACENTER SYSTEM 8000

Bringing the economics of cloud giants to every enterprise with the first hyperscale system for datacenters

Ericsson Hyperscale Datacenter System 8000 is the world's 1st complete system based on Intel® Rack Scale Design. It includes both pooled hardware and software defined infrastructure to manage the datacenter resources of telcos, service providers, and enterprises. It is powered by Intel® Xeon® Scalable Processor.

Cloud computing is dramatically altering both the scale and the economics of business. IT has moved from being a cost center to being a strategic asset and business enabler.

Companies will soon require 10x the IT capacity, with smaller budgets.

To be part of that digital transformation, you need to be able to scale rapidly, sometimes exponentially.

Ericsson Hyperscale Datacenter System 8000 is the infrastructure you need to modernize and transform your datacenter to meet today's, and tomorrow's, business demands. It delivers the compute power, storage, and networking to host hyperscale cloud platforms, plus the control and analytics software to visualize, optimize, and manage them for business agility.

Key Benefits

- > Up to 75% OPEX savings
- > Up to 55% CAPEX savings
- > Software-defined for comprehensive visibility, quicker time to market, and cost optimization
- > Pooled hardware resources for 100-200% increase in utilization rates
- > Optical backplane for massive scalability
- > Open platform with inclusive management
- > Aligned with Intel® Rack Scale Design Roadmap

SOLUTION OVERVIEW

Ericsson Hyperscale Datacenter System 8000 makes hyperscale clouds possible, with dramatically improved levels of Capex and Opex savings and quicker time to market.

Ericsson Hyperscale Datacenter System 8000 has everything you need to quickly create, deploy, and manage services in private, public, or hybrid cloud environments. It will make you agile, keep you lean, and let you see everything in your datacenter.

See everything in your datacenter

Ericsson Hyperscale Datacenter System 8000 includes Ericsson Command Center, which manages the compute resources, storage capacity, and network connectivity of the hyperscale system and systems from other vendors.

A central, configurable dashboard provides a one-stop view of your datacenter, so you can plan operations down to the component level.

In addition, the hyperscale system makes available inventory and status information about its physical assemblies (PODs) and virtual infrastructures (vPODs) to third party management platforms through a RESTful API. Any management platform that can communicate with this RESTful API can read that information and control those components according to the access rights and permissions it has been assigned.

Be agile with a quicker time to market

Rapidly respond to business opportunities by configuring the optimal vPOD for a cloud service or application workload. For instance, configure a vPOD with high performance components to provision a high-performance cloud service.

Configure one for PaaS, another for bare-metal as-a-service. When you are done, de-configure them to return the components to their common pool.

Get a lean infrastructure

The pooled resource design of Ericsson Hyperscale Datacenter System 8000 simplifies resource management and provides the ability to dynamically compose resources based on workload-specific demands. The aim is to create an open standard with open interfaces, with networking across Private, Public, Enterprise and Telecom Cloud domains.

This flexibility can be used differently by different solutions stacks.

Scale exponentially

The optical backplane of Ericsson Hyperscale Datacenter System 8000 provides extremely low-latency connections between the compute, storage, and networking resources, whether they are configured into physical PODs or vPODs. The optical connection eliminates the traditional distance and capacity limitations of electrical connections. You can pool resources from anywhere in the datacenter without worrying about bottlenecks.

The networking hardware, interconnect (cables, backplane) and management supports a wide range of cost-effective network topologies.

This networking flexibility means that datacenter operators have many configuration options to choose from. To help them choose the best, the hyperscale system can provide network traffic analytics at both the datacenter level (to the datacenter operator) or the vPOD level (to the vPOD user). The network analytics can be viewed in real time or stored for later analysis.

**UP TO
75%
OPEX
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INFRASTRUCTURE OVERVIEW

The design of Ericsson Hyperscale Datacenter System 8000 embodies Ericsson's approach to digital industrialization: an infrastructure that can be assembled into hyperscale datacenters as easily as it can be managed at the component level.

Infrastructure Assemblies

The hyperscale assembly consists of racks, chassis, an optical backplane, the components to connect, power, and manage them, and the hardware management systems. A system can be configured as a standalone rack, an aisle or racks, a complete datacenter, or geographically dispersed datacenters.

The hyperscale system holds one or more 19" racks. Each rack accommodates individual rack units and multiple chassis. A chassis can hold up to four compute, storage, or network sleds.

The hardware management systems initialize the compute, storage, and network components of a system, manage their power and cooling, monitor their hardware functions, and control access to them.

Compute Resources

Ericsson Hyperscale Datacenter System 8000 accepts compute resources in two forms: rack units and sled units.

Rack units fit directly into the system's 19" rack. Compute sleds fit into a four-slot chassis, which then slides into the 19" rack. Compute sleds make it easy to isolate access rights so that access to the applications and data of one tenant is completely isolated from the applications and data of both other tenants and the infrastructure administrator.

Both compute and rack units accommodate solid-state drives (SSDs), or hard disk drives (HDDs).

Ericsson Hyperscale Datacenter System 8000 supports connections to direct-attached storage (DAS) and to legacy network-attached storage (NAS) and storage area networks (SAN). It accepts both 2.5-inch and 3.5-inch storage drives.

Storage Resources

A storage sled can hold either twenty 2.5-inch drives or twelve 3.5-inch drives. Drives can be SSDs, HDDs, or a combination of the two. Individual disk drives in the sled can be hot-swapped. You can combine storage sleds into storage pools by daisy-chaining them through the optical backplane.

A storage pool can be formed from sleds with any mix of 2.5-inch and 3.5-inch drives, but those sleds don't have to be located in the same chassis. They can be spread throughout the datacenter, provided they are not farther away than the maximum limit of the optical backplane.

Network Resources

Ericsson Hyperscale Datacenter System 8000 contains two physically separate networks: one for data and one for control.

The data network provides two isolated Layer 2 packet switching domains per vPOD. It also provides isolated Layer 3 domains for routing and will, eventually, provide additional Layer 3 services such as DHCP, NTP, DNS, NAT, and load balancing.

The data network is physically arranged in a folded Clos spine/leaf topology. Its physical switches in the access layer are never more than one hop away from each other, which eliminates bottlenecks and reduces latency. That's particularly important for the high speeds possible with an optical backplane.

With this topology, if you connect a compute node to a pair of leaf switches, the compute node can benefit from the same high-availability, expansion, and load-balancing capabilities available to the network.

The control network allows management platforms from Ericsson or other vendors to monitor, control, and configure the compute, storage, and network resources of the hyperscale system, plus supporting systems.

About Ericsson

We are a world leader in the rapidly changing environment of communications technology – providing equipment, software and services to enable transformation through mobility. Some 40 percent of global mobile traffic runs through networks we have supplied. More than 1 billion subscribers around the world rely every day on networks that we manage. With more than 37,000 granted patents, we have one of the industry's strongest intellectual property rights portfolios. Our leadership in technology and services has been a driving force behind the expansion and improvement of connectivity worldwide. We believe that through mobility, our society can be transformed for the better. New innovations and forms of expression are finding a greater audience, industries and hierarchies are being revolutionized, and we are seeing a fundamental change in the way we communicate, socialize and make decisions together. These exciting changes represent the realization of our vision: a Networked Society, where every person and every industry is empowered to reach their full potential.