TRANSFORM HOW YOU MANAGE YOUR IT DATACENTER WORKLOADS

The Ericsson Hyperscale Datacenter System 8000 (HDS 8000) solution, based on Intel® Rack Scale Design, can transform infrastructure utilization and performance

Executive summary

Enterprise businesses face numerous challenges for achieving agility and performance for infrastructure in the datacenter. As demands for compute, storage, and networking resources surge, administrators find it increasingly difficult to provision and manage infrastructure that provides those resources while keeping costs in check.

The Ericsson Hyperscale Datacenter System 8000 (HDS 8000), based on Intel® Rack Scale Design, takes a new approach to managing workloads and the underlying infrastructure. The solution relies on Ericsson Command Center software, which allows organizations to disaggregate physical infrastructure into virtual pools called vPODs, which can be deployed and managed from a single pane of glass. vPODs can be rapidly deployed and optimized as needed to meet the compute, networking, and storage requirements of the enterprise workloads running above. This solution helps maximize utilization of hardware resources, which can reduce power, cooling, and footprint in the datacenter, in addition to helping businesses drastically increase the efficiency of their physical infrastructures.

This document describes the Ericsson and Intel solution and demonstrates how it can be used to solve IT infrastructure-resource challenges in the datacenter.

Monolithic infrastructure is costly and inflexible

IT departments are continuously searching for ways to deliver services faster, while driving down infrastructure costs. To be competitive in the age of digital transformation, companies need the flexibility to respond quickly to changing needs, to provision platforms at a moment's notice, and to scale enormously and rapidly to meet customer demands. Companies also need to maximize their use of existing infrastructure resources by increasing utilization rates. It's no longer feasible to dedicate racks of servers to accommodate brief periods of peak activity if those same servers run at 10-percent utilization most of the time. Monolithic server stacks result in over-provisioned resources, poor utilization rates, sub-optimal performance, and needless datacenter complexity.

Virtualization solutions attempt to address the shortcomings of monolithic-server solutions by consolidating some physical infrastructure into more flexible software packages. But virtualization alone can't completely solve the problems with isolated silos of underlying physical infrastructure. For example, you can't quickly or easily adjust compute power or memory on the servers hosting virtual machines (VMs). In addition, some enterprise applications are not suited to virtualization because they require bare-metal deployments for maximum performance and operational efficiency.

Intel® Rack Scale Design

Intel Rack Scale Design extends the principles and benefits of virtualization from individual servers to the entire datacenter with a next-generation platform of standardized APIs and an emerging ecosystem of solutions to meet a broad spectrum of customer needs.

Intel Rack Scale Design is:

1. A set of industry-standard API specifications and open-source reference software that allows you to pool resources
2. A reference architecture for a modern rack-architecture design that OEMs and infrastructure vendors like Ericsson can implement to create software-defined infrastructure (SDI) solutions for enterprise companies, telecoms, and cloud service providers

The Intel Rack Scale Design APIs are based on and extend the DMTF® Redfish® open industry-standard specification and schema. The schema specifies a RESTful interface and uses JSON and OData to help customers integrate solutions within their existing datacenter environments.

With Intel Rack Scale Design, organizations can simplify resource management and dynamically compose resources based on workload-specific demands. Datacenters implementing solutions that conform with Intel Rack Scale Design can significantly improve efficiency and enable rapid service provisioning, thereby helping organizations gain cloud-like efficiency, flexibility, and agility.

Ericsson HDS 8000 overview

The Ericsson HDS 8000 is a hyperscale, software-defined-infrastructure (SDI) solution based on Intel Rack Scale Design and on servers built with Intel® Xeon® processors and equipped with Intel® Solid-State Drives (SSDs) and Intel® Ethernet Adapters. Ericsson HDS 8000 can transform the way that your datacenter works by using the included Ericsson Command Center management software to disaggregate bare-metal compute, storage, and networking resources into virtual pools that can

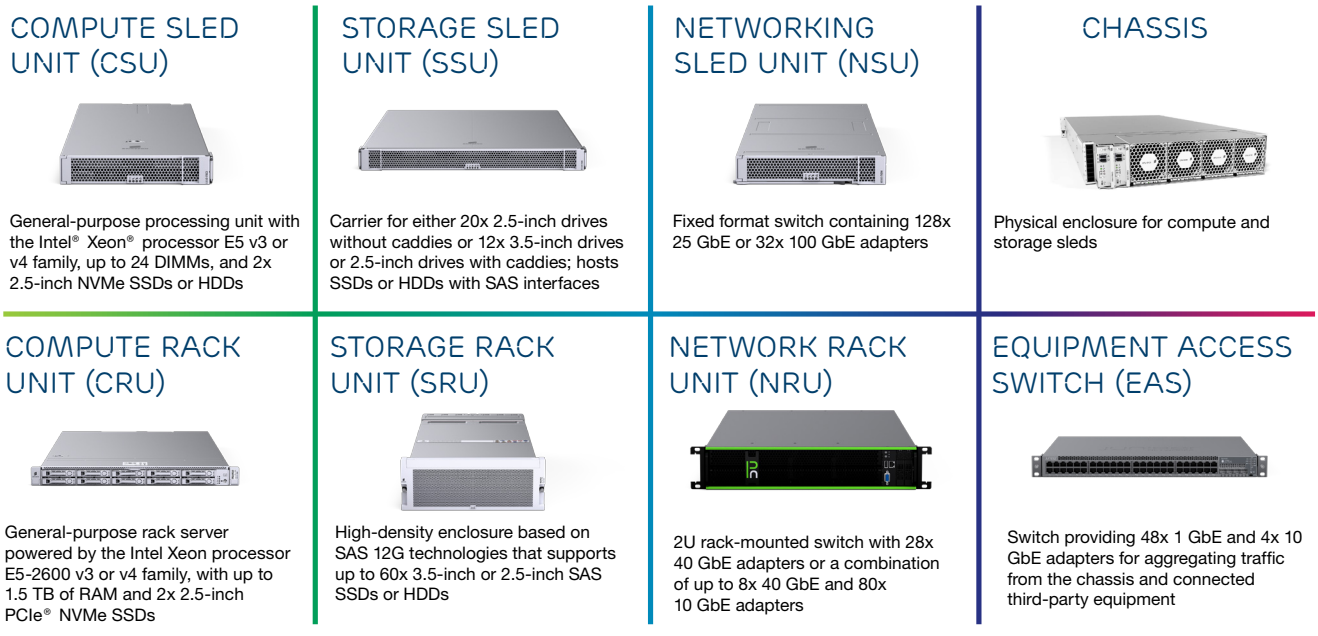

Figure 1. Infrastructure components that make up the Ericsson HDS 8000

be flexibly reallocated to compose servers for different needs and different environments. As a result, Ericsson HDS 8000 infrastructure can be optimized for efficiency and performance, with automated deployment and orchestration, all managed from a single pane of glass.

With the Ericsson HDS 8000, compute, storage, and networking resources are physically assembled into performance-optimized datacenters (PODs). PODs are configured and controlled through the Ericsson Command Center, which enables the platform to be a software-defined, cloud-based infrastructure. A POD physically consists of compute, storage, and network resources, provided as sled or rack units:

- Compute sled units (CSUs) or compute rack units (CRUs) with Intel Xeon processors, random-access memory (RAM), and Intel Ethernet Adapters
- Storage sled units (SSUs) and storage rack units (SRUs) with hard-disk drives (HDDs) or SSDs
- Networking sled units (NSU) or networking rack units (NRU) with Intel Ethernet Adapters and controllers
- Equipment-access switches (EAS)
- Chassis that provide physical enclosures with fans for the CSUs and SSUs

The solution also includes the cables, racks, and optical backplane, in addition to a network fabric consisting of:

- A control network that allows management platforms to monitor, control, and configure the compute, storage, and network resources
- A data network, which provides the network fabric for the application workloads

The Ericsson HDS 8000 coordinates physical resources in near real time across machines and racks by using an optical backplane. This capability removes the limitations of traditional electrical-based connectivity between physical components, and it allows you to connect compute, storage, and networking components across your datacenter with minimal latency.

The physical structure of the Ericsson HDS 8000 makes it possible to change hardware components as technology evolves, without having to replace other interconnected components prematurely. That capability allows you to extend your infrastructure lifecycle.

vPOD overview and benefits

The Ericsson Command Center is a key component of the Ericsson HDS 8000, because it enables and manages pooling of compute, storage, networking, and graphics processing unit (GPU) nodes from PODs into virtual PODs, or vPODs. The resources of a vPOD can be physically dispersed, but because of the optical backplane in Ericsson HDS 8000, they function with the speed of a single logical system.

The vPOD architecture is key to how the Ericsson HDS 8000 can help optimize enterprise datacenters. Because vPODs are actually virtual, software-defined partitions, they allow you to pool hardware resources to support multiple concurrent cloud platforms, such as a telecom cloud, an IT cloud, and a commercial cloud, all running across the same switch fabric.

You can use the Ericsson Command Center portal to assign to a vPOD whatever POD hardware is best suited to a particular workload. All storage, compute, and networking infrastructure is allocated as needed from different physical machines or racks. And because all infrastructure is software-defined, it's simple to scale or modify a vPOD as needed to correctly size it for a given workload.

vPODs provide a number of benefits compared to traditional infrastructure, including greater agility, higher utilization, and simplified management.

Cloud flexibility and agility

Ericsson HDS 8000 lets you deploy workloads on bare-metal infrastructure, in virtual machines, or in containers. You can use, consolidate, or migrate any combination of existing or new workload platforms. You can even run multiple virtualization layers—all with different hardware requirements—on the same infrastructure blocks.

Higher utilization

Ericsson HDS 8000 helps increase overall resource utilization in the datacenter by combining physical resources from multiple machines and racks into unified pools.

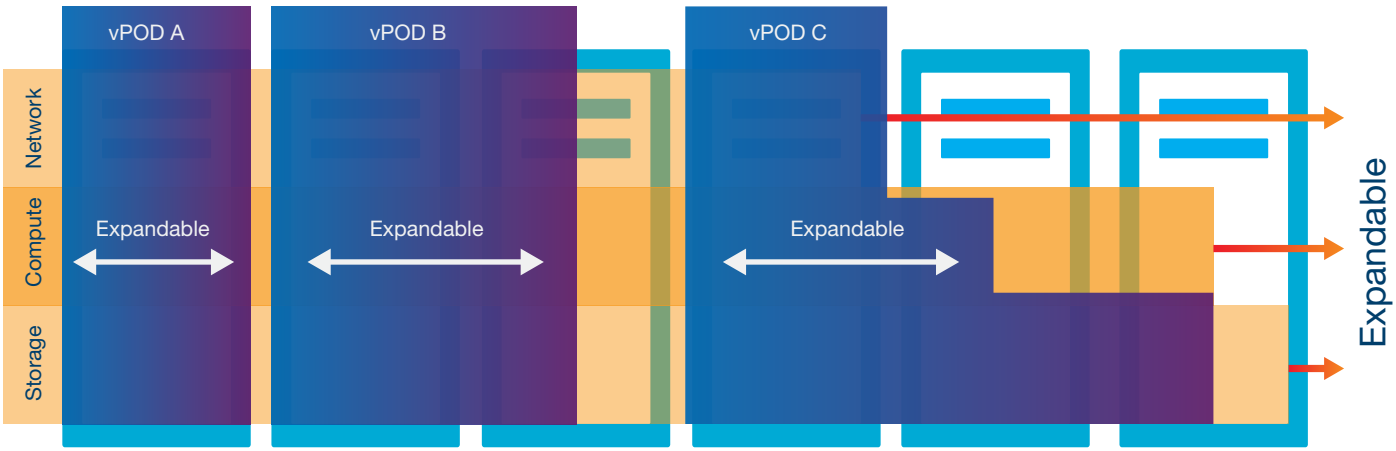

Figure 2. Ericsson HDS 8000 disaggregates compute, storage, and networking and allows resources to be assembled into highly agile vPODs

By eliminating the need for multiple, siloed infrastructure stacks, the Ericsson HDS 8000 solution helps IT admins reduce or remove the need to purchase additional hardware for over-provisioning compute or storage. IT admins can also reduce hardware requirements across the organization by more efficiently redistributing software-defined compute, storage, and networking resources in response to changing business needs or peaks in usage. Previously idle resources can be used more effectively, which reduces the need to purchase additional servers or storage to scale or change a given workload.

Single-pane-of-glass management

The Ericsson HDS 8000 offers better visibility and reporting of datacenter resources from a single combined view. This capability provides IT admins with detailed knowledge into what is going on inside the datacenter, and it provides insight to help companies reduce waste from unidentified resources sitting unused or underused. Better visibility also helps organizations determine the best way in which to distribute existing resources for current and planned workloads. With a more complete picture of company-wide compute, network, and storage infrastructure, IT organizations can plan for future needs in a more systematic way.

Ericsson HDS 8000 control and management

Ericsson HDS 8000 includes Ericsson Command Center, which manages many aspects of the datacenter hardware, including network connectivity, compute resources, and storage utilization. Ericsson Command Center aggregates data from the physical layers below and displays that information in a configurable dashboard, which provides a single view of the current state of the infrastructure.

With the information you gain about your infrastructure, you can analyze your datacenter needs and plan your operations down to the component level so that you can better match your services to the most appropriate hardware.

START YOUR DATACENTER MODERNIZATION JOURNEY TODAY

The Ericsson HDS 8000 is an industry-leading solution that currently provides asset and location discovery, the ability to orchestrate pools of compute, storage, and networking resources, and advanced management and monitoring capabilities. Additional features are being released on a regular basis as the solution matures. Check the Ericsson HDS 8000 web site frequently for information on new capabilities. By beginning your datacenter modernization journey today, you can take advantage of current features and be ready to implement new ones as soon as they are available.

Ericsson Command Center also lets you:

- Configure and manage compute resources, storage capacity, and network connectivity
- Perform real-time, automated asset management and orchestration
- Manage the power systems, firmware, and related functions of Ericsson HDS 8000
- Partition datacenter infrastructure into vPODs

Ericsson HDS 8000 also provides information—including inventory and status information about PODs and vPODs—to third-party management platforms through a DMTF Redfish RESTful API. Any management platform that can communicate with this RESTful API can read the information and control those components according to the assigned access rights and permissions.

Ericsson Cloud Manager can be used to stitch together different virtualization stacks, handle intelligent workload placement, and orchestrate the different layers of automation used by the Ericsson HDS 8000 in order to provide a dynamic, distributed cloud computing environment. Ericsson Cloud Manager manages physical and virtual resources in a flexible way, allowing companies to build and manage private clouds to optimize their internal operations, public clouds so that they can offer cloud services to their customers, or hybrids of both. It also provides the operational agility to automatically change the characteristics of the network to conform to meet the dynamic and on-demand needs of newer services, and it supports separation between virtual cloud deployments to help ensure isolation of critical workloads.

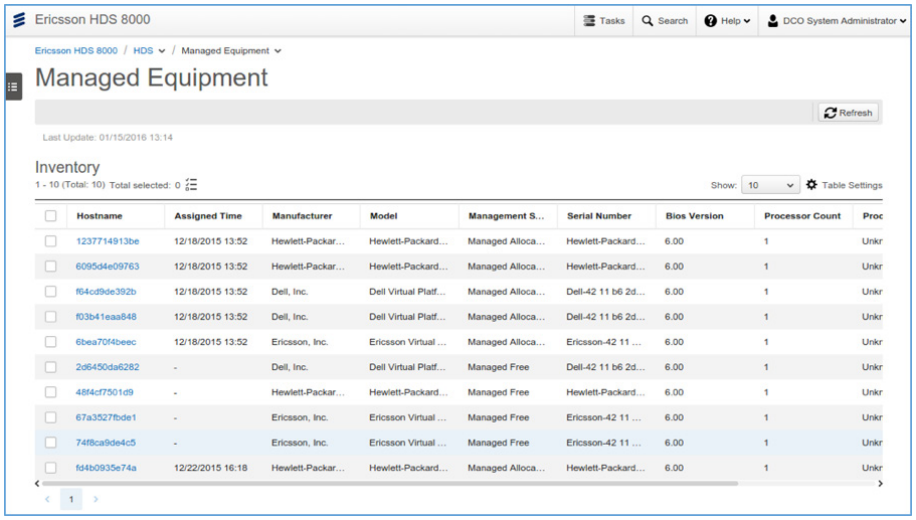

Figure 3. The Ericsson HDS 8000 includes the Ericsson Command Center, which displays aggregated data on the state of the physical infrastructure managed by the solution

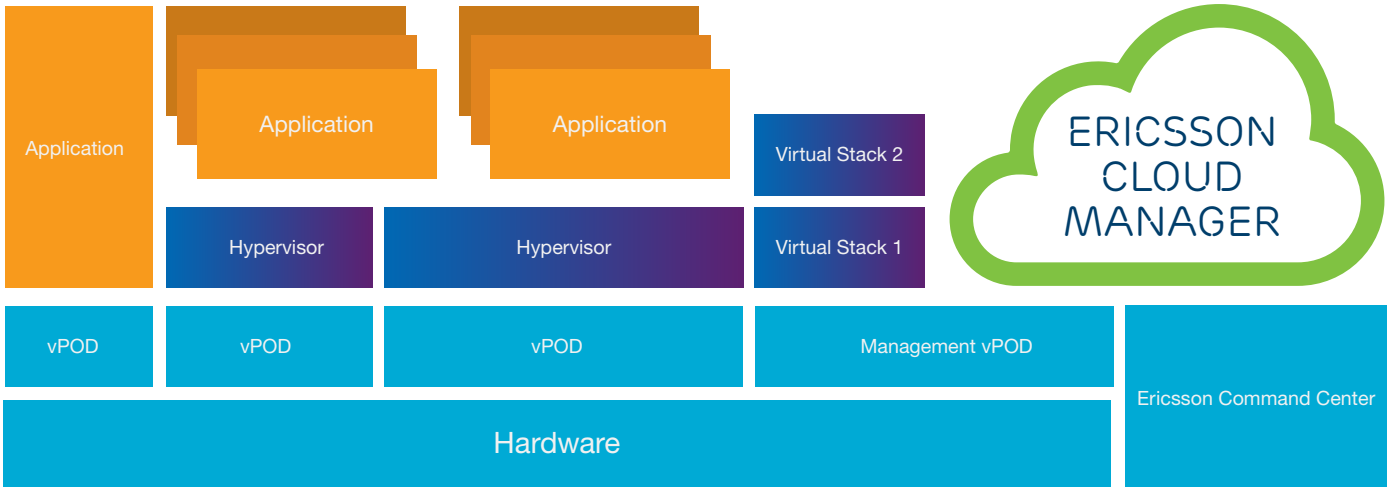

Figure 4. Ericsson Cloud Manager helps orchestrate, manage, and secure private, public, or hybrid cloud environments

The solution uses virtualization technology to abstract resources from the underlying physical hardware. Virtual stacks are managed by Ericsson Cloud Manager through a graphical user interface (GUI) or through Ericsson Cloud Manager APIs.

Using vPODs to support enterprise IT workloads

A vPOD is a set of compute, storage, and networking resources selected from a common pool and assembled by software into a virtual system. Each vPOD appears as a standard physical infrastructure to the workloads running above. As a result, you are not limited to any particular operating system or hypervisor deployment for your workloads. For example, you can deploy different vPODs for different environments such as those built on VMware® or OpenStack® solutions. You can provision workloads as bare-metal deployments, or you can deploy workloads using containers. Additionally, you can use the Apcera® platform to modernize legacy apps or provide additional governance and orchestration for container management.

Benefits of vPODs for IT workloads

Ericsson HDS 8000 vPODs provide several additional benefits for simplifying management and deploying infrastructure to support IT workloads. You can:

- Improve lifecycle management by adding or replacing individual hardware components without having to replace a complete hardware stack
- Make use of your existing servers: Ericsson Command Center can identify and add supported hardware to Ericsson HDS 8000 hardware pools (Ericsson Command Center has been verified with the following servers: Dell™ R series, HPE® ProLiant® DL series, and Quanta® D51B)
- Run a variety of virtualization stacks, all with different requirements, on separate, isolated vPODs, while retaining the agility to reallocate underlying hardware resources between vPODs as needed
- Migrate workloads to new vPODs, with each maintaining physical isolation through control of its underlying network fabric
- Use vPOD isolation to help ensure separation of workloads to meet compliance needs, while still using shared, disaggregated hardware below the virtualization layer

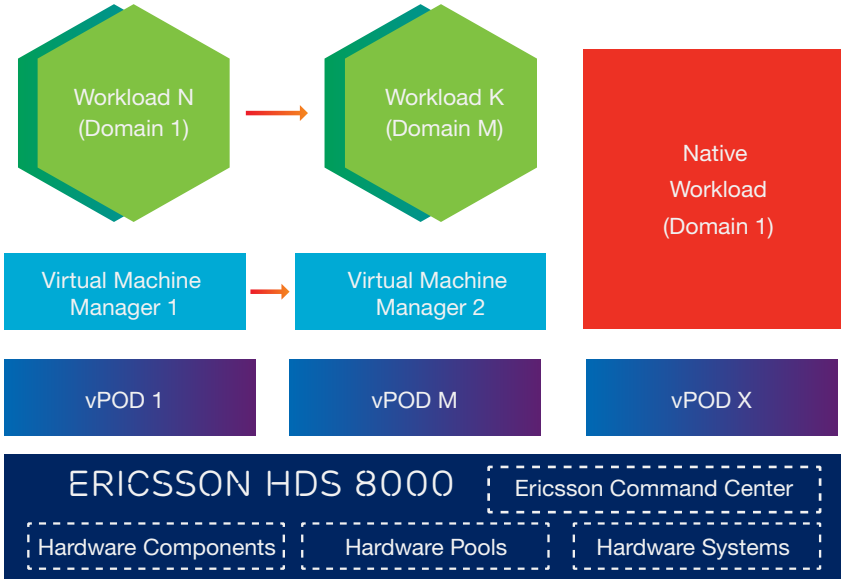

Figure 5. vPODs combine disaggregated resources into virtual platforms that can support any workload deployment, from bare metal to virtualized or containerized

The flexible design of vPODs lets you define resource pools for different workloads and then deploy those environments using Ericsson Command Center. You can also create templates for base vPOD configurations and automate the deployment or modification of those vPODs (including a virtualization stack) for specific workload requirements.

vPODs can scale out to meet changing needs, peak demands, or scheduled activities. The way that you reallocate resources depends on the type of resource and the operating system and apps running on the vPOD.

Operation monitoring apps can be used to identify a specific need (such as additional compute power or GPU acceleration) and can then

call an Ericsson API to trigger a request to Ericsson Command Center for more resources. An administrator can then respond manually by adding the additional resources to a vPOD and then moving the workload to the new resources. If the workload is part of a VM or is containerized, the administrator can dynamically shift the VM workload to another available node in that vPOD, make the resource change, and then restore the VM workload to the reconfigured vPOD.

Using vPODs to pool compute, storage, networking, and GPU resources

The Ericsson HDS 8000 enables compute, storage, networking, and GPU physical resources to be disaggregated, and then composed into vPODs that are optimized for a given workload. The optical backplane is key to enabling this functionality. For example, multiple storage sleds can be combined and connected to storage pools via the optical backplane. That allows any connected storage hardware to be assigned to vPODs as needed to accommodate specific workloads. Legacy storage hardware can be assigned to vPODs running less-demanding workloads, while higher-performing storage devices, such as Non-Volatile Memory Express (NVMe) SSD drives, are assigned to vPODs that need faster read/write access to disks.

Disaggregation of storage hardware offers several advantages for manageability, flexibility, and lifecycle management. For example, in a traditional datacenter, it's common for businesses to use dedicated appliances for specific workloads or software. Each appliance might have its own bank of dedicated storage drives that can't easily be repurposed during periods of underutilization. The Ericsson HDS 8000 provides a more efficient and cost-effective way to manage storage because it lets you assign blocks of commodity HDDs and SSDs to vPODs according to your workload requirements. That capability lets you avoid getting locked into proprietary solutions. It also extends the life of your physical assets because you don't need to replace a complete appliance, only individual storage or compute components, as needed.

The Ericsson HDS 8000 also provides a common pool of high-speed optical network resources that you can assign to workloads as needed. You can slice the networking into logical partitions and assign each partition to a vPOD. The data network is physically arranged in a folded Clos spine/leaf topology, which means the physical switches in the access layer are never more than one hop away from each other. That arrangement eliminates bottlenecks and reduces latency, which is particularly important for achieving the high speeds possible with an optical backplane.

Virtual switches that are assigned to vPODs can also be accelerated by the Data Plane Development Kit (DPDK) and by Intel technologies like Intel® Virtualization Technology for Connectivity (Intel® VT-c), Intel® Virtualization Technology for Directed I/O (Intel® VT-d), and 10/25/40 gigabit Ethernet (GbE), Intel® Ethernet Converged Network Adapters.

Matching workloads to vPODs for optimal utilization and performance

With the Ericsson HDS 8000 and Intel Rack Scale Design, you can shift workloads as needed to maximize infrastructure utilization and match infrastructure to the needs of your workloads. But you can also make better use of older, lower-performing infrastructure by assigning those components to less-demanding workloads, which helps extend the hardware lifecycle.

The following sections provide use cases that illustrate the capabilities of the Ericsson HDS 8000 and Intel Rack Scale Design for more easily managing IT workloads and supporting higher resource utilization.

INTEL® TECHNOLOGIES IMPROVE THE PERFORMANCE AND SECURITY OF DEVICES IN A VIRTUALIZED ENVIRONMENT

The Data Plane Development Kit (DPDK) is a set of software libraries for accelerating packet processing workloads. It greatly boosts packet processing performance and throughput, allowing more time for data-plane applications.

Intel® VT: Improving security and performance of I/O devices in a virtualized environment

Intel® VT-c is a key feature of many Intel® Ethernet Controllers. With I/O virtualization and quality-of-service (QoS) features designed directly into the controller's silicon, Intel VT-c enables I/O virtualization that transitions the traditional physical network models used in datacenters to more efficient virtualized models by providing port partitioning, multiple receive and transmit (RX/TX) queues, and on-controller QoS functionality that can be used in both virtual and non-virtual server deployments.

Intel® VT-d improves the security and reliability of systems and also improves performance for I/O devices in virtualized environments. Enabled operating systems and virtual-machine managers (VMMs) can use the Intel VT-d functionality of I/O memory management to isolate devices into protection domains that prevent devices from performing any delinquent direct memory access (DMA) that can affect the functioning of the system.

Use cases: hardware composition and resource allocation for IT workloads

The following use cases are based on apps commonly used by telecom operators. However, IT admins from any enterprise will identify with the types of workloads and the challenges that they each present for dynamically managing compute, storage, and networking resource allocation.

Example 1: Optimizing data storage and access for business support systems

Ericsson Revenue Manager is a charging and billing system that allows service providers to handle customers and services in real time through a streamlined, convergent process, covering pre-paid and post-paid, voice and data, fixed and mobile, and retail and wholesale. Ericsson Revenue Manager is designed to replace multiple disconnected systems—each with its own database—with a single common interface and database layer that can be accessed and read by all apps that need to provide or access data.

Currently, Ericsson Revenue Manager runs in a VMware vSphere® virtualization layer and consists of multiple virtual apps. The majority of Ericsson Revenue Manager virtual apps have their disk volumes on a physical storage-area network (SAN), because the apps require high I/O operations per second (IOPS). With the Ericsson HDS 8000, admins have the option of moving to more economical network-attached storage (NAS), because the Ericsson HDS 8000 uses a silicon-photonics backbone that can provide extremely fast transfer speeds.

Shifting a virtualized workload from dedicated physical infrastructure to Ericsson HDS 8000 vPODs allows a business to better allocate storage resources based on need. An admin can shift an Ericsson Revenue Manager workload to a vPOD with older HDDs, for example, during less-demanding periods. Other workloads can then be assigned to the vPODs with higher-speed storage in order to accelerate performance. As soon as the Ericsson Revenue Manager workloads require heavier lifting again, they can be moved back to the vPOD with faster drives.

The same concept applies to compute and networking allocation. Peak billing periods require additional processing capabilities to support burst needs. vPODs allow admins to shift Ericsson Revenue Manager workloads to vPODs that have additional CPU and networking capacity to handle peak loads. Those resources can then be released when no longer needed and reassigned to other workloads for higher overall utilization in the datacenter. This flexibility allows IT admins to optimize performance across workloads instead of wasting their capacity with under-utilized CPUs in siloed infrastructure.

Example 2: Optimizing processing and network operations for a streaming media workload

Ericsson MediaFirst TV Platform is a software-defined, media-optimized, cloud-based TV platform. It provides a flexible, modular, open, carrier-grade ecosystem that enables competitive next-generation video services.

The solution provides a wide range of services, including:

- Media encoding
- Media streaming
- Media storage (for digital-video-recorder [DVR] capabilities)
- Subscriber-management capabilities
- Recommendation engine
- Analytics

As an IT workload, Ericsson MediaFirst TV Platform is typically installed using container solutions, like Docker® or Kubernetes®, which makes it an ideal fit for vPODs in an Ericsson HDS 8000 deployment.

IT admins need to focus on several considerations and potential challenges when deploying Ericsson MediaFirst TV Platform. For example, different storage solutions are needed, depending on the popularity of content being stored and streamed. For more popular content, in-memory solutions are required. Other content might rely on fast SSDs, and less-popular media can be stored on HDDs. For encoding, it's critical to use storage with high IOPS. Finally, accelerators, such as GPUs or field programmable gate arrays (FPGAs), play an important role in accelerating performance for just-in-time encoding and packaging of content and for analytics.

Over time, storage and processing needs will increase dramatically as new forms of streaming media, such as virtual reality, become more popular. More and more bandwidth-hungry content will increase the IT challenges for reducing latencies and keeping up with storage and processing needs. In summary, IT admins will need to ensure consistent performance for customers, both today and tomorrow, while optimizing utilization of resources to avoid the costs of over-allocating hardware.

Ericsson HDS 8000 vPODs enable IT to more easily deploy and reallocate resources as needed to optimize performance and utilization. For example, a baseline vPOD can be configured to use hardware that is optimal for low-to-moderate compute, storage, and networking needs. Another vPOD can be configured with higher-end components that are optimized for peak performance. Admins can then assign a given workload to the baseline vPOD for standard media processing needs, and they can then shift the workload when required to accommodate burst processing around a high-demand situation, such as streaming a live performance of a popular recording artist.

That flexibility helps reduce costs. In traditional deployments, hardware acceleration can massively increase requirements for costly hardware because the infrastructure needs to ensure peak demands are covered in order to meet key performance indicators (KPIs). With the Ericsson HDS 8000, however, you can have fewer servers configured with accelerators, and then bring some or all of them into an optimized vPOD as needed to run media apps.

For example, if an Ericsson MediaFirst TV Platform operator needs to purchase and provision

INTEL® XEON® PROCESSORS PROVIDE ADVANCED SECURITY TECHNOLOGIES

Intel® Data Protection Technology with Advanced Encryption Standard New Instructions (Intel® AES-NI) is an instruction set found on Intel Xeon processors that increases encryption performance and reduces processor load. That capability allows encryption to be implemented without noticeable performance overhead. Intel AES-NI can also strengthen encryption by protecting against "side-channel" snooping attacks, which makes it harder for malware to find vulnerabilities in the encryption. This efficient, hardware-based solution allows you to deploy industry-standard AES encryption more widely, so you can protect data on networks, on storage devices, and within applications without sacrificing performance.

Intel® Trusted Execution Technology (Intel® TXT) is an instruction set built within Intel Xeon processors. It works with enabled software to help detect systems booting with unknown BIOS, firmware, or operating systems, including those that have been attacked by more advanced, persistent rootkits that threaten modern enterprises today. Intel TXT and other associated tools provide a processor-based, tamper-resistant environment that compares the firmware, BIOS, and operating system or hypervisor code to known-good configurations to establish a measured, trusted environment prior to launch. If trust is not verified, Intel TXT identifies that the code has been compromised, which lets you protect the system and remediate the problem. By starting with a root of trust and a measured launch environment (MLE), Intel TXT offers you better protection from malware and important visibility into the integrity of your system.

GPUs in a traditional infrastructure deployment, that operator would need to allocate GPUs for all workloads on the physical stack, even though most of the GPUs are only needed by workloads running specific, highly demanding tasks (such as media encoding) for limited timeframes.

vPODs let you manage GPUs efficiently because you can assign workloads to vPODs with GPU-optimized compute sleds configured to meet any performance level. That capability lets you reallocate resources as needed for optimal utilization. Storage and network resources can be similarly redistributed to accommodate needs.

The Ericsson HDS 8000 also helps businesses scale to meet growing demand. As storage and processing needs increase over time, additional resources can be assigned to vPODs running Ericsson MediaFirst TV Project workloads. If additional resources are available from other under-utilized vPOD environments, they can be redistributed for better utilization.

Example 3: Optimizing analytics needs for a business-intelligence workload

Ericsson Expert Analytics is a telecom-focused big-data analytics solution that measures telemetry and customer usage data based on metrics and events from network nodes, probes, devices, internal operations, business support systems, and other sources.

The analytics solution makes use of a data warehouse and uses Apache® Hadoop® for in-memory analytics processing. It requires significant CPU and memory resources for demanding workloads. Ericsson Expert Analytics also relies on a variety of storage solutions to accommodate hot, warm, and cold data appropriately, based on need.

Ericsson HDS 8000 can make use of disaggregated hardware in vPODs to appropriately allocate and reallocate resources to optimize performance and utilization for a bare-metal deployment of Ericsson Expert Analytics.

For example, businesses might need to accommodate bursts of in-memory analytics needs for Ericsson Expert Analytics telemetry around peaks in customer activity, such as a major sports event. To accommodate these peaks, admins can use Ericsson Command Center to shift workloads to vPODs that have greater CPU and memory configurations.

Similarly, storage can be assigned as appropriate for a particular need. Ericsson Expert Analytics runs multiple types of databases, each with different requirements:

- Apache® HBASE®: NoSQL key-value store for historical data; primarily uses high-volume cold storage
- Apache Hadoop Distributed File System (HDFS): Big data; flat file data for storing temporary files created between analytical processing steps; also uses cold storage
- Redis™: In-memory database; writes caches to disk to record internal state of components; relies on memory and cache storage
- Greenplum® Database: Relational database; data warehouse store for subscriber data, incidents, reference data, aggregated data, and service-level indexes; requires hot storage (SSDs)

What would be complex in a more traditional deployment is simplified and optimized on an Ericsson HDS 8000. vPODs can be configured with optimized compute sleds to handle CPU and memory needs for in-memory processing. Flash and disk storage can be assigned to accommodate the needs of the workload, but can also be reallocated as needed to accommodate bursts. Storage can be added dynamically to an existing vPOD, or a workload can by shifted from one vPOD to another to increase or decrease resources as needed.

Optimizing the datacenter, today and into the future

The Ericsson HDS 8000 is an industry-leading SDI solution that simplifies deployment and management of vPODs today, and that is rapidly advancing toward a complete automated and orchestrated solution for the datacenter. Through disaggregation of hardware resources, Ericsson HDS 8000 helps businesses achieve levels of resource utilization previously available only to a handful of the largest companies on the Internet.

Telecom companies and other enterprise businesses can manage their infrastructure with Ericsson HDS 8000 and Intel Rack Scale Design to maximize performance for applications across workloads, whether on bare metal, in containers, or in virtual machines.

Over time, the benefits of Ericsson HDS 8000 and Intel Rack Scale Design will increase as these transformative technologies continue to develop. Organizations that deploy the Ericsson and Intel solution can realize the benefits of SDI today while positioning themselves to take advantage of technical advances in the future.

LEARN MORE

Learn more about the Ericsson-Intel partnership: www.ericsson.com/hyperscale/partners/intel

Learn more about Ericsson HDS 8000:
www.ericsson.com/hyperscale/cloud-infrastructure/hyperscale-datacenter-system

Learn more about Intel® Rack Scale Design:
www.intel.com/content/www/us/en/architecture-and-technology/rack-scale-design-overview.html

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