

Flexible performance escala modular servers



Power and performance at the service of your business

Escala POWER8-based modular servers are designed for business applications and data-intensive workloads such as big data, analytics and cloud, all at an affordable price.

They deliver unprecedented performance and the flexibility that enable mid-sized business customers to consolidate AIX and Linux workloads in a virtualized environment while achieving lower total cost of ownership (TCO) with reduced footprint, power and software licenses.

Moreover, these Escala modular servers provide, in a compact format, the built-in RAS (reliability, availability and serviceability) and security characteristics that are crucial for business critical applications.

Non-stop scalability

Start small and scale up to meet the most demanding requirements. Escala Power8 modules can be stacked together, creating an up to 192-core, single-system image. Providing unprecedented flexibility and record-breaking performance.

The AIX Active Memory Expansion technology allows a virtual main memory expansion to up to 38 TB of operational memory - making it an unsurpassed platform for modern in-memory workloads.

The best in class I/O and memory bandwidth makes Escala Modular servers the ideal choice for Database, Java and Big Data solutions.

Impressive security track record

Thanks to the deep HW and Firmware integration of the virtualization architecture, PowerVM today provides an industry leading track record for security. In the 10 years that PowerVM has been on the market, not one security vulnerability has been reported.

Outstanding Oracle TCO

With an up to 2.4x superior per-core performance compared x86, Escala provides leading TCO advantages for Oracle Enterprise Edition customers. Reducing licenses costs as well as software maintenance fees by up to 40%.

Unmatched reliability

Rebooting a server which runs the workloads of thousands of users is not an option in today's Datacenter environments. Through reliability features such as dynamic firmware and Operating System updates, and self-healing capabilities for CPU and memory, Escala has set new standards in terms of uptime. With a reliability track record indicating a "meantime between fatal crash" well above 70 years, the Escala Modular series has proven to deliver up to 10x higher uptimes compared to competing architectures.

Integrated PowerVM Enterprise

Escala Modular systems come with PowerVM EE at no extra cost, allowing the movement of running partitions between physical servers. This functionality becomes even more interesting in combination with the optional Power Enterprise Pools (PEP). With PEP, dark CPU and memory activations can

Your benefits

- ▶ Better customer satisfaction due to faster response times and availability
- ▶ Improved operational efficiency
- ▶ Flexibility in responding to changing business requirements
- ▶ Highly secure architecture
- ▶ Reduced energy consumption
- ▶ Lower TCA/TCO for applications
- ▶ Open innovation for new capabilities
- ▶ Atos expertise

be dynamically shifted within a pool of Escala servers enabling resource balancing, non-disruptive planned downtime management as well as the implementation of very cost efficient disaster recovery solutions.

OpenStack Cloud enabling

The PowerVC management solution turns Escala VMs, storage and virtual networks into an OpenStack based IAAS cloud. PowerVC transforms the various server, storage and network resources into a managed pool, greatly simplifying the creation and deployment of AIX and Linux VMs. Snapshots and cloning features reduce the average deployment time of applications (or LPARs) from several hours to just a few minutes. Automation can be integrated through upper layer Cloud management products or triggered by popular open source tools such as Chef or Puppet.

Technical specifications

OUR OFFERS	ESCALA M6-800	ESCALA M7-800	ESCALA M8-800
SW licensing	Medium	Medium	Medium
System package	1 to 2 nodes (5U), System Control Unit (2U)	1 to 4 nodes (5U), System Control Unit (2U)	1 to 4 nodes (5U), System Control Unit (2U)
# of sockets/node	4	4	4
POWER8 Processor Options GHz - # of cores	4.02 GHz - 32 cores/node, 64 cores max 4.19 GHz - 40 cores/node, 80 cores max	4.19 GHz - 40 cores/node: 160 cores max 4.35 GHz - 32 cores/node: 128 cores max	4.02 GHz - 48 cores/node: 192 cores max
Min - max. memory (1066 MHz DIMMs)	4TB/node - Max 8 TB	Max 16TB	Max 16TB
PCIe Gen3 slots ^{1,2}	8 (x16) per system node = 16 8 I/O drawers max 96 slots max	8 (x16) per system node = 32 16 I/O drawers max 192 slots max	8 (x16) per system node = 32 16 I/O drawers max 192 slots max
Max total TB storage (system unit plus EXP24S disk)	128 EXPS24 disk drawers 3072 disks 5529TB	168 EXPS24 disk drawers 4032 disks 7257TB	168 EXPS24 disk drawers 4032 disks 7257TB
AIX® rPerf Ranges	(32-core) 4.02 GHz : 674.5 (64-core) 4.02 GHz : 1349 (40-core) 4.19 GHz : 856 (80-core) 4.19 GHz : 1711.9	(32-core) 4.35 GHz : 716.3 (64-core) 4.35 GHz : 1432.5 (128-core) 4.35 GHz : 2865	(48-core) 4.02 GHz : 976.4 (96-core) 4.02 GHz : 1952.9 (192-core) 4.02 GHz : 3905.8
Power Enterprise Pools (PEP)	Optional	Optional	Optional
AIX level	6.1, 7.1, 7.2	6.1, 7.1, 7.2	6.1, 7.1, 7.2
Linux	RHEL 7.1 (BE, LE), 6.6 (BE) * SLES 11 (BE), SLES 12 (LE) * Ubuntu 15.04 (LE) *	RHEL 7.1 (BE, LE), 6.6 (BE) * SLES 11 (BE), SLES 12 (LE) * Ubuntu 15.04 (LE) *	RHEL 7.1 (BE, LE), 6.6 (BE) * SLES 11 (BE), SLES 12 (LE) * Ubuntu 15.04 (LE) *
PowerVM Enterprise	Included	Included	Included
RAS and other features			
Redundant / Hot Swap Fans & Blowers	Std	Std	Std
Hot Swap PCI Adapters	Std	Std	Std
Concurrent Firmware Update	Std	Std	Std
Redundant / Hot Swap Power Supplies	Std	Std	Std
Processor Instruction Retry	Std	Std	Std
Alternate Processor Recovery	Std	Std	Std
Storage Keys (AIX only)	Std	Std	Std
PowerVM Live Partition Mobility / Live Application Mobility	Std	Std	Std
PowerVM Active Memory™ Sharing	Std	Std	Std
Dual VIOS	Opt	Opt	Opt
Active Memory Mirroring	Std	Std	Std
Chipkill Memory	Std	Std	Std
PowerVM Management	HMC	HMC	HMC

1. One x8 PCIe slot must contain a 4-port 1Gb Ethernet LAN available for client use.

2. Use of expanded function storage backplane uses one PCIe slot.

* Or later.