

Deliver real-time banking and insights

Modernize and transform core banking with HPE mission-critical systems. Bank on unmatched availability, security, and low latency.





To support real-time data initiatives and create new services that increase customer satisfaction, financial services institutions (FSIs) need to modernize core banking and digitally transform their organizations. These businesses must be able to adopt new technologies such as machine learning (ML) to advance digital initiatives such as fraud prevention, compliance automation, and know your customer (KYC).

However, a number of challenges stand in the way of transformation in today's evolving financial services landscape, as identified by analyst firm IDC:¹

- **Flexibility and scale must be embedded** in banking infrastructure so that firms can start small and scale up when needed and respond to changing market dynamics by making significant changes to the business model, for example, by providing a wider range of services such as analytics, governance, security, and risk management.
- **High availability (HA) and low latency** are defining features of core banking systems. Banks process millions of transactions every day and customers expect to see their latest account positions on demand. System failures can result in customer attrition, loss of reputation, and fines from regulators often running in the tens or hundreds of millions of dollars.²
- **Leveraging complex customer data in real time** differentiates the most competitive FSIs. Faster analytics and insights enable executives to be more responsive to market changes. Reacting in real time to customer activity can power new experiences, for example, a large-sum deposit by a customer can trigger an alert for wealth managers to contact them. The infrastructure supporting these systems must be founded on a modern, open architecture that can support technologies that enable real-time data processing, such as AI and ML.
- **Security is paramount.** Banks are attacked on a daily basis with ransomware and fraud. Information security laws, such as the Graham Leach Bliley Act in the US and Europe's General Data Protection Regulation, are focused on customer safety, and legislation is set to expand further.
- **The move to cloud continues.** A significant number of banks will build a private cloud to modernize noncloud applications.³ Modern banking infrastructure must support hybrid cloud.

Modern, scale-up mission-critical systems such as the **Intel based HPE Compute Scale-up Server 3200** and **HPE Superdome Flex** are ideal for meeting these challenges and growing demands on infrastructure. These platforms are standardized, open, and cloud ready. They also retain unique capabilities to handle demanding workloads—such as business processing, decision support, and analytics—with increased resources and the kind of ultra-low latency that isn't possible with horizontally scaled systems.

1, 2, 3 ["In Core Banking, Mission-Critical Platforms Are Essential for Digital Transformation,"](#) IDC, 2023





Transforming banking from edge to cloud with Hewlett Packard Enterprise

With an unmatched combination of expertise, consumption-based models, and mission-critical infrastructure solutions across servers, storage, and networking, HPE in collaboration with Intel helps financial services organizations across the globe to transform core banking environments by delivering resilient, scalable, and secure environments that are adaptable to the rapidly changing regulatory landscape and macro-economic conditions.

Our edge-centric, data-driven, and cloud-enabled approach enables FSIs to meet business challenges, decrease operational costs, and increase business productivity.

A proven platform for the future of banking

HPE Compute Scale-up Server 3200 and HPE Superdome Flex are standards-based mission-critical systems powered with Intel® Xeon® Scalable processors. These platforms have a unique modular design that enables FSIs to start small and grow to meet requirements of any size while maintaining the low latency of a scale-up system.

HPE Compute Scale-up Server 3200 features 4th Gen Intel Xeon Scalable processors. It scales from four up to 16 sockets in four-socket increments and from 128 GB to 32 TB of shared DDR5 memory.

HPE Superdome Flex 280 features 3rd Gen Intel Xeon Scalable processors. It scales from two to eight sockets in two-socket increments and from 64 GB to 24 TB of shared memory.

HPE Superdome Flex features 2nd Gen Intel Xeon Scalable processors. It scales from four sockets up to 32 in four-socket increments and from 768 GB to 48 TB of shared memory.

Reduced business risk

Reliability, availability, and serviceability (RAS) are among the most important requirements for core banking systems. HPE Compute Scale-up Server 3200 and HPE Superdome Flex family feature a range of differentiated RAS capabilities that reduce business risk, including:

- **Firmware First problem diagnosis** analyzes error logs at the firmware level, before OS and high-level software involvement, to diagnose faults even when the system processors have limited functionality.
- **Predicting, reporting, and handling faults** with the analysis engine, which constantly analyzes hardware for faults. Based on detected errors, the analysis engine can predict failures and initiate self-repair without operator assistance, reducing human error and therefore increasing availability.
- **Self-healing capabilities** provide mechanisms to react when faults do occur so that unplanned downtime is avoided.
- **Processor RAS features** leverage Intel Xeon Scalable processor technologies, including corrupt data containment and PCIe Live Error Recovery, to detect, correct, and report errors.

IDC has rated both HPE Compute Scale-up Server 3200 and HPE Superdome Flex as Availability Level 4 (AL4) systems. AL4 denotes fault tolerance that guarantees “continuous processing under any circumstance with an extensive set of hardware RAS features and redundancy.”⁴ Solutions can also include [HPE Serviceguard for Linux®](#), a fully automated and proven high availability (HA) and disaster recovery (DR) solution that helps maximize uptime for critical workloads. HPE Serviceguard for Linux is optimized for critical databases powering banking applications, including Oracle®, Microsoft SQL Server, and SAP HANA®, both on-premises and in hybrid cloud deployments.

⁴ IDC (July 2023). Mission-Critical Platforms Deliver Continuity in the Shift to a “Digital First” Business. #US51038023.



Real-time insights

With massive processing power and shared memory to enable in-memory computing, as well as an open and standards-based architecture, HPE Compute Scale-up Server 3200 and HPE Superdome Flex platforms allow FSIs to deliver real-time analytics based on growing sets of customer and transaction data.

Integrated AI accelerations, such as Intel® AVX-512 and Intel Deep Learning Boost, make these servers ideal for firms who want to employ AI to detect fraud, predict trends, manage compliance, and enhance services and any number of other use cases. With the solution's open architecture, based on unmodified Linux, FSIs have the freedom to adopt a wide range of technologies and software stacks, including container software such as Docker and Kubernetes.

Secure banking

To protect valuable banking data and workloads, the security strategy of HPE Compute Scale-up Server 3200 and HPE Superdome Flex focuses on minimizing threat exposure to vulnerabilities, including those found in common firmware. The **unique server management architecture** provides many security advantages; for example, the operating system, which is a major source of vulnerabilities, is rarely trusted.

HPE Compute Scale-up Server 3200 features silicon root of trust from HPE and adds dual Trusted Platform Module 2.0 (TPM 2.0) chips, bundled and authenticated firmware updates, and new automatic deconfiguration capabilities for the I/O subsystem.

Optimized cost of ownership

For organizations that need to increase cost-efficiency, the Intel based HPE Compute Scale up Server 3200 and HPE Superdome Flex platforms prove that scale-up mission-critical systems can fit the bill. Built from standard components, the solution's unique modular architecture helps optimize the cost of software licensing and avoids overprovisioning costs.

These mission-critical platforms are also ideal for consolidation projects, providing simpler, more cost-effective management, and a smaller footprint than scale-out alternatives, as well as greater reliability and availability.

Cloud experience

HPE Compute Scale-up Server 3200 and HPE Superdome Flex, along with the technology from the Intel Xeon processors, are ideal for mission-critical applications that organizations deem too risky to deploy on the public cloud yet want a shift to OpEx-based infrastructure. Through HPE GreenLake, these platforms can be delivered as a hybrid cloud solution with usage-based billing, flexibility to scale on demand, a wide range of managed services, as well as the control of locating infrastructure on-premises.

Transforming legacy UNIX® infrastructure

A global bank moved on from its legacy UNIX systems and modernized core banking applications with HPE Superdome Flex 280. The customer selected HPE for our:

- Cost-effective and future-proof solution
- Experience in helping banks to digitally transform with lower risk
- Low total cost of ownership

SQL Server modernization in core banking

A large European bank transformed its mission-critical Microsoft SQL Server environment with HPE Superdome Flex. The HPE solution delivered:

- Very high availability for core banking software
- End-to-end transformation partnership including servers, storage, software, and services





Get started

Financial institutions that want to modernize core banking need flexible, standardized platforms able to support real-time data initiatives, as well as transformative technologies such as ML and cloud. With the HPE Compute Scale-up Server 3200 and HPE Superdome Flex family you can have all of this, together with the abundant compute resources, low latency, and exceptional reliability of scale-up, mission-critical systems. And you can have a cloud experience that starts as small as you need it to, with HPE GreenLake.

For more information:

- Contact your HPE representative
- [“In Core Banking, Mission-Critical Platforms Are Essential for Digital Transformation,” IDC, 2023](#)

Learn more at

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[Intel.com/content/www/us/en/products/details/processors/xeon.html](https://intel.com/content/www/us/en/products/details/processors/xeon.html)



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