Amazon EC2 X1 Instances

Designed to support your most demanding SAP HANA based applications

SAP HANA based applications are known for memory-intensive tasks like generating analytics in real time, processing giant graphs, and creating enormous caches. But to utilize all of the functionality of SAP's in-memory technologies, you need an infrastructure platform that can deliver the underlying memory required to handle the most demanding, enterprise-scale workloads.

Amazon Web Services and Intel have teamed up to produce the Amazon EC2 X1 Instance, a memory-optimized instance perfect for databases like SAP HANA. X1 instances are the first public cloud instance powered by the Intel® Xeon® E7 8880 v3 (Haswell) processor, and offers up to 128 vCPUs and up to 2 TB of memory. In addition, X1 instances offer 10 Gbps of dedicated bandwidth to Amazon Elastic Block Store (Amazon EBS) and are EBS-optimized by default at no additional cost.

X1 instances are available with the following specification:

Instance Type	vCPUs	Instance Memory (GB)
x1.32xlarge	128	1,952

Instance Storage (GB)	Network Bandwidth	Dedicated EBS Bandwidth
2 x 1,920 SSD	10 Gbps	10 Gbps

X1 instances are currently available in US East (N. Virginia), US West (Oregon), EU (Ireland), EU (Frankfurt), Asia Pacific (Tokyo), Asia Pacific (Singapore), and Asia Pacific (Sydney) regions, with support in other regions coming soon. To request access, visit **aws.amazon.com/ec2/instance-types/x1/request-access/**

Why host SAP Workloads on AWS?

Scalability and Elasticity
Rapidly provision infrastructure as needed, with no upfront cost or long-term commitment.

High Availability
Leverage EC2 Auto Recovery, EC2 Auto Scaling, and HANA System Replication (HSR) functionality across availability zones and regions for high availability (HA) and disaster recovery (DR).
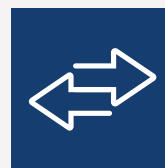
High Performance
Achieve peak performance with 128 vCPUs are powered by Intel E7 processors and custom ENA-based enhanced networking.

Agility
Test, deploy, and scale new workloads in minutes instead of days or weeks.

Trade CapEx for OpEx
Provision the infrastructure capacity you need without upfront investments and pay-as-you go

Extensive Partner Ecosystem
Leverage SAP competency partners to further simplify your migration and deployment

The X1 Instance type gives you the abilityto support your most memory-intensive workloads and realize all of the benefits of running in AWS: massive scalability, high availability and performance, improved agility, the ability to trade CapEx for OpEx, and an extensive partner ecosystem.

SAP Solutions Supported by X1 Instances:

- **S/4HANA** - Simply run SAP's next generation business suite on the AWS platform without the burden of investing in new hardware. X1 instances, with 2 TB of memory, allow you to deploy S/4HANA on AWS and eliminate the need to manage and invest in on-premises hardware.

- **Business Suite** - Understanding the core of your business must be always-on. X1 instances provide the performance and reliability needed to run your business with confidence. By migrating Business Suite from on-premises to AWS, you can reduce management overhead and scale your business cost-effectively.

- **Business Warehouse** - Capturing data, storing it, and ensuring that it is available at all times is critical. X1 instances provide the performance and speed needed to deliver data insights anywhere, anytime. If needed, leverage a broad AWS partner ecosystem to migrating Business Warehouse and other SAP solutions to AWS.

- **HANA Analytics** - HANA Analytics-in-memory and high performance are key to delivering analytics to your business. Leveraging the X1 instance, and the rest of the EC2 instance family, you can combine for optimal performance, cost and accelerate time to value.

A Comparison Between R3 and X1

Amazon EC2 Memory Optimized Instances	Memory Optimized R3	Memory Optimized X1
Intel® processor	Intel® Xeon® E5-2670 v2	Intel® Xeon® E7-8880 v3
Intel® AVX	✔	AVX2.0
Intel® AES-NI	✔	✔
Intel® Turbo Boost	✔	✔
Intel® Transactional Synchronization Extensions (TSX)		✔
Max Memory (GiB)	244	1,952
Max vCPUs	32	128
Instance Storage (GB)	2 x 320 SSD	2 x 1,952 SSD
SAPS Performance Rating	31,920	131,500

Brooks Brothers

"Using AWS SAP HANA Quick Start, we only needed to push a few buttons to get a functioning SAP HANA solution."

- Philip Miller, Director, Brooks Brothers

Learn more about

driving your SAP applications with Amazon EC2 X1 Instances

aws.amazon.com/ec2/instance-types/x1

aws.amazon.com/quickstart

aws.amazon.com/sap/solutions/saphana