Instance Types

Amazon EC2

Copyright © 2024 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon EC2: Instance Types

Copyright © 2024 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

Table of Contents

Instance types **1**
Current generation instances 1
Previous generation instances 2
Instance performance 2
Pricing 3
Naming conventions **4**
Specifications **6**
General purpose 7
Instance families and instance types 8
Instance family summary 11
Performance specifications 14
Network specifications 38
Amazon EBS specifications 53
Instance store specifications 73
Security specifications 79
Compute optimized 103
Instance families and instance types 103
Instance family summary 105
Performance specifications 107
Network specifications 127
Amazon EBS specifications 139
Instance store specifications 154
Security specifications 158
Memory optimized 178
Instance families and instance types 178
Instance family summary 182
Performance specifications 185
Network specifications 215
Amazon EBS specifications 233
Instance store specifications 256
Security specifications 265
Storage optimized 293
Instance families and instance types 294
Instance family summary 295

Performance specifications ... 296
Network specifications ... 303
Amazon EBS specifications ... 307
Instance store specifications ... 314
Security specifications ... 320
Accelerated computing ... 324
Instance families and instance types ... 324
Instance family summary ... 326
Performance specifications ... 328
Network specifications ... 343
Amazon EBS specifications ... 349
Instance store specifications ... 357
Security specifications ... 362
High-performance computing ... 369
Instance families and instance types ... 370
Instance family summary ... 370
Performance specifications ... 371
Network specifications ... 372
Amazon EBS specifications ... 373
Instance store specifications ... 375
Security specifications ... 376
Previous generation ... 377
Instance families and instance types ... 378
Instance family summary ... 379
Performance specifications ... 380
Network specifications ... 386
Amazon EBS specifications ... 390
Instance store specifications ... 394
Security specifications ... 396
Instance types by Region ... 402
US East (N. Virginia) ... 402
US East (Ohio) ... 402
US West (N. California) ... 403
US West (Oregon) ... 403
Africa (Cape Town) ... 404
Asia Pacific (Hong Kong) ... 404

Asia Pacific (Hyderabad) ... 405
Asia Pacific (Jakarta) ... 405
Asia Pacific (Malaysia) ... 405
Asia Pacific (Melbourne) ... 405
Asia Pacific (Mumbai) ... 406
Asia Pacific (Osaka) ... 406
Asia Pacific (Seoul) ... 406
Asia Pacific (Singapore) ... 407
Asia Pacific (Sydney) ... 407
Asia Pacific (Tokyo) ... 408
Canada (Central) ... 408
Canada West (Calgary) ... 409
Europe (Frankfurt) ... 409
Europe (Ireland) ... 410
Europe (London) ... 410
Europe (Milan) ... 410
Europe (Paris) ... 411
Europe (Spain) ... 411
Europe (Stockholm) ... 412
Europe (Zurich) ... 412
Israel (Tel Aviv) ... 412
Middle East (Bahrain) ... 413
Middle East (UAE) ... 413
South America (São Paulo) ... 413
AWS GovCloud (US-East) ... 414
AWS GovCloud (US-West) ... 414
AWS Nitro System ... 415
Nitro components ... 415
Network feature support ... 415
Virtualized instances ... 417
Bare metal instances ... 418
Nitro instance requirements ... 419
Linux instances with AWS Graviton processors ... 422
Quotas ... 423
On-Demand Instance quotas ... 423
Spot Instance quotas ... 424

Dedicated Host quotas 424
Document history 431

Amazon EC2 instance types

When you launch an EC2 instance, the *instance type* that you specify determines the hardware of the host computer used for your instance. Each instance type offers different compute, memory, and storage capabilities, and is grouped in an instance family based on these capabilities. Select an instance type based on the requirements of the application or software that you plan to run on your instance.

Amazon EC2 dedicates some resources of the host computer, such as CPU, memory, and instance storage, to a particular instance. Amazon EC2 shares other resources of the host computer, such as the network and the disk subsystem, among instances. If each instance on a host computer tries to use as much of one of these shared resources as possible, each receives an equal share of that resource. However, when a resource is underused, an instance can consume a higher share of that resource while it's available.

Each instance type provides higher or lower minimum performance from a shared resource. For example, instance types with high I/O performance have a larger allocation of shared resources. Allocating a larger share of shared resources also reduces the variance of I/O performance. For most applications, moderate I/O performance is more than enough. However, for applications that require greater or more consistent I/O performance, consider an instance type with higher I/O performance.

Contents

- Current generation instances
- Previous generation instances
- Amazon EC2 instance type naming conventions
- Amazon EC2 instance type specifications
- Instances built on the AWS Nitro System
- Amazon EC2 instance type quotas

Current generation instances

For the best performance, we recommend that you use the following instance types when you launch new instances. For more information, see Amazon EC2 Instance Types.

- **General purpose:** M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | M8g | Mac1 | Mac2 | Mac2-m1ultra | Mac2-m2 | Mac2-m2pro | T2 | T3 | T3a | T4g
- **Compute optimized:** C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7gn | C7i | C7i-flex | C8g
- **Memory optimized:** R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | R8g | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | U-24tb1 | U7i-12tb | U7in-16tb | U7in-24tb | U7in-32tb | X1 | X1e | X2gd | X2idn | X2iedn | X2iezn | X8g | z1d
- **Storage optimized:** D2 | D3 | D3en | H1 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated computing:** DL1 | DL2q | F1 | G4ad | G4dn | G5 | G5g | G6 | G6e | Gr6 | Inf1 | Inf2 | P2 | P3 | P3dn | P4d | P4de | P5 | P5e | Trn1 | Trn1n | VT1
- **High-performance computing:** Hpc6a | Hpc6id | Hpc7a | Hpc7g

Previous generation instances

Amazon Web Services offers previous generation instance types for users who have optimized their applications around them and have yet to upgrade. We encourage you to use current generation instance types to get the best performance, but we continue to support the following previous generation instance types. For more information about which current generation instance type would be a suitable upgrade, see Previous Generation Instances.

- **General purpose**: A1 | M1 | M2 | M3 | M4 | T1
- **Compute optimized**: C1 | C3 | C4
- **Memory optimized**: R3 | R4
- **Storage optimized**: I2
- **Accelerated computing**: G3

Instance performance

Fixed performance instances

Fixed performance instances provide fixed CPU resources. These instances can deliver and sustain full CPU performance at any time, and for as long as a workload needs it. If you need consistently

high CPU performance for applications such as video encoding, high volume websites, or HPC applications, we recommend that you use fixed performance instances.

Burstable performance instances

Burstable performance (T) instances provide a baseline level of CPU performance with the ability to burst above the baseline. The baseline CPU is designed to meet the needs of the majority of general purpose workloads, such as large-scale micro-services, web servers, small and medium databases, data logging, code repositories, virtual desktops, and development and test environments.

The baseline utilization and ability to burst are governed by CPU credits. Each burstable performance instance continuously earns credits when it stays below the CPU baseline, and continuously spends credits when it bursts above the baseline. For more information, see Burstable performance instances in the *Amazon EC2 User Guide*.

Flex instances

M7i-flex and C7i-flex instances offer a balance of compute, memory, and network resources, and they provide the most cost-effective way to run a broad spectrum of general purpose applications. These instances provide reliable CPU resources to deliver a baseline CPU performance of 40 percent, which is designed to meet the compute requirements for a majority of general purpose workloads. When more performance is needed, these instances provide the ability to exceed the baseline CPU performance and deliver up to 100 percent CPU performance for 95 percent of the time over a 24-hour window.

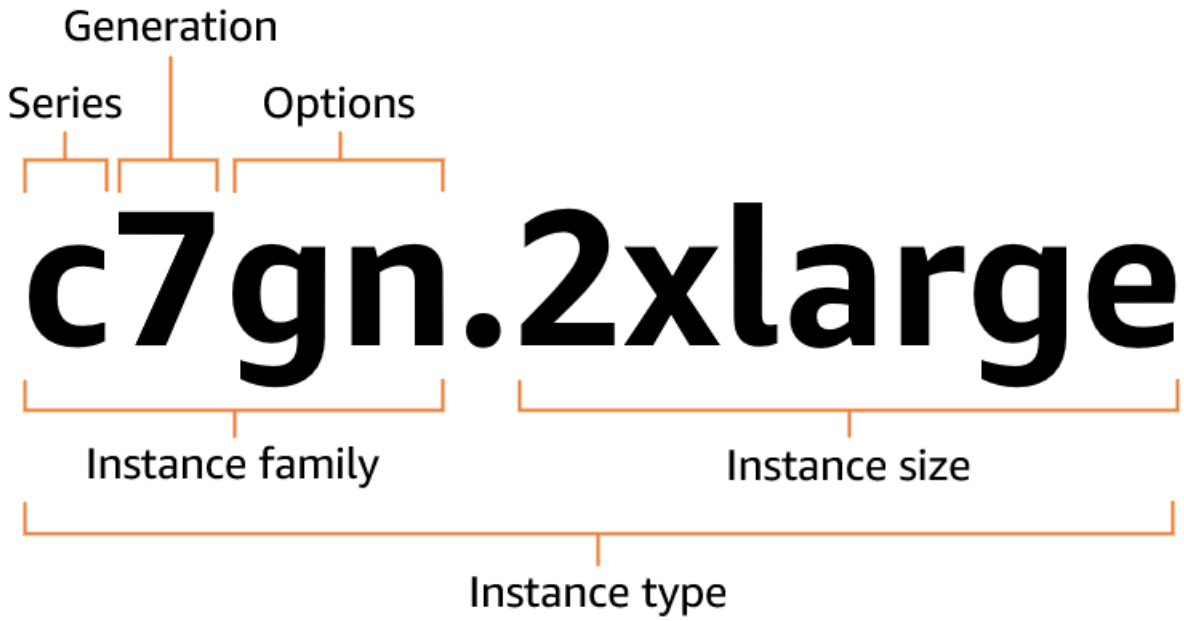
M7i-flex and C7i-flex instances running at a high CPU utilization that is consistently above the baseline for long periods of time might see a gradual reduction in the maximum burst CPU throughput. For more information, see M7i-flex instances and C7i-flex instances.

Pricing

For pricing information, see Amazon EC2 Pricing.

Amazon EC2 instance type naming conventions

Amazon EC2 provides a variety of instance types so you can choose the type that best meets your requirements. Instance types are named based on their *instance family* and *instance size*. The first position of the instance family indicates the *series*, for example c. The second position indicates the *generation*, for example 7. The third position indicates the *options*, for example gn. After the period (`.`) is the instance size, such as `small` or `4xlarge`, or `metal` for bare metal instances.



Series	Options
• **C** – Compute optimized • **D** – Dense storage • **F** – FPGA • **G** – Graphics intensive • **Hpc** – High performance computing • **I** – Storage optimized • **Im** – Storage optimized (1 to 4 ratio of vCPU to memory) • **Is** – Storage optimized (1 to 6 ratio of vCPU to memory)	• **a** – AMD processors • **g** – AWS Graviton processors • **i** – Intel processors • **b** – Block storage optimization • **d** – Instance store volumes • **e** – Extra storage or memory • **flex** – Flex instance • **n** – Network and EBS optimized • **q** – Qualcomm inference accelerators • **z** – High performance

Series	Options
• **Inf** – AWS Inferentia • **M** – General purpose • **Mac** – macOS • **P** – GPU accelerated • **R** – Memory optimized • **T** – Burstable performance • **Trn** – AWS Trainium • **U** – High memory • **VT** – Video transcoding • **X** – Memory intensive	

Amazon EC2 instance type specifications

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instance types comprise varying combinations of CPU, memory, storage, and networking capacity and give you the flexibility to choose the appropriate mix of resources for your applications. Each instance type includes one or more instance sizes, allowing you to scale your resources to the requirements of your target workload.

We group EC2 instance into the following categories:

- **General purpose** – Provide a balance of compute, memory, and networking resources. These instances are ideal for applications that use these resources in equal proportions, such as web servers and code repositories.

  Burstable performance – The T instance family is also referred to as burstable performance instances. These instances provide a baseline CPU performance with the ability to burst above the baseline at any time. For more information, see Burstable performance instances in the *Amazon EC2 User Guide*.
- **Compute optimized** – Designed for compute intensive applications that benefit from high performance processors. These instances are ideal for batch processing workloads, media transcoding, high performance web servers, high performance computing (HPC), scientific modeling, dedicated gaming servers, ad server engines, and machine learning inference.
- **Memory optimized** – Designed to deliver fast performance for workloads that process large data sets in memory.
- **Storage optimized** – Designed for workloads that require high, sequential read and write access to very large data sets on local storage. They are optimized to deliver tens of thousands of low-latency, random I/O operations per second (IOPS) to applications.
- **Accelerated computing** – Use hardware accelerators, or co-processors, to perform functions, such as floating point number calculations, graphics processing, or data pattern matching, more efficiently than is possible in software running on CPUs.
- **High-performance computing** – Purpose built to offer the best price performance for running HPC workloads at scale on AWS. These instances are ideal for applications that benefit from high-performance processors, such as large, complex simulations and deep learning workloads.
- **Previous generation** – AWS offers previous generation instance types for users who have optimized their applications around them and have yet to upgrade. We encourage you to use

current generation instance types to get the best performance, but we continue to support previous generation instance types.

To determine which instance types meet your requirements, such as supported Regions, compute resources, or storage resources, see Find an Amazon EC2 instance type in the *Amazon EC2 User Guide*.

Categories

- Specifications for Amazon EC2 general purpose instances
- Specifications for Amazon EC2 compute optimized instances
- Specifications for Amazon EC2 memory optimized instances
- Specifications for Amazon EC2 storage optimized instances
- Specifications for Amazon EC2 accelerated computing instances
- Specifications for Amazon EC2 high-performance computing instances
- Specifications for Amazon EC2 previous generation instances

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Specifications for Amazon EC2 general purpose instances

General purpose instances provide a balance of compute, memory, and networking resources. These instances are ideal for applications that use these resources in equal proportions, such as web servers and code repositories.

For information on previous generation instance types of this category, such as M4 instances, see Specifications for Amazon EC2 previous generation instances.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications

- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
M5	m5.large|m5.xlarge |m5.2xlarge |m5.4xlarge |m5.8xlarge | m5.12xlarge |m5.16xlarge |m5.24xlarge |m5.metal
M5a	m5a.large |m5a.xlarge |m5a.2xlarge |m5a.4xlarge |m5a.8xlarge |m5a.12xlarge |m5a.16xlarge |m5a.24xlarge
M5ad	m5ad.large |m5ad.xlarge |m5ad.2xlarge |m5ad.4xlarge | m5ad.8xlarge |m5ad.12xlarge |m5ad.16xlarge |m5ad.24xlarge
M5d	m5d.large |m5d.xlarge |m5d.2xlarge |m5d.4xlarge |m5d.8xlarge |m5d.12xlarge |m5d.16xlarge |m5d.24xlarge |m5d.metal
M5dn	m5dn.large |m5dn.xlarge |m5dn.2xlarge |m5dn.4xlarge | m5dn.8xlarge |m5dn.12xlarge |m5dn.16xlarge |m5dn.24xlarge | m5dn.metal
M5n	m5n.large |m5n.xlarge |m5n.2xlarge |m5n.4xlarge |m5n.8xlarge |m5n.12xlarge |m5n.16xlarge |m5n.24xlarge |m5n.metal
M5zn	m5zn.large |m5zn.xlarge |m5zn.2xlarge |m5zn.3xlarge | m5zn.6xlarge |m5zn.12xlarge |m5zn.metal
M6a	m6a.large |m6a.xlarge |m6a.2xlarge |m6a.4xlarge |m6a.8xlarge |m6a.12xlarge |m6a.16xlarge |m6a.24xlarge |m6a.32xlarge | m6a.48xlarge |m6a.metal

Instance family	Available instance types
M6g	m6g.medium |m6g.large |m6g.xlarge |m6g.2xlarge |m6g.4xlarge |m6g.8xlarge |m6g.12xlarge |m6g.16xlarge |m6g.metal
M6gd	m6gd.medium |m6gd.large |m6gd.xlarge |m6gd.2xlarge | m6gd.4xlarge |m6gd.8xlarge |m6gd.12xlarge |m6gd.16xlarge | m6gd.metal
M6i	m6i.large |m6i.xlarge |m6i.2xlarge |m6i.4xlarge |m6i.8xlarge |m6i.12xlarge |m6i.16xlarge |m6i.24xlarge |m6i.32xlarge | m6i.metal
M6id	m6id.large |m6id.xlarge |m6id.2xlarge |m6id.4xlarge | m6id.8xlarge |m6id.12xlarge |m6id.16xlarge |m6id.24xlarge | m6id.32xlarge |m6id.metal
M6idn	m6idn.large |m6idn.xlarge |m6idn.2xlarge |m6idn.4xlarge |m6idn.8xlarge |m6idn.12xlarge |m6idn.16xlarge |m6idn.24xlarge |m6idn.32xlarge |m6idn.metal
M6in	m6in.large |m6in.xlarge |m6in.2xlarge |m6in.4xlarge | m6in.8xlarge |m6in.12xlarge |m6in.16xlarge |m6in.24xlarge | m6in.32xlarge |m6in.metal
M7a	m7a.medium |m7a.large |m7a.xlarge |m7a.2xlarge |m7a.4xlarge |m7a.8xlarge |m7a.12xlarge |m7a.16xlarge |m7a.24xlarge | m7a.32xlarge |m7a.48xlarge |m7a.metal-48xl
M7g	m7g.medium |m7g.large |m7g.xlarge |m7g.2xlarge |m7g.4xlarge |m7g.8xlarge |m7g.12xlarge |m7g.16xlarge |m7g.metal
M7gd	m7gd.medium |m7gd.large |m7gd.xlarge |m7gd.2xlarge | m7gd.4xlarge |m7gd.8xlarge |m7gd.12xlarge |m7gd.16xlarge | m7gd.metal

Instance family	Available instance types
M7i	m7i.large |m7i.xlarge |m7i.2xlarge |m7i.4xlarge |m7i.8xlarge |m7i.12xlarge |m7i.16xlarge |m7i.24xlarge |m7i.48xlarge |m7i.metal-24xl |m7i.metal-48xl
M7i-flex	m7i-flex.large |m7i-flex.xlarge |m7i-flex.2xlarge |m7i-flex.4xlarge |m7i-flex.8xlarge
M8g	m8g.medium |m8g.large |m8g.xlarge |m8g.2xlarge |m8g.4xlarge |m8g.8xlarge |m8g.12xlarge |m8g.16xlarge |m8g.24xlarge |m8g.48xlarge |m8g.metal-24xl |m8g.metal-48xl
Mac1	mac1.metal
Mac2	mac2.metal
Mac2-m1ultra	mac2-m1ultra.metal
Mac2-m2	mac2-m2.metal
Mac2-m2pro	mac2-m2pro.metal
T2	t2.nano|t2.micro|t2.small|t2.medium |t2.large|t2.xlarge |t2.2xlarge
T3	t3.nano|t3.micro|t3.small|t3.medium |t3.large|t3.xlarge |t3.2xlarge
T3a	t3a.nano|t3a.micro |t3a.small |t3a.medium |t3a.large |t3a.xlarge |t3a.2xlarge
T4g	t4g.nano|t4g.micro |t4g.small |t4g.medium |t4g.large |t4g.xlarge |t4g.2xlarge

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
M5	Nitro v2	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
M5a	Nitro v2	AMD (x86_64)	✗	✓	✓	✓	Windows | Linux
M5ad	Nitro v2	AMD (x86_64)	✗	✗	✓	✓	Windows | Linux
M5d	Nitro v2	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
M5dn	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
M5n	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
M5zn	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
M6a	Nitro v4	AMD (x86_64)	✓	✓	✓	✗	Windows | Linux
M6g	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
M6gd	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✓	Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
M6i	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
M6id	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
M6idn	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
M6in	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
M7a	Nitro v4	AMD (x86_64)	✓	✓	✓	✗	Windows | Linux
M7g	Nitro v4	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
M7gd	Nitro v4	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
M7i	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
M7i-flex	Nitro v4	Intel (x86_64)	✗	✗	✓	✓	Windows | Linux
M8g	Nitro v5	AWS Graviton (arm64)	✓	✓	✓	✓	Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
Mac1	Nitro v2	Intel (x86_64_mac)	✓	✓	✗	✗	Linux
Mac2	Nitro v2	Apple (arm64_mac)	✓	✓	✗	✗	Linux
Mac2-m1ultra	Nitro v2	Apple (arm64_mac)	✓	✓	✗	✗	Linux
Mac2-m2	Nitro v2	Apple (arm64_mac)	✓	✓	✗	✗	Linux
Mac2-m2pro	Nitro v2	Apple (arm64_mac)	✓	✓	✗	✗	Linux
T2	Xen	Intel (x86_64)	✗	✗	✓	✓	Windows | Linux
T3	Nitro v2	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux
T3a	Nitro v2	AMD (x86_64)	✗	✗	✓	✓	Windows | Linux
T4g	Nitro v2	AWS Graviton (arm64)	✗	✗	✓	✓	Linux

Performance specifications

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
			M5					
m5.large	✗	8.00	Intel Xeon Platinum 8175	2	1	2	✗	✗
m5.xlarge	✗	16.00	Intel Xeon Platinum 8175	4	2	2	✗	✗
m5.2xlarge	✗	32.00	Intel Xeon Platinum 8175	8	4	2	✗	✗
m5.4xlarge	✗	64.00	Intel Xeon Platinum 8175	16	8	2	✗	✗
m5.8xlarge	✗	128.00	Intel Xeon Platinum 8175	32	16	2	✗	✗
m5.12xlarge	✗	192.00	Intel Xeon Platinum 8175	48	24	2	✗	✗
m5.16xlarge	✗	256.00	Intel Xeon Platinum 8175	64	32	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m5.24xlarge	✗	384.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
m5.metal	✗	384.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
M5a								
m5a.large	✗	8.00	AMD EPYC 7571	2	1	2	✗	✗
m5a.xlarge	✗	16.00	AMD EPYC 7571	4	2	2	✗	✗
m5a.2xlarge	✗	32.00	AMD EPYC 7571	8	4	2	✗	✗
m5a.4xlarge	✗	64.00	AMD EPYC 7571	16	8	2	✗	✗
m5a.8xlarge	✗	128.00	AMD EPYC 7571	32	16	2	✗	✗
m5a.12xlarge	✗	192.00	AMD EPYC 7571	48	24	2	✗	✗
m5a.16xlarge	✗	256.00	AMD EPYC 7571	64	32	2	✗	✗
m5a.24xlarge	✗	384.00	AMD EPYC 7571	96	48	2	✗	✗
M5ad								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m5ad.large	✗	8.00	AMD EPYC 7571	2	1	2	✗	✗
m5ad.xlarge	✗	16.00	AMD EPYC 7571	4	2	2	✗	✗
m5ad.2xlarge	✗	32.00	AMD EPYC 7571	8	4	2	✗	✗
m5ad.4xlarge	✗	64.00	AMD EPYC 7571	16	8	2	✗	✗
m5ad.8xlarge	✗	128.00	AMD EPYC 7571	32	16	2	✗	✗
m5ad.12xlarge	✗	192.00	AMD EPYC 7571	48	24	2	✗	✗
m5ad.16xlarge	✗	256.00	AMD EPYC 7571	64	32	2	✗	✗
m5ad.24xlarge	✗	384.00	AMD EPYC 7571	96	48	2	✗	✗
M5d								
m5d.large	✗	8.00	Intel Xeon Platinum 8175	2	1	2	✗	✗
m5d.xlarge	✗	16.00	Intel Xeon Platinum 8175	4	2	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m5d.2xlarge	✗	32.00	Intel Xeon Platinum 8175	8	4	2	✗	✗
m5d.4xlarge	✗	64.00	Intel Xeon Platinum 8175	16	8	2	✗	✗
m5d.8xlarge	✗	128.00	Intel Xeon Platinum 8175	32	16	2	✗	✗
m5d.12xlarge	✗	192.00	Intel Xeon Platinum 8175	48	24	2	✗	✗
m5d.16xlarge	✗	256.00	Intel Xeon Platinum 8175	64	32	2	✗	✗
m5d.24xlarge	✗	384.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
m5d.metal	✗	384.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
M5dn								
m5dn.large	✗	8.00	Intel Xeon Platinum 8259	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m5dn.xlarge	✗	16.00	Intel Xeon Platinum 8259	4	2	2	✗	✗
m5dn.2xlarge	✗	32.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
m5dn.4xlarge	✗	64.00	Intel Xeon Platinum 8259	16	8	2	✗	✗
m5dn.8xlarge	✗	128.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
m5dn.12xlarge	✗	192.00	Intel Xeon Platinum 8259	48	24	2	✗	✗
m5dn.16xlarge	✗	256.00	Intel Xeon Platinum 8259	64	32	2	✗	✗
m5dn.24xlarge	✗	384.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
m5dn.metal	✗	384.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
M5n								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m5n.large	✗	8.00	Intel Xeon Platinum 8259	2	1	2	✗	✗
m5n.xlarge	✗	16.00	Intel Xeon Platinum 8259	4	2	2	✗	✗
m5n.2xlarge	✗	32.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
m5n.4xlarge	✗	64.00	Intel Xeon Platinum 8259	16	8	2	✗	✗
m5n.8xlarge	✗	128.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
m5n.12xlarge	✗	192.00	Intel Xeon Platinum 8259	48	24	2	✗	✗
m5n.16xlarge	✗	256.00	Intel Xeon Platinum 8259	64	32	2	✗	✗
m5n.24xlarge	✗	384.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
m5n.metal	✗	384.00	Intel Xeon Platinum 8259	96	48	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
M5zn								
m5zn.large	✗	8.00	Intel Xeon Platinum 8252	2	1	2	✗	✗
m5zn.xlarge	✗	16.00	Intel Xeon Platinum 8252	4	2	2	✗	✗
m5zn.2xlarge	✗	32.00	Intel Xeon Platinum 8252	8	4	2	✗	✗
m5zn.3xlarge	✗	48.00	Intel Xeon Platinum 8252	12	6	2	✗	✗
m5zn.6xlarge	✗	96.00	Intel Xeon Platinum 8252	24	12	2	✗	✗
m5zn.12xlarge	✗	192.00	Intel Xeon Platinum 8252	48	24	2	✗	✗
m5zn.metal	✗	192.00	Intel Xeon Platinum 8252	48	24	2	✗	✗
M6a								
m6a.large	✗	8.00	AMD EPYC 7R13	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m6a.xlarge	✗	16.00	AMD EPYC 7R13	4	2	2	✗	✗
m6a.2xlarge	✗	32.00	AMD EPYC 7R13	8	4	2	✗	✗
m6a.4xlarge	✗	64.00	AMD EPYC 7R13	16	8	2	✗	✗
m6a.8xlarge	✗	128.00	AMD EPYC 7R13	32	16	2	✗	✗
m6a.12xlarge	✗	192.00	AMD EPYC 7R13	48	24	2	✗	✗
m6a.16xlarge	✗	256.00	AMD EPYC 7R13	64	32	2	✗	✗
m6a.24xlarge	✗	384.00	AMD EPYC 7R13	96	48	2	✗	✗
m6a.32xlarge	✗	512.00	AMD EPYC 7R13	128	64	2	✗	✗
m6a.48xlarge	✗	768.00	AMD EPYC 7R13	192	96	2	✗	✗
m6a.metal	✗	768.00	AMD EPYC 7R13	192	96	2	✗	✗
M6g								
m6g.medium	✗	4.00	AWS Graviton2 Processor	1	1	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m6g.large	✗	8.00	AWS Graviton2 Processor	2	2	1	✗	✗
m6g.xlarge	✗	16.00	AWS Graviton2 Processor	4	4	1	✗	✗
m6g.2xlarge	✗	32.00	AWS Graviton2 Processor	8	8	1	✗	✗
m6g.4xlarge	✗	64.00	AWS Graviton2 Processor	16	16	1	✗	✗
m6g.8xlarge	✗	128.00	AWS Graviton2 Processor	32	32	1	✗	✗
m6g.12xlarge	✗	192.00	AWS Graviton2 Processor	48	48	1	✗	✗
m6g.16xlarge	✗	256.00	AWS Graviton2 Processor	64	64	1	✗	✗
m6g.metal	✗	256.00	AWS Graviton2 Processor	64	64	1	✗	✗
M6gd								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m6gd.medium	✗	4.00	AWS Graviton2 Processor	1	1	1	✗	✗
m6gd.large	✗	8.00	AWS Graviton2 Processor	2	2	1	✗	✗
m6gd.xlarge	✗	16.00	AWS Graviton2 Processor	4	4	1	✗	✗
m6gd.2xlarge	✗	32.00	AWS Graviton2 Processor	8	8	1	✗	✗
m6gd.4xlarge	✗	64.00	AWS Graviton2 Processor	16	16	1	✗	✗
m6gd.8xlarge	✗	128.00	AWS Graviton2 Processor	32	32	1	✗	✗
m6gd.12xlarge	✗	192.00	AWS Graviton2 Processor	48	48	1	✗	✗
m6gd.16xlarge	✗	256.00	AWS Graviton2 Processor	64	64	1	✗	✗
m6gd.metal	✗	256.00	AWS Graviton2 Processor	64	64	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
M6i								
m6i.large	✗	8.00	Intel Xeon Ice Lake	2	1	2	✗	✗
m6i.xlarge	✗	16.00	Intel Xeon Ice Lake	4	2	2	✗	✗
m6i.2xlarge	✗	32.00	Intel Xeon Ice Lake	8	4	2	✗	✗
m6i.4xlarge	✗	64.00	Intel Xeon Ice Lake	16	8	2	✗	✗
m6i.8xlarge	✗	128.00	Intel Xeon Ice Lake	32	16	2	✗	✗
m6i.12xlarge	✗	192.00	Intel Xeon Ice Lake	48	24	2	✗	✗
m6i.16xlarge	✗	256.00	Intel Xeon Ice Lake	64	32	2	✗	✗
m6i.24xlarge	✗	384.00	Intel Xeon Ice Lake	96	48	2	✗	✗
m6i.32xlarge	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
m6i.metal	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
M6id								
m6id.large	✗	8.00	Intel Xeon Ice Lake	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m6id.xlarge	✗	16.00	Intel Xeon Ice Lake	4	2	2	✗	✗
m6id.2xlarge	✗	32.00	Intel Xeon Ice Lake	8	4	2	✗	✗
m6id.4xlarge	✗	64.00	Intel Xeon Ice Lake	16	8	2	✗	✗
m6id.8xlarge	✗	128.00	Intel Xeon Ice Lake	32	16	2	✗	✗
m6id.12xlarge	✗	192.00	Intel Xeon Ice Lake	48	24	2	✗	✗
m6id.16xlarge	✗	256.00	Intel Xeon Ice Lake	64	32	2	✗	✗
m6id.24xlarge	✗	384.00	Intel Xeon Ice Lake	96	48	2	✗	✗
m6id.32xlarge	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
m6id.metal	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
M6idn								
m6idn.large	✗	8.00	Intel Xeon Ice Lake	2	1	2	✗	✗
m6idn.xlarge	✗	16.00	Intel Xeon Ice Lake	4	2	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m6idn.2xlarge	✗	32.00	Intel Xeon Ice Lake	8	4	2	✗	✗
m6idn.4xlarge	✗	64.00	Intel Xeon Ice Lake	16	8	2	✗	✗
m6idn.8xlarge	✗	128.00	Intel Xeon Ice Lake	32	16	2	✗	✗
m6idn.12xlarge	✗	192.00	Intel Xeon Ice Lake	48	24	2	✗	✗
m6idn.16xlarge	✗	256.00	Intel Xeon Ice Lake	64	32	2	✗	✗
m6idn.24xlarge	✗	384.00	Intel Xeon Ice Lake	96	48	2	✗	✗
m6idn.32xlarge	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
m6idn.metal	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
M6in								
m6in.large	✗	8.00	Intel Xeon Ice Lake	2	1	2	✗	✗
m6in.xlarge	✗	16.00	Intel Xeon Ice Lake	4	2	2	✗	✗
m6in.2xlarge	✗	32.00	Intel Xeon Ice Lake	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m6in.4xlarge	✗	64.00	Intel Xeon Ice Lake	16	8	2	✗	✗
m6in.8xlarge	✗	128.00	Intel Xeon Ice Lake	32	16	2	✗	✗
m6in.12xlarge	✗	192.00	Intel Xeon Ice Lake	48	24	2	✗	✗
m6in.16xlarge	✗	256.00	Intel Xeon Ice Lake	64	32	2	✗	✗
m6in.24xlarge	✗	384.00	Intel Xeon Ice Lake	96	48	2	✗	✗
m6in.32xlarge	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
m6in.metal	✗	512.00	Intel Xeon Ice Lake	128	64	2	✗	✗
M7a								
m7a.medium	✗	4.00	AMD EPYC 9R14	1	1	1	✗	✗
m7a.large	✗	8.00	AMD EPYC 9R14	2	2	1	✗	✗
m7a.xlarge	✗	16.00	AMD EPYC 9R14	4	4	1	✗	✗
m7a.2xlarge	✗	32.00	AMD EPYC 9R14	8	8	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m7a.4xlarge	✗	64.00	AMD EPYC 9R14	16	16	1	✗	✗
m7a.8xlarge	✗	128.00	AMD EPYC 9R14	32	32	1	✗	✗
m7a.12xlarge	✗	192.00	AMD EPYC 9R14	48	48	1	✗	✗
m7a.16xlarge	✗	256.00	AMD EPYC 9R14	64	64	1	✗	✗
m7a.24xlarge	✗	384.00	AMD EPYC 9R14	96	96	1	✗	✗
m7a.32xlarge	✗	512.00	AMD EPYC 9R14	128	128	1	✗	✗
m7a.48xlarge	✗	768.00	AMD EPYC 9R14	192	192	1	✗	✗
m7a.metal-48xl	✗	768.00	AMD EPYC 9R14	192	192	1	✗	✗
M7g								
m7g.medium	✗	4.00	AWS Graviton3 Processor	1	1	1	✗	✗
m7g.large	✗	8.00	AWS Graviton3 Processor	2	2	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m7g.xlarge	✗	16.00	AWS Graviton3 Processor	4	4	1	✗	✗
m7g.2xlarge	✗	32.00	AWS Graviton3 Processor	8	8	1	✗	✗
m7g.4xlarge	✗	64.00	AWS Graviton3 Processor	16	16	1	✗	✗
m7g.8xlarge	✗	128.00	AWS Graviton3 Processor	32	32	1	✗	✗
m7g.12xlarge	✗	192.00	AWS Graviton3 Processor	48	48	1	✗	✗
m7g.16xlarge	✗	256.00	AWS Graviton3 Processor	64	64	1	✗	✗
m7g.metal	✗	256.00	AWS Graviton3 Processor	64	64	1	✗	✗
M7gd								
m7gd.medium	✗	4.00	AWS Graviton3 Processor	1	1	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m7gd.large	✗	8.00	AWS Graviton3 Processor	2	2	1	✗	✗
m7gd.xlarge	✗	16.00	AWS Graviton3 Processor	4	4	1	✗	✗
m7gd.2xlarge	✗	32.00	AWS Graviton3 Processor	8	8	1	✗	✗
m7gd.4xlarge	✗	64.00	AWS Graviton3 Processor	16	16	1	✗	✗
m7gd.8xlarge	✗	128.00	AWS Graviton3 Processor	32	32	1	✗	✗
m7gd.12xlarge	✗	192.00	AWS Graviton3 Processor	48	48	1	✗	✗
m7gd.16xlarge	✗	256.00	AWS Graviton3 Processor	64	64	1	✗	✗
m7gd.metal	✗	256.00	AWS Graviton3 Processor	64	64	1	✗	✗
M7i								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m7i.large	✗	8.00	Intel Xeon Sapphire Rapids	2	1	2	✗	✗
m7i.xlarge	✗	16.00	Intel Xeon Sapphire Rapids	4	2	2	✗	✗
m7i.2xlarge	✗	32.00	Intel Xeon Sapphire Rapids	8	4	2	✗	✗
m7i.4xlarge	✗	64.00	Intel Xeon Sapphire Rapids	16	8	2	✗	✗
m7i.8xlarge	✗	128.00	Intel Xeon Sapphire Rapids	32	16	2	✗	✗
m7i.12xlarge	✗	192.00	Intel Xeon Sapphire Rapids	48	24	2	✗	✗
m7i.16xlarge	✗	256.00	Intel Xeon Sapphire Rapids	64	32	2	✗	✗
m7i.24xlarge	✗	384.00	Intel Xeon Sapphire Rapids	96	48	2	✗	✗
m7i.48xlarge	✗	768.00	Intel Xeon Sapphire Rapids	192	96	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m7i.metal-24xl	✗	384.00	Intel Xeon Sapphire Rapids	96	48	2	✗	✗
m7i.metal-48xl	✗	768.00	Intel Xeon Sapphire Rapids	192	96	2	✗	✗
M7i-flex								
m7i-flex.large	✗	8.00	Intel Xeon Sapphire Rapids	2	1	2	✗	✗
m7i-flex.xlarge	✗	16.00	Intel Xeon Sapphire Rapids	4	2	2	✗	✗
m7i-flex.2xlarge	✗	32.00	Intel Xeon Sapphire Rapids	8	4	2	✗	✗
m7i-flex.4xlarge	✗	64.00	Intel Xeon Sapphire Rapids	16	8	2	✗	✗
m7i-flex.8xlarge	✗	128.00	Intel Xeon Sapphire Rapids	32	16	2	✗	✗
M8g								
m8g.medium	✗	4.00	AWS Graviton4 Processor	1	1	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m8g.large	✗	8.00	AWS Graviton4 Processor	2	2	1	✗	✗
m8g.xlarge	✗	16.00	AWS Graviton4 Processor	4	4	1	✗	✗
m8g.2xlarge	✗	32.00	AWS Graviton4 Processor	8	8	1	✗	✗
m8g.4xlarge	✗	64.00	AWS Graviton4 Processor	16	16	1	✗	✗
m8g.8xlarge	✗	128.00	AWS Graviton4 Processor	32	32	1	✗	✗
m8g.12xlarge	✗	192.00	AWS Graviton4 Processor	48	48	1	✗	✗
m8g.16xlarge	✗	256.00	AWS Graviton4 Processor	64	64	1	✗	✗
m8g.24xlarge	✗	384.00	AWS Graviton4 Processor	96	96	1	✗	✗
m8g.48xlarge	✗	768.00	AWS Graviton4 Processor	192	192	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m8g.metal-24xl	✗	384.00	AWS Graviton4 Processor	96	96	1	✗	✗
m8g.metal-48xl	✗	768.00	AWS Graviton4 Processor	192	192	1	✗	✗
Mac1								
mac1.metal	✗	32.00	Intel Core i7-8700B	12	6	2	✗	✗
Mac2								
mac2.metal	✗	16.00	Apple M1 chip with 8-core CPU	8	4	2	✗	✗
Mac2-m1ultra								
mac2-m1ultra.metal	✗	128.00	Apple M1 Ultra with 20-core CPU	20	20	1	✗	✗
Mac2-m2								
mac2-m2.metal	✗	24.00	Apple M2 with 8-core CPU	8	8	1	✗	✗
Mac2-m2pro								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
mac2-m2pro.metal	✗	32.00	Apple M2 Pro with 12-core CPU	12	12	1	✗	✗
T2								
t2.nano	✓	0.50	Intel Xeon Family	1	1	1	✗	✗
t2.micro	✓	1.00	Intel Xeon Family	1	1	1	✗	✗
t2.small	✓	2.00	Intel Xeon Family	1	1	1	✗	✗
t2.medium	✓	4.00	Intel Broadwell E5-2686v4	2	2	1	✗	✗
t2.large	✓	8.00	Intel Broadwell E5-2686v4	2	2	1	✗	✗
t2.xlarge	✓	16.00	Intel Broadwell E5-2686v4	4	4	1	✗	✗
t2.2xlarge	✓	32.00	Intel Broadwell E5-2686v4	8	8	1	✗	✗
T3								
t3.nano	✓	0.50	Intel Skylake P-8175	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
t3.micro	✓	1.00	Intel Skylake P-8175	2	1	2	✗	✗
t3.small	✓	2.00	Intel Skylake P-8175	2	1	2	✗	✗
t3.medium	✓	4.00	Intel Skylake P-8175	2	1	2	✗	✗
t3.large	✓	8.00	Intel Skylake P-8175	2	1	2	✗	✗
t3.xlarge	✓	16.00	Intel Skylake P-8175	4	2	2	✗	✗
t3.2xlarge	✓	32.00	Intel Skylake P-8175	8	4	2	✗	✗
T3a								
t3a.nano	✓	0.50	AMD EPYC 7571	2	1	2	✗	✗
t3a.micro	✓	1.00	AMD EPYC 7571	2	1	2	✗	✗
t3a.small	✓	2.00	AMD EPYC 7571	2	1	2	✗	✗
t3a.medium	✓	4.00	AMD EPYC 7571	2	1	2	✗	✗
t3a.large	✓	8.00	AMD EPYC 7571	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
t3a.xlarge	✓	16.00	AMD EPYC 7571	4	2	2	✗	✗
t3a.2xlarge	✓	32.00	AMD EPYC 7571	8	4	2	✗	✗
T4g								
t4g.nano	✓	0.50	AWS Graviton2 Processor	2	2	1	✗	✗
t4g.micro	✓	1.00	AWS Graviton2 Processor	2	2	1	✗	✗
t4g.small	✓	2.00	AWS Graviton2 Processor	2	2	1	✗	✗
t4g.medium	✓	4.00	AWS Graviton2 Processor	2	2	1	✗	✗
t4g.large	✓	8.00	AWS Graviton2 Processor	2	2	1	✗	✗
t4g.xlarge	✓	16.00	AWS Graviton2 Processor	4	4	1	✗	✗
t4g.2xlarge	✓	32.00	AWS Graviton2 Processor	8	8	1	✗	✗

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
M5								
m5.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
m5.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
m5.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
m5.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
m5.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
m5.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
m5.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
m5.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
m5.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
M5a								
m5a.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
m5a.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
m5a.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
m5a.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
m5a.8xlarge [1]	7.5 / 10.0	✗	✓	✗	1	8	30	✓
m5a.12xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m5a.16xlarge	12 Gigabit	✗	✓	✗	1	15	50	✓
m5a.24xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
M5ad								
m5ad.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
m5ad.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
m5ad.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
m5ad.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
m5ad.8xlarge [1]	7.5 / 10.0	✗	✓	✗	1	8	30	✓
m5ad.12xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
m5ad.16xlarge	12 Gigabit	✗	✓	✗	1	15	50	✓
m5ad.24xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
M5d								
m5d.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
m5d.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
m5d.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m5d.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
m5d.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
m5d.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
m5d.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
m5d.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
m5d.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
M5dn								
m5dn.large [1]	2.1 / 25.0	✗	✓	✗	1	3	10	✓
m5dn.xlarge [1]	4.1 / 25.0	✗	✓	✗	1	4	15	✓
m5dn.2xlarge [1]	8.125 / 25.0	✗	✓	✗	1	4	15	✓
m5dn.4xlarge [1]	16.25 / 25.0	✗	✓	✗	1	8	30	✓
m5dn.8xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
m5dn.12xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
m5dn.16xlarge	75 Gigabit	✗	✓	✗	1	15	50	✓
m5dn.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
m5dn.metal	100 Gigabit	✓	✓	✗	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
M5n								
m5n.large [1]	2.1 / 25.0	✗	✓	✗	1	3	10	✓
m5n.xlarge [1]	4.1 / 25.0	✗	✓	✗	1	4	15	✓
m5n.2xlarge [1]	8.125 / 25.0	✗	✓	✗	1	4	15	✓
m5n.4xlarge [1]	16.25 / 25.0	✗	✓	✗	1	8	30	✓
m5n.8xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
m5n.12xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
m5n.16xlarge	75 Gigabit	✗	✓	✗	1	15	50	✓
m5n.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
m5n.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
M5zn								
m5zn.large [1]	3.0 / 25.0	✗	✓	✗	1	3	10	✓
m5zn.xlarge [1]	5.0 / 25.0	✗	✓	✗	1	4	15	✓
m5zn.2xlarge [1]	10.0 / 25.0	✗	✓	✗	1	4	15	✓
m5zn.3xlarge [1]	15.0 / 25.0	✗	✓	✗	1	8	30	✓
m5zn.6xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
m5zn.12xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m5zn.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
M6a								
m6a.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
m6a.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
m6a.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
m6a.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
m6a.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
m6a.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
m6a.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
m6a.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
m6a.32xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
m6a.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
m6a.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
M6g								
m6g.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓
m6g.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
m6g.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
m6g.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m6g.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
m6g.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
m6g.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
m6g.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
m6g.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
M6gd								
m6gd.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓
m6gd.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
m6gd.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
m6gd.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
m6gd.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
m6gd.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
m6gd.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
m6gd.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
m6gd.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
M6i								

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m6i.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
m6i.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
m6i.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
m6i.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
m6i.8xlarge	12.5 Gigabit	✗	✓	✓	1	8	30	✓
m6i.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
m6i.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
m6i.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
m6i.32xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
m6i.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
M6id								
m6id.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
m6id.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
m6id.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
m6id.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
m6id.8xlarge	12.5 Gigabit	✗	✓	✓	1	8	30	✓
m6id.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
m6id.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
m6id.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m6id.32xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
m6id.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
M6idn								
m6idn.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
m6idn.xlarge [1]	6.25 / 30.0	✗	✓	✗	1	4	15	✓
m6idn.2xlarge [1]	12.5 / 40.0	✗	✓	✗	1	4	15	✓
m6idn.4xlarge [1]	25.0 / 50.0	✗	✓	✗	1	8	30	✓
m6idn.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
m6idn.12xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
m6idn.16xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
m6idn.24xlarge	150 Gigabit	✗	✓	✗	1	15	50	✓
m6idn.32xlarge	200 Gigabit	✓	✓	✗	2	16	50	✓
m6idn.metal	200 Gigabit	✓	✓	✗	2	16	50	✓
M6in								

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m6in.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
m6in.xlarge [1]	6.25 / 30.0	✗	✓	✗	1	4	15	✓
m6in.2xlarge [1]	12.5 / 40.0	✗	✓	✗	1	4	15	✓
m6in.4xlarge [1]	25.0 / 50.0	✗	✓	✗	1	8	30	✓
m6in.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
m6in.12xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
m6in.16xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
m6in.24xlarge	150 Gigabit	✗	✓	✗	1	15	50	✓
m6in.32xlarge	200 Gigabit	✓	✓	✗	2	16	50	✓
m6in.metal	200 Gigabit	✓	✓	✗	2	16	50	✓
			M7a					
m7a.medium [1]	0.39 / 12.5	✗	✓	✗	1	2	4	✓
m7a.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
m7a.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
m7a.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
m7a.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
m7a.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
m7a.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m7a.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
m7a.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
m7a.32xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
m7a.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
m7a.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
M7g								
m7g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
m7g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
m7g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
m7g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
m7g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
m7g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
m7g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
m7g.16xlarge	30 Gigabit	✓	✓	✓	1	15	50	✓
m7g.metal	30 Gigabit	✓	✓	✓	1	15	50	✓
M7gd								
m7gd.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m7gd.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
m7gd.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
m7gd.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
m7gd.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
m7gd.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
m7gd.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
m7gd.16xlarge	30 Gigabit	✓	✓	✓	1	15	50	✓
m7gd.metal	30 Gigabit	✓	✓	✓	1	15	50	✓
M7i								
m7i.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
m7i.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
m7i.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
m7i.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
m7i.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
m7i.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
m7i.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m7i.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
m7i.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
m7i.metal-24xl	37.5 Gigabit	✗	✓	✓	1	15	50	✓
m7i.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
M7i-flex								
m7i-flex.large [1]	0.39 / 12.5	✗	✓	✗	1	3	10	✓
m7i-flex.xlarge [1]	0.781 / 12.5	✗	✓	✗	1	4	15	✓
m7i-flex.2xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
m7i-flex.4xlarge [1]	3.125 / 12.5	✗	✓	✗	1	8	30	✓
m7i-flex.8xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
M8g								
m8g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
m8g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
m8g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m8g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
m8g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
m8g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
m8g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
m8g.16xlarge	30 Gigabit	✗	✓	✓	1	15	50	✓
m8g.24xlarge	40 Gigabit	✓	✓	✓	1	15	50	✓
m8g.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
m8g.metal-24xl	40 Gigabit	✓	✓	✓	1	15	50	✓
m8g.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
Mac1								
mac1.metal	25 Gigabit	✗	✓	✗	1	8	30	✓
Mac2								
mac2.metal	10 Gigabit	✗	✓	✗	1	8	30	✓
Mac2-m1ultra								
mac2-m1ultra.metal	10 Gigabit	✗	✓	✗	1	8	30	✓
Mac2-m2								

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
mac2-m2.metal	10 Gigabit	✗	✓	✗	1	8	30	✓
Mac2-m2pro								
mac2-m2pro.metal	10 Gigabit	✗	✓	✗	1	8	30	✓
T2								
t2.nano	Low to Moderate	✗	✗	✗	1	2	2	✓
t2.micro	Low to Moderate	✗	✗	✗	1	2	2	✓
t2.small	Low to Moderate	✗	✗	✗	1	3	4	✓
t2.medium	Low to Moderate	✗	✗	✗	1	3	6	✓
t2.large	Low to Moderate	✗	✗	✗	1	3	12	✓
t2.xlarge	Moderate	✗	✗	✗	1	3	15	✓
t2.2xlarge	Moderate	✗	✗	✗	1	3	15	✓
T3								
t3.nano [1]	0.032 / 5.0	✗	✓	✗	1	2	2	✓
t3.micro [1]	0.064 / 5.0	✗	✓	✗	1	2	2	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
t3.small [1]	0.128 / 5.0	✗	✓	✗	1	3	4	✓
t3.medium [1]	0.256 / 5.0	✗	✓	✗	1	3	6	✓
t3.large [1]	0.512 / 5.0	✗	✓	✗	1	3	12	✓
t3.xlarge [1]	1.024 / 5.0	✗	✓	✗	1	4	15	✓
t3.2xlarge [1]	2.048 / 5.0	✗	✓	✗	1	4	15	✓
T3a								
t3a.nano [1]	0.032 / 5.0	✗	✓	✗	1	2	2	✓
t3a.micro [1]	0.064 / 5.0	✗	✓	✗	1	2	2	✓
t3a.small [1]	0.128 / 5.0	✗	✓	✗	1	2	4	✓
t3a.medium [1]	0.256 / 5.0	✗	✓	✗	1	3	6	✓
t3a.large [1]	0.512 / 5.0	✗	✓	✗	1	3	12	✓
t3a.xlarge [1]	1.024 / 5.0	✗	✓	✗	1	4	15	✓
t3a.2xlarge [1]	2.048 / 5.0	✗	✓	✗	1	4	15	✓
T4g								
t4g.nano [1]	0.032 / 5.0	✗	✓	✗	1	2	2	✓
t4g.micro [1]	0.064 / 5.0	✗	✓	✗	1	2	2	✓
t4g.small [1]	0.128 / 5.0	✗	✓	✗	1	3	4	✓
t4g.medium [1]	0.256 / 5.0	✗	✓	✗	1	3	6	✓
t4g.large [1]	0.512 / 5.0	✗	✓	✗	1	3	12	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
t4g.xlarge [1]	1.024 / 5.0	✗	✓	✗	1	4	15	✓
t4g.2xlarge [1]	2.048 / 5.0	✗	✓	✗	1	4	15	✓

Note

[1] These instances have a baseline bandwidth and can use a network I/O credit mechanism to burst beyond their baseline bandwidth on a best effort basis. Other instances types can sustain their maximum performance indefinitely. For more information, see instance network bandwidth.

For `32xlarge` and `metal` instance types that support 200 Gbps, at least 2 ENIs, each attached to a different network card, are required on the instance to achieve 200 Gbps throughput. Each ENI attached to a network card can achieve a max of 170 Gbps.

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5

gp3 volumes provisioned with 16,000 IOPS each (5 volumes x 16,000 IOPS = 80,000 IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
M5					
m5.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default
m5.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
m5.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
m5.4xlarge	4750.00	593.75	18750.00	✓	default
m5.8xlarge	6800.00	850.00	30000.00	✓	default
m5.12xlarge	9500.00	1187.50	40000.00	✓	default
m5.16xlarge	13600.00	1700.00	60000.00	✓	default
m5.24xlarge	19000.00	2375.00	80000.00	✓	default
m5.metal	19000.00	2375.00	80000.00	✓	default
M5a					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m5a.large [1]	650.00 / 2880.00	81.25 / 360.00	3600.00 / 16000.00	✓	default
m5a.xlarge [1]	1085.00 / 2880.00	135.62 / 360.00	6000.00 / 16000.00	✓	default
m5a.2xlarge [1]	1580.00 / 2880.00	197.50 / 360.00	8333.00 / 16000.00	✓	default
m5a.4xlarge	2880.00	360.00	16000.00	✓	default
m5a.8xlarge	4750.00	593.75	20000.00	✓	default
m5a.12xlarge	6780.00	847.50	30000.00	✓	default
m5a.16xlarge	9500.00	1187.50	40000.00	✓	default
m5a.24xlarge	13750.00	1718.75	60000.00	✓	default
M5ad					
m5ad.large [1]	650.00 / 2880.00	81.25 / 360.00	3600.00 / 16000.00	✓	default
m5ad.xlarge [1]	1085.00 / 2880.00	135.62 / 360.00	6000.00 / 16000.00	✓	default
m5ad.2xlarge [1]	1580.00 / 2880.00	197.50 / 360.00	8333.00 / 16000.00	✓	default
m5ad.4xlarge	2880.00	360.00	16000.00	✓	default
m5ad.8xlarge	4750.00	593.75	20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m5ad.12xlarge	6780.00	847.50	30000.00	✓	default
m5ad.16xlarge	9500.00	1187.50	40000.00	✓	default
m5ad.24xlarge	13750.00	1718.75	60000.00	✓	default
M5d					
m5d.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default
m5d.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
m5d.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
m5d.4xlarge	4750.00	593.75	18750.00	✓	default
m5d.8xlarge	6800.00	850.00	30000.00	✓	default
m5d.12xlarge	9500.00	1187.50	40000.00	✓	default
m5d.16xlarge	13600.00	1700.00	60000.00	✓	default
m5d.24xlarge	19000.00	2375.00	80000.00	✓	default
m5d.metal	19000.00	2375.00	80000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
M5dn					
m5dn.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default
m5dn.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
m5dn.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
m5dn.4xlarge	4750.00	593.75	18750.00	✓	default
m5dn.8xlarge	6800.00	850.00	30000.00	✓	default
m5dn.12xlarge	9500.00	1187.50	40000.00	✓	default
m5dn.16xlarge	13600.00	1700.00	60000.00	✓	default
m5dn.24xlarge	19000.00	2375.00	80000.00	✓	default
m5dn.metal	19000.00	2375.00	80000.00	✓	default
M5n					
m5n.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m5n.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
m5n.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
m5n.4xlarge	4750.00	593.75	18750.00	✓	default
m5n.8xlarge	6800.00	850.00	30000.00	✓	default
m5n.12xlarge	9500.00	1187.50	40000.00	✓	default
m5n.16xlarge	13600.00	1700.00	60000.00	✓	default
m5n.24xlarge	19000.00	2375.00	80000.00	✓	default
m5n.metal	19000.00	2375.00	80000.00	✓	default
M5zn					
m5zn.large [1]	800.00 / 3170.00	100.00 / 396.25	3333.00 / 13333.00	✓	default
m5zn.xlarge [1]	1564.00 / 3170.00	195.50 / 396.25	6667.00 / 13333.00	✓	default
m5zn.2xlarge	3170.00	396.25	13333.00	✓	default
m5zn.3xlarge	4750.00	593.75	20000.00	✓	default
m5zn.6xlarge	9500.00	1187.50	40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m5zn.12xlarge	19000.00	2375.00	80000.00	✓	default
m5zn.metal	19000.00	2375.00	80000.00	✓	default
M6a					
m6a.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
m6a.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m6a.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m6a.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m6a.8xlarge	10000.00	1250.00	40000.00	✓	default
m6a.12xlarge	15000.00	1875.00	60000.00	✓	default
m6a.16xlarge	20000.00	2500.00	80000.00	✓	default
m6a.24xlarge	30000.00	3750.00	120000.00	✓	default
m6a.32xlarge	40000.00	5000.00	160000.00	✓	default
m6a.48xlarge	40000.00	5000.00	240000.00	✓	default
m6a.metal	40000.00	5000.00	240000.00	✓	default
M6g					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m6g.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default
m6g.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default
m6g.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
m6g.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
m6g.4xlarge	4750.00	593.75	20000.00	✓	default
m6g.8xlarge	9500.00	1187.50	40000.00	✓	default
m6g.12xlarge	14250.00	1781.25	50000.00	✓	default
m6g.16xlarge	19000.00	2375.00	80000.00	✓	default
m6g.metal	19000.00	2375.00	80000.00	✓	default
M6gd					
m6gd.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default
m6gd.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default
m6gd.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m6gd.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
m6gd.4xlarge	4750.00	593.75	20000.00	✓	default
m6gd.8xlarge	9500.00	1187.50	40000.00	✓	default
m6gd.12xlarge	14250.00	1781.25	50000.00	✓	default
m6gd.16xlarge	19000.00	2375.00	80000.00	✓	default
m6gd.metal	19000.00	2375.00	80000.00	✓	default
M6i					
m6i.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
m6i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m6i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m6i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m6i.8xlarge	10000.00	1250.00	40000.00	✓	default
m6i.12xlarge	15000.00	1875.00	60000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m6i.16xlarge	20000.00	2500.00	80000.00	✓	default
m6i.24xlarge	30000.00	3750.00	120000.00	✓	default
m6i.32xlarge	40000.00	5000.00	160000.00	✓	default
m6i.metal	40000.00	5000.00	160000.00	✓	default
M6id					
m6id.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
m6id.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m6id.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m6id.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m6id.8xlarge	10000.00	1250.00	40000.00	✓	default
m6id.12xlarge	15000.00	1875.00	60000.00	✓	default
m6id.16xlarge	20000.00	2500.00	80000.00	✓	default
m6id.24xlarge	30000.00	3750.00	120000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m6id.32xlarge	40000.00	5000.00	160000.00	✓	default
m6id.metal	40000.00	5000.00	160000.00	✓	default
M6idn					
m6idn.large [1]	1562.00 / 25000.00	195.31 / 3125.00	6250.00 / 100000.00	✓	default
m6idn.xlarge [1]	3125.00 / 25000.00	390.62 / 3125.00	12500.00 / 100000.00	✓	default
m6idn.2xlarge [1]	6250.00 / 25000.00	781.25 / 3125.00	25000.00 / 100000.00	✓	default
m6idn.4xlarge [1]	12500.00 / 25000.00	1562.50 / 3125.00	50000.00 / 100000.00	✓	default
m6idn.8xlarge	25000.00	3125.00	100000.00	✓	default
m6idn.12xlarge	37500.00	4687.50	150000.00	✓	default
m6idn.16xlarge	50000.00	6250.00	200000.00	✓	default
m6idn.24xlarge	75000.00	9375.00	300000.00	✓	default
m6idn.32xlarge	100000.00	12500.00	400000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m6idn.metal	100000.00	12500.00	400000.00	✓	default
M6in					
m6in.large [1]	1562.00 / 25000.00	195.31 / 3125.00	6250.00 / 100000.00	✓	default
m6in.xlarge [1]	3125.00 / 25000.00	390.62 / 3125.00	12500.00 / 100000.00	✓	default
m6in.2xlarge [1]	6250.00 / 25000.00	781.25 / 3125.00	25000.00 / 100000.00	✓	default
m6in.4xlarge [1]	12500.00 / 25000.00	1562.50 / 3125.00	50000.00 / 100000.00	✓	default
m6in.8xlarge	25000.00	3125.00	100000.00	✓	default
m6in.12xlarge	37500.00	4687.50	150000.00	✓	default
m6in.16xlarge	50000.00	6250.00	200000.00	✓	default
m6in.24xlarge	75000.00	9375.00	300000.00	✓	default
m6in.32xlarge	100000.00	12500.00	400000.00	✓	default
m6in.metal	100000.00	12500.00	400000.00	✓	default
M7a					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m7a.medium [1]	325.00 / 10000.00	40.62 / 1250.00	2500.00 / 40000.00	✓	default
m7a.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
m7a.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m7a.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m7a.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m7a.8xlarge	10000.00	1250.00	40000.00	✓	default
m7a.12xlarge	15000.00	1875.00	60000.00	✓	default
m7a.16xlarge	20000.00	2500.00	80000.00	✓	default
m7a.24xlarge	30000.00	3750.00	120000.00	✓	default
m7a.32xlarge	40000.00	5000.00	160000.00	✓	default
m7a.48xlarge	40000.00	5000.00	240000.00	✓	default
m7a.metal -48xl	40000.00	5000.00	240000.00	✓	default
M7g					
m7g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m7g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
m7g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m7g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m7g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m7g.8xlarge	10000.00	1250.00	40000.00	✓	default
m7g.12xlarge	15000.00	1875.00	60000.00	✓	default
m7g.16xlarge	20000.00	2500.00	80000.00	✓	default
m7g.metal	20000.00	2500.00	80000.00	✓	default
M7gd					
m7gd.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
m7gd.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
m7gd.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m7gd.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m7gd.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m7gd.8xlarge	10000.00	1250.00	40000.00	✓	default
m7gd.12xlarge	15000.00	1875.00	60000.00	✓	default
m7gd.16xlarge	20000.00	2500.00	80000.00	✓	default
m7gd.metal	20000.00	2500.00	80000.00	✓	default
M7i					
m7i.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
m7i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m7i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m7i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m7i.8xlarge	10000.00	1250.00	40000.00	✓	default
m7i.12xlarge	15000.00	1875.00	60000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m7i.16xlarge	20000.00	2500.00	80000.00	✓	default
m7i.24xlarge	30000.00	3750.00	120000.00	✓	default
m7i.48xlarge	40000.00	5000.00	240000.00	✓	default
m7i.metal-24xl	30000.00	3750.00	120000.00	✓	default
m7i.metal-48xl	40000.00	5000.00	240000.00	✓	default
M7i-flex					
m7i-flex.large [1]	312.00 / 10000.00	39.06 / 1250.00	2500.00 / 40000.00	✓	default
m7i-flex.xlarge [1]	625.00 / 10000.00	78.12 / 1250.00	3600.00 / 40000.00	✓	default
m7i-flex.2xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m7i-flex.4xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m7i-flex.8xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
M8g					
m8g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m8g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
m8g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
m8g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
m8g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
m8g.8xlarge	10000.00	1250.00	40000.00	✓	default
m8g.12xlarge	15000.00	1875.00	60000.00	✓	default
m8g.16xlarge	20000.00	2500.00	80000.00	✓	default
m8g.24xlarge	30000.00	3750.00	120000.00	✓	default
m8g.48xlarge	40000.00	5000.00	240000.00	✓	default
m8g.metal-24xl	30000.00	3750.00	120000.00	✓	default
m8g.metal-48xl	40000.00	5000.00	240000.00	✓	default
Mac1					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
mac1.metal	14000.00	1750.00	80000.00	✓	default
Mac2					
mac2.metal	10000.00	1250.00	55000.00	✓	default
Mac2-m1ultra					
mac2-m1ultra.metal	10000.00	1250.00	55000.00	✓	default
Mac2-m2					
mac2-m2.metal	8000.00	1000.00	55000.00	✓	default
Mac2-m2pro					
mac2-m2pro.metal	8000.00	1000.00	55000.00	✓	default
T2					
T3					
t3.nano [1]	43.00 / 2085.00	5.38 / 260.62	250.00 / 11800.00	✓	default
t3.micro [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11800.00	✓	default
t3.small [1]	174.00 / 2085.00	21.75 / 260.62	1000.00 / 11800.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
t3.medium [1]	347.00 / 2085.00	43.38 / 260.62	2000.00 / 11800.00	✓	default
t3.large [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
t3.xlarge [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
t3.2xlarge [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
T3a					
t3a.nano [1]	45.00 / 2085.00	5.62 / 260.62	250.00 / 11800.00	✓	default
t3a.micro [1]	90.00 / 2085.00	11.25 / 260.62	500.00 / 11800.00	✓	default
t3a.small [1]	175.00 / 2085.00	21.88 / 260.62	1000.00 / 11800.00	✓	default
t3a.medium [1]	350.00 / 2085.00	43.75 / 260.62	2000.00 / 11800.00	✓	default
t3a.large [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
t3a.xlarge [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
t3a.2xlarge [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
T4g					
t4g.nano [1]	43.00 / 2085.00	5.38 / 260.62	250.00 / 11800.00	✓	default
t4g.micro [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11800.00	✓	default
t4g.small [1]	174.00 / 2085.00	21.75 / 260.62	1000.00 / 11800.00	✓	default
t4g.medium [1]	347.00 / 2085.00	43.38 / 260.62	2000.00 / 11800.00	✓	default
t4g.large [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
t4g.xlarge [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default
t4g.2xlarge [1]	695.00 / 2780.00	86.88 / 347.50	4000.00 / 15700.00	✓	default

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.

[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

The following table shows the instance store volume configuration for supported instance types, along with the aggregated IOPS performance with 4,096 byte block size at queue depth saturation.

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
M5ad					
m5ad.large	1 x 75 GB	NVMe SSD	30,000 / 15,000		✓
m5ad.xlarge	1 x 150 GB	NVMe SSD	59,000 / 29,000		✓
m5ad.2xlarge	1 x 300 GB	NVMe SSD	117,000 / 57,000		✓
m5ad.4xlarge	2 x 300 GB	NVMe SSD	234,000 / 114,000		✓
m5ad.8xlarge	2 x 600 GB	NVMe SSD	466,666 / 233,334		✓
m5ad.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
m5ad.16xlarge	4 x 600 GB	NVMe SSD	933,332 / 466,668		✓
m5ad.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
M5d					
m5d.large	1 x 75 GB	NVMe SSD	30,000 / 15,000		✓
m5d.xlarge	1 x 150 GB	NVMe SSD	59,000 / 29,000		✓
m5d.2xlarge	1 x 300 GB	NVMe SSD	117,000 / 57,000		✓
m5d.4xlarge	2 x 300 GB	NVMe SSD	234,000 / 114,000		✓
m5d.8xlarge	2 x 600 GB	NVMe SSD	466,666 / 233,334		✓
m5d.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
m5d.16xlarge	4 x 600 GB	NVMe SSD	933,332 / 466,668		✓
m5d.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓
m5d.metal	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓
M5dn					
m5dn.large	1 x 75 GB	NVMe SSD	29,000 / 14,500		✓
m5dn.xlarge	1 x 150 GB	NVMe SSD	58,000 / 29,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
m5dn.2xlarge	1 x 300 GB	NVMe SSD	116,000 / 58,000		✓
m5dn.4xlarge	2 x 300 GB	NVMe SSD	232,000 / 116,000		✓
m5dn.8xlarge	2 x 600 GB	NVMe SSD	464,000 / 232,000		✓
m5dn.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 350,000		✓
m5dn.16xlarge	4 x 600 GB	NVMe SSD	930,000 / 465,000		✓
m5dn.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 700,000		✓
m5dn.metal	4 x 900 GB	NVMe SSD	1,400,000 / 700,000		✓
M6gd					
m6gd.medium	1 x 59 GB	NVMe SSD	13,438 / 5,625		✓
m6gd.large	1 x 118 GB	NVMe SSD	26,875 / 11,250		✓
m6gd.xlarge	1 x 237 GB	NVMe SSD	53,750 / 22,500		✓
m6gd.2xlarge	1 x 474 GB	NVMe SSD	107,500 / 45,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
m6gd.4xlarge	1 x 950 GB	NVMe SSD	215,000 / 90,000		✓
m6gd.8xlarge	1 x 1900 GB	NVMe SSD	430,000 / 180,000		✓
m6gd.12xlarge	2 x 1425 GB	NVMe SSD	645,000 / 270,000		✓
m6gd.16xlarge	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
m6gd.metal	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
M6id					
m6id.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓
m6id.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
m6id.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
m6id.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓
m6id.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
m6id.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
m6id.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
m6id.24xlarge	4 x 1425 GB	NVMe SSD	1,609,996 / 805,000		✓
m6id.32xlarge	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
m6id.metal	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
M6idn					
m6idn.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓
m6idn.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
m6idn.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
m6idn.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓
m6idn.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
m6idn.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
m6idn.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
m6idn.24xlarge	4 x 1425 GB	NVMe SSD	1,609,996 / 805,000		✓
m6idn.32xlarge	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
m6idn.metal	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
M7gd					
m7gd.medium	1 x 59 GB	NVMe SSD	16,771 / 8,385		✓
m7gd.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓
m7gd.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
m7gd.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
m7gd.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓
m7gd.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
m7gd.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
m7gd.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
m7gd.metal	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			M5			
m5.large	✓	Instance store not supported	✗	✗	✓	✗
m5.xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5.2xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5.4xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m5.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5.24xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5.metal	✓	Instance store not supported	✗	✗	✗	✗
M5a						
m5a.large	✓	Instance store not supported	✗	✗	✓	✗
m5a.xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5a.2xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m5a.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5a.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5a.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5a.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
m5a.24xlarge	✓	Instance store not supported	✗	✗	✓	✓
M5ad						
m5ad.large	✓	✓	✗	✗	✓	✗
m5ad.xlarge	✓	✓	✗	✗	✓	✓
m5ad.2xlarge	✓	✓	✗	✗	✓	✓
m5ad.4xlarge	✓	✓	✗	✗	✓	✓
m5ad.8xlarge	✓	✓	✗	✗	✓	✓
m5ad.12xlarge	✓	✓	✗	✗	✓	✓
m5ad.16xlarge	✓	✓	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m5ad.24xlarge	✓	✓	✗	✗	✓	✓
M5d						
m5d.large	✓	✓	✗	✗	✓	✗
m5d.xlarge	✓	✓	✗	✗	✓	✓
m5d.2xlarge	✓	✓	✗	✗	✓	✓
m5d.4xlarge	✓	✓	✗	✗	✓	✓
m5d.8xlarge	✓	✓	✗	✗	✓	✓
m5d.12xlarge	✓	✓	✗	✗	✓	✓
m5d.16xlarge	✓	✓	✗	✗	✓	✓
m5d.24xlarge	✓	✓	✗	✗	✓	✓
m5d.metal	✓	✓	✗	✗	✗	✗
M5dn						
m5dn.large	✓	✓	✓	✗	✓	✗
m5dn.xlarge	✓	✓	✓	✗	✓	✓
m5dn.2xlarge	✓	✓	✓	✗	✓	✓
m5dn.4xlarge	✓	✓	✓	✗	✓	✓
m5dn.8xlarge	✓	✓	✓	✗	✓	✓
m5dn.12xlarge	✓	✓	✓	✗	✓	✓
m5dn.16xlarge	✓	✓	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m5dn.24xlarge	✓	✓	✓	✗	✓	✓
m5dn.metal	✓	✓	✓	✗	✗	✗
M5n						
m5n.large	✓	Instance store not supported	✓	✗	✓	✗
m5n.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5n.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5n.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5n.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5n.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5n.16xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m5n.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5n.metal	✓	Instance store not supported	✓	✗	✗	✗
M5zn						
m5zn.large	✓	Instance store not supported	✓	✗	✓	✗
m5zn.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5zn.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5zn.3xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5zn.6xlarge	✓	Instance store not supported	✓	✗	✓	✓
m5zn.12xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m5zn.metal	✓	Instance store not supported	✓	✗	✗	✗
M6a						
m6a.large	✓	Instance store not supported	✓	✓	✓	✗
m6a.xlarge	✓	Instance store not supported	✓	✓	✓	✓
m6a.2xlarge	✓	Instance store not supported	✓	✓	✓	✓
m6a.4xlarge	✓	Instance store not supported	✓	✓	✓	✓
m6a.8xlarge	✓	Instance store not supported	✓	✓	✓	✓
m6a.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6a.16xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m6a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6a.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6a.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6a.metal	✓	Instance store not supported	✓	✗	✗	✗
M6g						
m6g.medium	✓	Instance store not supported	✗	✗	✓	✗
m6g.large	✓	Instance store not supported	✗	✗	✓	✓
m6g.xlarge	✓	Instance store not supported	✗	✗	✓	✓
m6g.2xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m6g.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
m6g.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
m6g.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
m6g.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
m6g.metal	✓	Instance store not supported	✗	✗	✗	✗
M6gd						
m6gd.medium	✓	✓	✗	✗	✓	✗
m6gd.large	✓	✓	✗	✗	✓	✓
m6gd.xlarge	✓	✓	✗	✗	✓	✓
m6gd.2xlarge	✓	✓	✗	✗	✓	✓
m6gd.4xlarge	✓	✓	✗	✗	✓	✓
m6gd.8xlarge	✓	✓	✗	✗	✓	✓
m6gd.12xlarge	✓	✓	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m6gd.16xlarge	✓	✓	✗	✗	✓	✓
m6gd.metal	✓	✓	✗	✗	✗	✗
			M6i			
m6i.large	✓	Instance store not supported	✓	✗	✓	✗
m6i.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.16xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m6i.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6i.metal	✓	Instance store not supported	✓	✗	✗	✗
M6id						
m6id.large	✓	✓	✓	✗	✓	✗
m6id.xlarge	✓	✓	✓	✗	✓	✓
m6id.2xlarge	✓	✓	✓	✗	✓	✓
m6id.4xlarge	✓	✓	✓	✗	✓	✓
m6id.8xlarge	✓	✓	✓	✗	✓	✓
m6id.12xlarge	✓	✓	✓	✗	✓	✓
m6id.16xlarge	✓	✓	✓	✗	✓	✓
m6id.24xlarge	✓	✓	✓	✗	✓	✓
m6id.32xlarge	✓	✓	✓	✗	✓	✓
m6id.metal	✓	✓	✓	✗	✗	✗
M6idn						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m6idn.large	✓	✓	✓	✗	✓	✗
m6idn.xlarge	✓	✓	✓	✗	✓	✓
m6idn.2xlarge	✓	✓	✓	✗	✓	✓
m6idn.4xlarge	✓	✓	✓	✗	✓	✓
m6idn.8xlarge	✓	✓	✓	✗	✓	✓
m6idn.12xlarge	✓	✓	✓	✗	✓	✓
m6idn.16xlarge	✓	✓	✓	✗	✓	✓
m6idn.24xlarge	✓	✓	✓	✗	✓	✓
m6idn.32xlarge	✓	✓	✓	✗	✓	✓
m6idn.metal	✓	✓	✓	✗	✗	✗
M6in						
m6in.large	✓	Instance store not supported	✓	✗	✓	✗
m6in.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.2xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m6in.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
m6in.metal	✓	Instance store not supported	✓	✗	✗	✗
M7a						
m7a.medium	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m7a.large	✓	Instance store not supported	✓	✗	✓	✗
m7a.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m7a.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7a.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
M7g						
m7g.medium	✓	Instance store not supported	✓	✗	✓	✗
m7g.large	✓	Instance store not supported	✓	✗	✓	✗
m7g.xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7g.2xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7g.4xlarge	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m7g.8xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7g.12xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7g.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7g.metal	✓	Instance store not supported	✓	✗	✗	✗
M7gd						
m7gd.medium	✓	✓	✓	✗	✓	✗
m7gd.large	✓	✓	✓	✗	✓	✗
m7gd.xlarge	✓	✓	✓	✗	✓	✗
m7gd.2xlarge	✓	✓	✓	✗	✓	✗
m7gd.4xlarge	✓	✓	✓	✗	✓	✗
m7gd.8xlarge	✓	✓	✓	✗	✓	✗
m7gd.12xlarge	✓	✓	✓	✗	✓	✗
m7gd.16xlarge	✓	✓	✓	✗	✓	✗
m7gd.metal	✓	✓	✓	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			M7i			
m7i.large	✓	Instance store not supported	✓	✗	✓	✗
m7i.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7i.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7i.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7i.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7i.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m7i.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7i.24xlarge	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m7i.48xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7i.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗
m7i.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
M7i-flex						
m7i-flex.large	✓	Instance store not supported	✓	✗	✓	✗
m7i-flex.xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7i-flex.2xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7i-flex.4xlarge	✓	Instance store not supported	✓	✗	✓	✗
m7i-flex.8xlarge	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
M8g						
m8g.medium	✓	Instance store not supported	✓	✗	✓	✗
m8g.large	✓	Instance store not supported	✓	✗	✓	✓
m8g.xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.16xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m8g.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
m8g.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗
m8g.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
Mac1						
mac1.metal	✓	Instance store not supported	✗	✗	✗	✗
Mac2						
mac2.metal	✓	Instance store not supported	✗	✗	✗	✗
Mac2-m1ultra						
mac2-m1ultra.metal	✓	Instance store not supported	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
Mac2-m2						
mac2-m2.metal	✓	Instance store not supported	✗	✗	✗	✗
Mac2-m2pro						
mac2-m2pro.metal	✓	Instance store not supported	✗	✗	✗	✗
T2						
t2.nano	✓	Instance store not supported	✗	✗	✗	✗
t2.micro	✓	Instance store not supported	✗	✗	✗	✗
t2.small	✓	Instance store not supported	✗	✗	✗	✗
t2.medium	✓	Instance store not supported	✗	✗	✗	✗
t2.large	✓	Instance store not supported	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
t2.xlarge	✓	Instance store not supported	✗	✗	✗	✗
t2.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
			T3			
t3.nano	✓	Instance store not supported	✗	✗	✓	✗
t3.micro	✓	Instance store not supported	✗	✗	✓	✗
t3.small	✓	Instance store not supported	✗	✗	✓	✗
t3.medium	✓	Instance store not supported	✗	✗	✓	✗
t3.large	✓	Instance store not supported	✗	✗	✓	✗
t3.xlarge	✓	Instance store not supported	✗	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
t3.2xlarge	✓	Instance store not supported	✗	✗	✓	✗
T3a						
t3a.nano	✓	Instance store not supported	✗	✗	✓	✗
t3a.micro	✓	Instance store not supported	✗	✗	✓	✗
t3a.small	✓	Instance store not supported	✗	✗	✓	✗
t3a.medium	✓	Instance store not supported	✗	✗	✓	✗
t3a.large	✓	Instance store not supported	✗	✗	✓	✗
t3a.xlarge	✓	Instance store not supported	✗	✗	✓	✗
t3a.2xlarge	✓	Instance store not supported	✗	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
T4g						
t4g.nano	✓	Instance store not supported	✗	✗	✓	✗
t4g.micro	✓	Instance store not supported	✗	✗	✓	✗
t4g.small	✓	Instance store not supported	✗	✗	✓	✗
t4g.medium	✓	Instance store not supported	✗	✗	✓	✗
t4g.large	✓	Instance store not supported	✗	✗	✓	✗
t4g.xlarge	✓	Instance store not supported	✗	✗	✓	✗
t4g.2xlarge	✓	Instance store not supported	✗	✗	✓	✗

Specifications for Amazon EC2 compute optimized instances

Compute optimized instances are designed for compute intensive applications that benefit from high performance processors. These instances are ideal for batch processing workloads, media transcoding, high performance web servers, high performance computing (HPC), scientific modeling, dedicated gaming servers, ad server engines, and machine learning inference.

For information on previous generation instance types of this category, such as C4 instances, see Specifications for Amazon EC2 previous generation instances.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications
- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
C5	c5.large | c5.xlarge | c5.2xlarge | c5.4xlarge | c5.9xlarge | c5.12xlarge | c5.18xlarge | c5.24xlarge | c5.metal
C5a	c5a.large | c5a.xlarge | c5a.2xlarge | c5a.4xlarge | c5a.8xlarge | c5a.12xlarge | c5a.16xlarge | c5a.24xlarge
C5ad	c5ad.large | c5ad.xlarge | c5ad.2xlarge | c5ad.4xlarge | c5ad.8xlarge | c5ad.12xlarge | c5ad.16xlarge | c5ad.24xlarge

Instance family	Available instance types
C5d	c5d.large |c5d.xlarge |c5d.2xlarge |c5d.4xlarge |c5d.9xlarge |c5d.12xlarge |c5d.18xlarge |c5d.24xlarge |c5d.metal
C5n	c5n.large |c5n.xlarge |c5n.2xlarge |c5n.4xlarge |c5n.9xlarge |c5n.18xlarge |c5n.metal
C6a	c6a.large |c6a.xlarge |c6a.2xlarge |c6a.4xlarge |c6a.8xlarge |c6a.12xlarge |c6a.16xlarge |c6a.24xlarge |c6a.32xlarge |c6a.48xlarge |c6a.metal
C6g	c6g.medium |c6g.large |c6g.xlarge |c6g.2xlarge |c6g.4xlarge |c6g.8xlarge |c6g.12xlarge |c6g.16xlarge |c6g.metal
C6gd	c6gd.medium |c6gd.large |c6gd.xlarge |c6gd.2xlarge |c6gd.4xlarge |c6gd.8xlarge |c6gd.12xlarge |c6gd.16xlarge |c6gd.metal
C6gn	c6gn.medium |c6gn.large |c6gn.xlarge |c6gn.2xlarge |c6gn.4xlarge |c6gn.8xlarge |c6gn.12xlarge |c6gn.16xlarge
C6i	c6i.large |c6i.xlarge |c6i.2xlarge |c6i.4xlarge |c6i.8xlarge |c6i.12xlarge |c6i.16xlarge |c6i.24xlarge |c6i.32xlarge |c6i.metal
C6id	c6id.large |c6id.xlarge |c6id.2xlarge |c6id.4xlarge |c6id.8xlarge |c6id.12xlarge |c6id.16xlarge |c6id.24xlarge |c6id.32xlarge |c6id.metal
C6in	c6in.large |c6in.xlarge |c6in.2xlarge |c6in.4xlarge |c6in.8xlarge |c6in.12xlarge |c6in.16xlarge |c6in.24xlarge |c6in.32xlarge |c6in.metal
C7a	c7a.medium |c7a.large |c7a.xlarge |c7a.2xlarge |c7a.4xlarge |c7a.8xlarge |c7a.12xlarge |c7a.16xlarge |c7a.24xlarge |c7a.32xlarge |c7a.48xlarge |c7a.metal-48xl

Instance family	Available instance types
C7g	c7g.medium | c7g.large | c7g.xlarge | c7g.2xlarge | c7g.4xlarge | c7g.8xlarge | c7g.12xlarge | c7g.16xlarge | c7g.metal
C7gd	c7gd.medium | c7gd.large | c7gd.xlarge | c7gd.2xlarge | c7gd.4xlarge | c7gd.8xlarge | c7gd.12xlarge | c7gd.16xlarge | c7gd.metal
C7gn	c7gn.medium | c7gn.large | c7gn.xlarge | c7gn.2xlarge | c7gn.4xlarge | c7gn.8xlarge | c7gn.12xlarge | c7gn.16xlarge | c7gn.metal
C7i	c7i.large | c7i.xlarge | c7i.2xlarge | c7i.4xlarge | c7i.8xlarge | c7i.12xlarge | c7i.16xlarge | c7i.24xlarge | c7i.48xlarge | c7i.metal-24xl | c7i.metal-48xl
C7i-flex	c7i-flex.large | c7i-flex.xlarge | c7i-flex.2xlarge | c7i-flex.4xlarge | c7i-flex.8xlarge
C8g	c8g.medium | c8g.large | c8g.xlarge | c8g.2xlarge | c8g.4xlarge | c8g.8xlarge | c8g.12xlarge | c8g.16xlarge | c8g.24xlarge | c8g.48xlarge | c8g.metal-24xl | c8g.metal-48xl

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
C5	Nitro v2	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
C5a	Nitro v2	AMD (x86_64)	✗	✗	✓	✗	Windows | Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
C5ad	Nitro v2	AMD (x86_64)	✗	✗	✓	✗	Windows | Linux
C5d	Nitro v2	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
C5n	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
C6a	Nitro v4	AMD (x86_64)	✓	✓	✓	✗	Windows | Linux
C6g	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
C6gd	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
C6gn	Nitro v4	AWS Graviton (arm64)	✗	✓	✓	✓	Linux
C6i	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
C6id	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
C6in	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
C7a	Nitro v4	AMD (x86_64)	✓	✓	✓	✓	Windows | Linux
C7g	Nitro v4	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
C7gd	Nitro v4	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
C7gn	Nitro v5	AWS Graviton (arm64)	✓	✓	✓	✗	Linux
C7i	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
C7i-flex	Nitro v4	Intel (x86_64)	✗	✗	✓	✓	Windows | Linux
C8g	Nitro v5	AWS Graviton (arm64)	✓	✓	✓	✓	Linux

Performance specifications

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Threads per core	Accelerators	Accelerator memory
C5								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c5.large	✗	4.00	Intel Xeon Platinum 8124M	2	1	2	✗	✗
c5.xlarge	✗	8.00	Intel Xeon Platinum 8124M	4	2	2	✗	✗
c5.2xlarge	✗	16.00	Intel Xeon Platinum 8124M	8	4	2	✗	✗
c5.4xlarge	✗	32.00	Intel Xeon Platinum 8124M	16	8	2	✗	✗
c5.9xlarge	✗	72.00	Intel Xeon Platinum 8124M	36	18	2	✗	✗
c5.12xlarge	✗	96.00	2nd Gen Intel Xeon Platinum 8275CL	48	24	2	✗	✗
c5.18xlarge	✗	144.00	Intel Xeon Platinum 8124M	72	36	2	✗	✗
c5.24xlarge	✗	192.00	2nd Gen Intel Xeon Platinum 8275CL	96	48	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c5.metal	✗	192.00	2nd Gen Intel Xeon Platinum 8275CL	96	48	2	✗	✗
C5a								
c5a.large	✗	4.00	2nd Gen AMD EPYC 7R32	2	1	2	✗	✗
c5a.xlarge	✗	8.00	2nd Gen AMD EPYC 7R32	4	2	2	✗	✗
c5a.2xlarge	✗	16.00	2nd Gen AMD EPYC 7R32	8	4	2	✗	✗
c5a.4xlarge	✗	32.00	2nd Gen AMD EPYC 7R32	16	8	2	✗	✗
c5a.8xlarge	✗	64.00	2nd Gen AMD EPYC 7R32	32	16	2	✗	✗
c5a.12xlarge	✗	96.00	2nd Gen AMD EPYC 7R32	48	24	2	✗	✗
c5a.16xlarge	✗	128.00	2nd Gen AMD EPYC 7R32	64	32	2	✗	✗
c5a.24xlarge	✗	192.00	2nd Gen AMD EPYC 7R32	96	48	2	✗	✗
C5ad								
c5ad.large	✗	4.00	2nd Gen AMD EPYC 7R32	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c5ad.xlarge	✗	8.00	2nd Gen AMD EPYC 7R32	4	2	2	✗	✗
c5ad.2xlarge	✗	16.00	2nd Gen AMD EPYC 7R32	8	4	2	✗	✗
c5ad.4xlarge	✗	32.00	2nd Gen AMD EPYC 7R32	16	8	2	✗	✗
c5ad.8xlarge	✗	64.00	2nd Gen AMD EPYC 7R32	32	16	2	✗	✗
c5ad.12xlarge	✗	96.00	2nd Gen AMD EPYC 7R32	48	24	2	✗	✗
c5ad.16xlarge	✗	128.00	2nd Gen AMD EPYC 7R32	64	32	2	✗	✗
c5ad.24xlarge	✗	192.00	2nd Gen AMD EPYC 7R32	96	48	2	✗	✗
C5d								
c5d.large	✗	4.00	Intel Xeon Platinum 8124M	2	1	2	✗	✗
c5d.xlarge	✗	8.00	Intel Xeon Platinum 8124M	4	2	2	✗	✗
c5d.2xlarge	✗	16.00	Intel Xeon Platinum 8124M	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c5d.4xlarge	✗	32.00	Intel Xeon Platinum 8124M	16	8	2	✗	✗
c5d.9xlarge	✗	72.00	Intel Xeon Platinum 8124M	36	18	2	✗	✗
c5d.12xlarge	✗	96.00	2nd Gen Intel Xeon Platinum 8275CL	48	24	2	✗	✗
c5d.18xlarge	✗	144.00	Intel Xeon Platinum 8124M	72	36	2	✗	✗
c5d.24xlarge	✗	192.00	2nd Gen Intel Xeon Platinum 8275CL	96	48	2	✗	✗
c5d.metal	✗	192.00	2nd Gen Intel Xeon Platinum 8275CL	96	48	2	✗	✗
C5n								
c5n.large	✗	5.25	Intel Xeon Platinum 8124M	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c5n.xlarge	✗	10.50	Intel Xeon Platinum 8124M	4	2	2	✗	✗
c5n.2xlarge	✗	21.00	Intel Xeon Platinum 8124M	8	4	2	✗	✗
c5n.4xlarge	✗	42.00	Intel Xeon Platinum 8124M	16	8	2	✗	✗
c5n.9xlarge	✗	96.00	Intel Xeon Platinum 8124M	36	18	2	✗	✗
c5n.18xlarge	✗	192.00	Intel Xeon Platinum 8124M	72	36	2	✗	✗
c5n.metal	✗	192.00	Intel Xeon Platinum 8124M	72	36	2	✗	✗
C6a								
c6a.large	✗	4.00	AMD EPYC 7R13	2	1	2	✗	✗
c6a.xlarge	✗	8.00	AMD EPYC 7R13	4	2	2	✗	✗
c6a.2xlarge	✗	16.00	AMD EPYC 7R13	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6a.4xlarge	✗	32.00	AMD EPYC 7R13	16	8	2	✗	✗
c6a.8xlarge	✗	64.00	AMD EPYC 7R13	32	16	2	✗	✗
c6a.12xlarge	✗	96.00	AMD EPYC 7R13	48	24	2	✗	✗
c6a.16xlarge	✗	128.00	AMD EPYC 7R13	64	32	2	✗	✗
c6a.24xlarge	✗	192.00	AMD EPYC 7R13	96	48	2	✗	✗
c6a.32xlarge	✗	256.00	AMD EPYC 7R13	128	64	2	✗	✗
c6a.48xlarge	✗	384.00	AMD EPYC 7R13	192	96	2	✗	✗
c6a.metal	✗	384.00	AMD EPYC 7R13	192	96	2	✗	✗
C6g								
c6g.medium	✗	2.00	AWS Graviton2 Processor	1	1	1	✗	✗
c6g.large	✗	4.00	AWS Graviton2 Processor	2	2	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6g.xlarge	✗	8.00	AWS Graviton2 Processor	4	4	1	✗	✗
c6g.2xlarge	✗	16.00	AWS Graviton2 Processor	8	8	1	✗	✗
c6g.4xlarge	✗	32.00	AWS Graviton2 Processor	16	16	1	✗	✗
c6g.8xlarge	✗	64.00	AWS Graviton2 Processor	32	32	1	✗	✗
c6g.12xlarge	✗	96.00	AWS Graviton2 Processor	48	48	1	✗	✗
c6g.16xlarge	✗	128.00	AWS Graviton2 Processor	64	64	1	✗	✗
c6g.metal	✗	128.00	AWS Graviton2 Processor	64	64	1	✗	✗
C6gd								
c6gd.medium	✗	2.00	AWS Graviton2 Processor	1	1	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6gd.large	✗	4.00	AWS Graviton2 Processor	2	2	1	✗	✗
c6gd.xlarge	✗	8.00	AWS Graviton2 Processor	4	4	1	✗	✗
c6gd.2xlarge	✗	16.00	AWS Graviton2 Processor	8	8	1	✗	✗
c6gd.4xlarge	✗	32.00	AWS Graviton2 Processor	16	16	1	✗	✗
c6gd.8xlarge	✗	64.00	AWS Graviton2 Processor	32	32	1	✗	✗
c6gd.12xlarge	✗	96.00	AWS Graviton2 Processor	48	48	1	✗	✗
c6gd.16xlarge	✗	128.00	AWS Graviton2 Processor	64	64	1	✗	✗
c6gd.metal	✗	128.00	AWS Graviton2 Processor	64	64	1	✗	✗
C6gn								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6gn.medium	✗	2.00	AWS Graviton2 Processor	1	1	1	✗	✗
c6gn.large	✗	4.00	AWS Graviton2 Processor	2	2	1	✗	✗
c6gn.xlarge	✗	8.00	AWS Graviton2 Processor	4	4	1	✗	✗
c6gn.2xlarge	✗	16.00	AWS Graviton2 Processor	8	8	1	✗	✗
c6gn.4xlarge	✗	32.00	AWS Graviton2 Processor	16	16	1	✗	✗
c6gn.8xlarge	✗	64.00	AWS Graviton2 Processor	32	32	1	✗	✗
c6gn.12xlarge	✗	96.00	AWS Graviton2 Processor	48	48	1	✗	✗
c6gn.16xlarge	✗	128.00	AWS Graviton2 Processor	64	64	1	✗	✗
C6i								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6i.large	✗	4.00	Intel Xeon Ice Lake	2	1	2	✗	✗
c6i.xlarge	✗	8.00	Intel Xeon Ice Lake	4	2	2	✗	✗
c6i.2xlarge	✗	16.00	Intel Xeon Ice Lake	8	4	2	✗	✗
c6i.4xlarge	✗	32.00	Intel Xeon Ice Lake	16	8	2	✗	✗
c6i.8xlarge	✗	64.00	Intel Xeon Ice Lake	32	16	2	✗	✗
c6i.12xlarge	✗	96.00	Intel Xeon Ice Lake	48	24	2	✗	✗
c6i.16xlarge	✗	128.00	Intel Xeon Ice Lake	64	32	2	✗	✗
c6i.24xlarge	✗	192.00	Intel Xeon Ice Lake	96	48	2	✗	✗
c6i.32xlarge	✗	256.00	Intel Xeon Ice Lake	128	64	2	✗	✗
c6i.metal	✗	256.00	Intel Xeon Ice Lake	128	64	2	✗	✗
C6id								
c6id.large	✗	4.00	Intel Xeon Ice Lake	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6id.xlarge	✗	8.00	Intel Xeon Ice Lake	4	2	2	✗	✗
c6id.2xlarge	✗	16.00	Intel Xeon Ice Lake	8	4	2	✗	✗
c6id.4xlarge	✗	32.00	Intel Xeon Ice Lake	16	8	2	✗	✗
c6id.8xlarge	✗	64.00	Intel Xeon Ice Lake	32	16	2	✗	✗
c6id.12xlarge	✗	96.00	Intel Xeon Ice Lake	48	24	2	✗	✗
c6id.16xlarge	✗	128.00	Intel Xeon Ice Lake	64	32	2	✗	✗
c6id.24xlarge	✗	192.00	Intel Xeon Ice Lake	96	48	2	✗	✗
c6id.32xlarge	✗	256.00	Intel Xeon Ice Lake	128	64	2	✗	✗
c6id.metal	✗	256.00	Intel Xeon Ice Lake	128	64	2	✗	✗
C6in								
c6in.large	✗	4.00	Intel Xeon Ice Lake	2	1	2	✗	✗
c6in.xlarge	✗	8.00	Intel Xeon Ice Lake	4	2	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c6in.2xlarge	✗	16.00	Intel Xeon Ice Lake	8	4	2	✗	✗
c6in.4xlarge	✗	32.00	Intel Xeon Ice Lake	16	8	2	✗	✗
c6in.8xlarge	✗	64.00	Intel Xeon Ice Lake	32	16	2	✗	✗
c6in.12xlarge	✗	96.00	Intel Xeon Ice Lake	48	24	2	✗	✗
c6in.16xlarge	✗	128.00	Intel Xeon Ice Lake	64	32	2	✗	✗
c6in.24xlarge	✗	192.00	Intel Xeon Ice Lake	96	48	2	✗	✗
c6in.32xlarge	✗	256.00	Intel Xeon Ice Lake	128	64	2	✗	✗
c6in.metal	✗	256.00	Intel Xeon Ice Lake	128	64	2	✗	✗
C7a								
c7a.medium	✗	2.00	AMD EPYC 9R14	1	1	1	✗	✗
c7a.large	✗	4.00	AMD EPYC 9R14	2	2	1	✗	✗
c7a.xlarge	✗	8.00	AMD EPYC 9R14	4	4	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c7a.2xlarge	✗	16.00	AMD EPYC 9R14	8	8	1	✗	✗
c7a.4xlarge	✗	32.00	AMD EPYC 9R14	16	16	1	✗	✗
c7a.8xlarge	✗	64.00	AMD EPYC 9R14	32	32	1	✗	✗
c7a.12xlarge	✗	96.00	AMD EPYC 9R14	48	48	1	✗	✗
c7a.16xlarge	✗	128.00	AMD EPYC 9R14	64	64	1	✗	✗
c7a.24xlarge	✗	192.00	AMD EPYC 9R14	96	96	1	✗	✗
c7a.32xlarge	✗	256.00	AMD EPYC 9R14	128	128	1	✗	✗
c7a.48xlarge	✗	384.00	AMD EPYC 9R14	192	192	1	✗	✗
c7a.metal-48xl	✗	384.00	AMD EPYC 9R14	192	192	1	✗	✗
C7g								
c7g.medium	✗	2.00	AWS Graviton3 Processor	1	1	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c7g.large	✗	4.00	AWS Graviton3 Processor	2	2	1	✗	✗
c7g.xlarge	✗	8.00	AWS Graviton3 Processor	4	4	1	✗	✗
c7g.2xlarge	✗	16.00	AWS Graviton3 Processor	8	8	1	✗	✗
c7g.4xlarge	✗	32.00	AWS Graviton3 Processor	16	16	1	✗	✗
c7g.8xlarge	✗	64.00	AWS Graviton3 Processor	32	32	1	✗	✗
c7g.12xlarge	✗	96.00	AWS Graviton3 Processor	48	48	1	✗	✗
c7g.16xlarge	✗	128.00	AWS Graviton3 Processor	64	64	1	✗	✗
c7g.metal	✗	128.00	AWS Graviton3 Processor	64	64	1	✗	✗
C7gd								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c7gd.medium	✗	2.00	AWS Graviton3 Processor	1	1	1	✗	✗
c7gd.large	✗	4.00	AWS Graviton3 Processor	2	2	1	✗	✗
c7gd.xlarge	✗	8.00	AWS Graviton3 Processor	4	4	1	✗	✗
c7gd.2xlarge	✗	16.00	AWS Graviton3 Processor	8	8	1	✗	✗
c7gd.4xlarge	✗	32.00	AWS Graviton3 Processor	16	16	1	✗	✗
c7gd.8xlarge	✗	64.00	AWS Graviton3 Processor	32	32	1	✗	✗
c7gd.12xlarge	✗	96.00	AWS Graviton3 Processor	48	48	1	✗	✗
c7gd.16xlarge	✗	128.00	AWS Graviton3 Processor	64	64	1	✗	✗
c7gd.metal	✗	128.00	AWS Graviton3 Processor	64	64	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
C7gn								
c7gn.medium	✗	2.00	AWS Graviton3E Processor	1	1	1	✗	✗
c7gn.large	✗	4.00	AWS Graviton3E Processor	2	2	1	✗	✗
c7gn.xlarge	✗	8.00	AWS Graviton3E Processor	4	4	1	✗	✗
c7gn.2xlarge	✗	16.00	AWS Graviton3E Processor	8	8	1	✗	✗
c7gn.4xlarge	✗	32.00	AWS Graviton3E Processor	16	16	1	✗	✗
c7gn.8xlarge	✗	64.00	AWS Graviton3E Processor	32	32	1	✗	✗
c7gn.12xlarge	✗	96.00	AWS Graviton3E Processor	48	48	1	✗	✗
c7gn.16xlarge	✗	128.00	AWS Graviton3E Processor	64	64	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c7gn.metal	✗	128.00	AWS Graviton3E Processor	64	64	1	✗	✗
C7i								
c7i.large	✗	4.00	Intel Xeon Sapphire Rapids	2	1	2	✗	✗
c7i.xlarge	✗	8.00	Intel Xeon Sapphire Rapids	4	2	2	✗	✗
c7i.2xlarge	✗	16.00	Intel Xeon Sapphire Rapids	8	4	2	✗	✗
c7i.4xlarge	✗	32.00	Intel Xeon Sapphire Rapids	16	8	2	✗	✗
c7i.8xlarge	✗	64.00	Intel Xeon Sapphire Rapids	32	16	2	✗	✗
c7i.12xlarge	✗	96.00	Intel Xeon Sapphire Rapids	48	24	2	✗	✗
c7i.16xlarge	✗	128.00	Intel Xeon Sapphire Rapids	64	32	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c7i.24xlarge	✗	192.00	Intel Xeon Sapphire Rapids	96	48	2	✗	✗
c7i.48xlarge	✗	384.00	Intel Xeon Sapphire Rapids	192	96	2	✗	✗
c7i.metal-24xl	✗	192.00	Intel Xeon Sapphire Rapids	96	48	2	✗	✗
c7i.metal-48xl	✗	384.00	Intel Xeon Sapphire Rapids	192	96	2	✗	✗
C7i-flex								
c7i-flex.large	✗	4.00	Intel Xeon Sapphire Rapids	2	1	2	✗	✗
c7i-flex.xlarge	✗	8.00	Intel Xeon Sapphire Rapids	4	2	2	✗	✗
c7i-flex.2xlarge	✗	16.00	Intel Xeon Sapphire Rapids	8	4	2	✗	✗
c7i-flex.4xlarge	✗	32.00	Intel Xeon Sapphire Rapids	16	8	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c7i-flex.8xlarge	✗	64.00	Intel Xeon Sapphire Rapids	32	16	2	✗	✗
C8g								
c8g.medium	✗	2.00	AWS Graviton4 Processor	1	1	1	✗	✗
c8g.large	✗	4.00	AWS Graviton4 Processor	2	2	1	✗	✗
c8g.xlarge	✗	8.00	AWS Graviton4 Processor	4	4	1	✗	✗
c8g.2xlarge	✗	16.00	AWS Graviton4 Processor	8	8	1	✗	✗
c8g.4xlarge	✗	32.00	AWS Graviton4 Processor	16	16	1	✗	✗
c8g.8xlarge	✗	64.00	AWS Graviton4 Processor	32	32	1	✗	✗
c8g.12xlarge	✗	96.00	AWS Graviton4 Processor	48	48	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c8g.16xlarge	✗	128.00	AWS Graviton4 Processor	64	64	1	✗	✗
c8g.24xlarge	✗	192.00	AWS Graviton4 Processor	96	96	1	✗	✗
c8g.48xlarge	✗	384.00	AWS Graviton4 Processor	192	192	1	✗	✗
c8g.metal-24xl	✗	192.00	AWS Graviton4 Processor	96	96	1	✗	✗
c8g.metal-48xl	✗	384.00	AWS Graviton4 Processor	192	192	1	✗	✗

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
C5								
c5.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
c5.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c5.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
c5.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
c5.9xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c5.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c5.18xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
c5.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
c5.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
C5a								
c5a.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
c5a.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
c5a.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
c5a.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
c5a.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
c5a.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c5a.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
c5a.24xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
C5ad								
c5ad.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
c5ad.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c5ad.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
c5ad.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
c5ad.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
c5ad.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c5ad.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
c5ad.24xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
C5d								
c5d.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
c5d.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
c5d.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
c5d.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
c5d.9xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c5d.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c5d.18xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
c5d.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
c5d.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
C5n								
c5n.large [1]	3.0 / 25.0	✗	✓	✗	1	3	10	✓
c5n.xlarge [1]	5.0 / 25.0	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c5n.2xlarge [1]	10.0 / 25.0	✗	✓	✗	1	4	15	✓
c5n.4xlarge [1]	15.0 / 25.0	✗	✓	✗	1	8	30	✓
c5n.9xlarge	50 Gigabit	✓	✓	✗	1	8	30	✓
c5n.18xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
c5n.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
C6a								
c6a.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
c6a.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
c6a.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
c6a.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
c6a.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
c6a.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
c6a.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
c6a.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
c6a.32xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
c6a.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
c6a.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
C6g								
c6g.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c6g.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
c6g.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
c6g.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
c6g.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
c6g.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c6g.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
c6g.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
c6g.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
C6gd								
c6gd.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓
c6gd.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
c6gd.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
c6gd.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
c6gd.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
c6gd.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
c6gd.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
c6gd.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
c6gd.metal	25 Gigabit	✗	✓	✗	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
C6gn								
c6gn.medium [1]	1.6 / 16.0	✗	✓	✗	1	2	4	✓
c6gn.large [1]	3.0 / 25.0	✗	✓	✗	1	3	10	✓
c6gn.xlarge [1]	6.3 / 25.0	✗	✓	✗	1	4	15	✓
c6gn.2xlarge [1]	12.5 / 25.0	✗	✓	✗	1	4	15	✓
c6gn.4xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
c6gn.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
c6gn.12xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
c6gn.16xlarge	100 Gigabit	✓	✓	✓	1	15	50	✓
C6i								
c6i.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
c6i.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
c6i.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
c6i.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
c6i.8xlarge	12.5 Gigabit	✗	✓	✓	1	8	30	✓
c6i.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
c6i.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
c6i.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c6i.32xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
c6i.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
C6id								
c6id.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
c6id.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
c6id.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
c6id.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
c6id.8xlarge	12.5 Gigabit	✗	✓	✓	1	8	30	✓
c6id.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
c6id.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
c6id.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
c6id.32xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
c6id.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
C6in								
c6in.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
c6in.xlarge [1]	6.25 / 30.0	✗	✓	✗	1	4	15	✓
c6in.2xlarge [1]	12.5 / 40.0	✗	✓	✗	1	4	15	✓
c6in.4xlarge [1]	25.0 / 50.0	✗	✓	✗	1	8	30	✓
c6in.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c6in.12xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
c6in.16xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
c6in.24xlarge	150 Gigabit	✗	✓	✗	1	15	50	✓
c6in.32xlarge	200 Gigabit	✓	✓	✗	2	16	50	✓
c6in.metal	200 Gigabit	✓	✓	✗	2	16	50	✓
C7a								
c7a.medium [1]	0.39 / 12.5	✗	✓	✗	1	2	4	✓
c7a.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
c7a.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
c7a.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
c7a.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
c7a.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
c7a.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
c7a.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
c7a.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
c7a.32xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
c7a.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
c7a.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
C7g								
c7g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
c7g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
c7g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
c7g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
c7g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
c7g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
c7g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
c7g.16xlarge	30 Gigabit	✓	✓	✓	1	15	50	✓
c7g.metal	30 Gigabit	✓	✓	✓	1	15	50	✓
C7gd								
c7gd.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
c7gd.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
c7gd.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
c7gd.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
c7gd.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
c7gd.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
c7gd.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c7gd.16xlarge	30 Gigabit	✓	✓	✓	1	15	50	✓
c7gd.metal	30 Gigabit	✓	✓	✓	1	15	50	✓
C7gn								
c7gn.medium [1]	3.125 / 25.0	✗	✓	✗	1	2	4	✓
c7gn.large [1]	6.25 / 30.0	✗	✓	✗	1	3	10	✓
c7gn.xlarge [1]	12.5 / 40.0	✗	✓	✗	1	4	15	✓
c7gn.2xlarge [1]	25.0 / 50.0	✗	✓	✗	1	4	15	✓
c7gn.4xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
c7gn.8xlarge	100 Gigabit	✗	✓	✗	1	8	30	✓
c7gn.12xlarge	150 Gigabit	✗	✓	✗	1	8	30	✓
c7gn.16xlarge	200 Gigabit	✓	✓	✗	1	15	50	✓
c7gn.metal	200 Gigabit	✓	✓	✗	1	15	50	✓
C7i								
c7i.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
c7i.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
c7i.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
c7i.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
c7i.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c7i.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
c7i.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
c7i.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
c7i.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
c7i.metal-24xl	37.5 Gigabit	✗	✓	✓	1	15	50	✓
c7i.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
C7i-flex								
c7i-flex.large [1]	0.39 / 12.5	✗	✓	✗	1	3	10	✓
c7i-flex.xlarge [1]	0.781 / 12.5	✗	✓	✗	1	4	15	✓
c7i-flex.2xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
c7i-flex.4xlarge [1]	3.125 / 12.5	✗	✓	✗	1	8	30	✓
c7i-flex.8xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
C8g								
c8g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
c8g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
c8g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c8g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
c8g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
c8g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
c8g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
c8g.16xlarge	30 Gigabit	✗	✓	✓	1	15	50	✓
c8g.24xlarge	40 Gigabit	✓	✓	✓	1	15	50	✓
c8g.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
c8g.metal-24xl	40 Gigabit	✓	✓	✓	1	15	50	✓
c8g.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓

Note

[1] These instances have a baseline bandwidth and can use a network I/O credit mechanism to burst beyond their baseline bandwidth on a best effort basis. Other instances types can sustain their maximum performance indefinitely. For more information, see instance network bandwidth.

For `32xlarge` and `metal` instance types that support 200 Gbps, at least 2 ENIs, each attached to a different network card, are required on the instance to achieve 200 Gbps throughput. Each ENI attached to a network card can achieve a max of 170 Gbps.

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5 gp3 volumes provisioned with `16,000` IOPS each (5 volumes x `16,000` IOPS = `80,000` IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
C5					
c5.large [1]	650.00 / 4750.00	81.25 / 593.75	4000.00 / 20000.00	✓	default
c5.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c5.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	10000.00 / 20000.00	✓	default
c5.4xlarge	4750.00	593.75	20000.00	✓	default
c5.9xlarge	9500.00	1187.50	40000.00	✓	default
c5.12xlarge	9500.00	1187.50	40000.00	✓	default
c5.18xlarge	19000.00	2375.00	80000.00	✓	default
c5.24xlarge	19000.00	2375.00	80000.00	✓	default
c5.metal	19000.00	2375.00	80000.00	✓	default
C5a					
c5a.large [1]	200.00 / 3170.00	25.00 / 396.25	800.00 / 13300.00	✓	default
c5a.xlarge [1]	400.00 / 3170.00	50.00 / 396.25	1600.00 / 13300.00	✓	default
c5a.2xlarge [1]	800.00 / 3170.00	100.00 / 396.25	3200.00 / 13300.00	✓	default
c5a.4xlarge [1]	1580.00 / 3170.00	197.50 / 396.25	6600.00 / 13300.00	✓	default
c5a.8xlarge	3170.00	396.25	13300.00	✓	default
c5a.12xlarge	4750.00	593.75	20000.00	✓	default
c5a.16xlarge	6300.00	787.50	26700.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c5a.24xlarge	9500.00	1187.50	40000.00	✓	default
C5ad					
c5ad.large [1]	200.00 / 3170.00	25.00 / 396.25	800.00 / 13300.00	✓	default
c5ad.xlarge [1]	400.00 / 3170.00	50.00 / 396.25	1600.00 / 13300.00	✓	default
c5ad.2xlarge [1]	800.00 / 3170.00	100.00 / 396.25	3200.00 / 13300.00	✓	default
c5ad.4xlarge [1]	1580.00 / 3170.00	197.50 / 396.25	6600.00 / 13300.00	✓	default
c5ad.8xlarge	3170.00	396.25	13300.00	✓	default
c5ad.12xlarge	4750.00	593.75	20000.00	✓	default
c5ad.16xlarge	6300.00	787.50	26700.00	✓	default
c5ad.24xlarge	9500.00	1187.50	40000.00	✓	default
C5d					
c5d.large [1]	650.00 / 4750.00	81.25 / 593.75	4000.00 / 20000.00	✓	default
c5d.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c5d.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	10000.00 / 20000.00	✓	default
c5d.4xlarge	4750.00	593.75	20000.00	✓	default
c5d.9xlarge	9500.00	1187.50	40000.00	✓	default
c5d.12xlarge	9500.00	1187.50	40000.00	✓	default
c5d.18xlarge	19000.00	2375.00	80000.00	✓	default
c5d.24xlarge	19000.00	2375.00	80000.00	✓	default
c5d.metal	19000.00	2375.00	80000.00	✓	default
C5n					
c5n.large [1]	650.00 / 4750.00	81.25 / 593.75	4000.00 / 20000.00	✓	default
c5n.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 20000.00	✓	default
c5n.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	10000.00 / 20000.00	✓	default
c5n.4xlarge	4750.00	593.75	20000.00	✓	default
c5n.9xlarge	9500.00	1187.50	40000.00	✓	default
c5n.18xlarge	19000.00	2375.00	80000.00	✓	default
c5n.metal	19000.00	2375.00	80000.00	✓	default
C6a					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c6a.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
c6a.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c6a.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c6a.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c6a.8xlarge	10000.00	1250.00	40000.00	✓	default
c6a.12xlarge	15000.00	1875.00	60000.00	✓	default
c6a.16xlarge	20000.00	2500.00	80000.00	✓	default
c6a.24xlarge	30000.00	3750.00	120000.00	✓	default
c6a.32xlarge	40000.00	5000.00	160000.00	✓	default
c6a.48xlarge	40000.00	5000.00	240000.00	✓	default
c6a.metal	40000.00	5000.00	240000.00	✓	default
C6g					
c6g.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default
c6g.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c6g.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
c6g.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
c6g.4xlarge	4750.00	593.75	20000.00	✓	default
c6g.8xlarge	9500.00	1187.50	40000.00	✓	default
c6g.12xlarge	14250.00	1781.25	50000.00	✓	default
c6g.16xlarge	19000.00	2375.00	80000.00	✓	default
c6g.metal	19000.00	2375.00	80000.00	✓	default
C6gd					
c6gd.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default
c6gd.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default
c6gd.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
c6gd.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
c6gd.4xlarge	4750.00	593.75	20000.00	✓	default
c6gd.8xlarge	9500.00	1187.50	40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c6gd.12xlarge	14250.00	1781.25	50000.00	✓	default
c6gd.16xlarge	19000.00	2375.00	80000.00	✓	default
c6gd.metal	19000.00	2375.00	80000.00	✓	default
C6gn					
c6gn.medium [1]	760.00 / 9500.00	95.00 / 1187.50	2500.00 / 40000.00	✓	default
c6gn.large [1]	1235.00 / 9500.00	154.38 / 1187.50	5000.00 / 40000.00	✓	default
c6gn.xlarge [1]	2375.00 / 9500.00	296.88 / 1187.50	10000.00 / 40000.00	✓	default
c6gn.2xlarge [1]	4750.00 / 9500.00	593.75 / 1187.50	20000.00 / 40000.00	✓	default
c6gn.4xlarge	9500.00	1187.50	40000.00	✓	default
c6gn.8xlarge	19000.00	2375.00	80000.00	✓	default
c6gn.12xlarge	28500.00	3562.50	120000.00	✓	default
c6gn.16xlarge	38000.00	4750.00	160000.00	✓	default
C6i					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c6i.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
c6i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c6i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c6i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c6i.8xlarge	10000.00	1250.00	40000.00	✓	default
c6i.12xlarge	15000.00	1875.00	60000.00	✓	default
c6i.16xlarge	20000.00	2500.00	80000.00	✓	default
c6i.24xlarge	30000.00	3750.00	120000.00	✓	default
c6i.32xlarge	40000.00	5000.00	160000.00	✓	default
c6i.metal	40000.00	5000.00	160000.00	✓	default
C6id					
c6id.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
c6id.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c6id.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c6id.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c6id.8xlarge	10000.00	1250.00	40000.00	✓	default
c6id.12xlarge	15000.00	1875.00	60000.00	✓	default
c6id.16xlarge	20000.00	2500.00	80000.00	✓	default
c6id.24xlarge	30000.00	3750.00	120000.00	✓	default
c6id.32xlarge	40000.00	5000.00	160000.00	✓	default
c6id.metal	40000.00	5000.00	160000.00	✓	default
C6in					
c6in.large [1]	1562.00 / 25000.00	195.31 / 3125.00	6250.00 / 100000.00	✓	default
c6in.xlarge [1]	3125.00 / 25000.00	390.62 / 3125.00	12500.00 / 100000.00	✓	default
c6in.2xlarge [1]	6250.00 / 25000.00	781.25 / 3125.00	25000.00 / 100000.00	✓	default
c6in.4xlarge [1]	12500.00 / 25000.00	1562.50 / 3125.00	50000.00 / 100000.00	✓	default
c6in.8xlarge	25000.00	3125.00	100000.00	✓	default
c6in.12xlarge	37500.00	4687.50	150000.00	✓	default
c6in.16xlarge	50000.00	6250.00	200000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c6in.24xlarge	75000.00	9375.00	300000.00	✓	default
c6in.32xlarge	100000.00	12500.00	400000.00	✓	default
c6in.metal	100000.00	12500.00	400000.00	✓	default
C7a					
c7a.medium [1]	325.00 / 10000.00	40.62 / 1250.00	2500.00 / 40000.00	✓	default
c7a.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
c7a.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c7a.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c7a.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c7a.8xlarge	10000.00	1250.00	40000.00	✓	default
c7a.12xlarge	15000.00	1875.00	60000.00	✓	default
c7a.16xlarge	20000.00	2500.00	80000.00	✓	default
c7a.24xlarge	30000.00	3750.00	120000.00	✓	default
c7a.32xlarge	40000.00	5000.00	160000.00	✓	default
c7a.48xlarge	40000.00	5000.00	240000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c7a.metal-48xl	40000.00	5000.00	240000.00	✓	default
C7g					
c7g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
c7g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
c7g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c7g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c7g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c7g.8xlarge	10000.00	1250.00	40000.00	✓	default
c7g.12xlarge	15000.00	1875.00	60000.00	✓	default
c7g.16xlarge	20000.00	2500.00	80000.00	✓	default
c7g.metal	20000.00	2500.00	80000.00	✓	default
C7gd					
c7gd.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c7gd.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
c7gd.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c7gd.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c7gd.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c7gd.8xlarge	10000.00	1250.00	40000.00	✓	default
c7gd.12xlarge	15000.00	1875.00	60000.00	✓	default
c7gd.16xlarge	20000.00	2500.00	80000.00	✓	default
c7gd.metal	20000.00	2500.00	80000.00	✓	default
C7gn					
c7gn.medium [1]	521.00 / 10000.00	65.12 / 1250.00	2083.00 / 40000.00	✓	default
c7gn.large [1]	1042.00 / 10000.00	130.25 / 1250.00	4167.00 / 40000.00	✓	default
c7gn.xlarge [1]	2083.00 / 10000.00	260.38 / 1250.00	8333.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c7gn.2xlarge [1]	4167.00 / 10000.00	520.88 / 1250.00	16667.00 / 40000.00	✓	default
c7gn.4xlarge [1]	8333.00 / 10000.00	1041.62 / 1250.00	33333.00 / 40000.00	✓	default
c7gn.8xlarge [1]	16667.00 / 20000.00	2083.38 / 2500.00	66667.00 / 80000.00	✓	default
c7gn.12xlarge [1]	25000.00 / 30000.00	3125.00 / 3750.00	100000.00 / 120000.00	✓	default
c7gn.16xlarge [1]	33333.00 / 40000.00	4166.62 / 5000.00	133333.00 / 160000.00	✓	default
c7gn.metal [1]	33333.00 / 40000.00	4166.62 / 5000.00	133333.00 / 160000.00	✓	default
C7i					
c7i.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
c7i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c7i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c7i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c7i.8xlarge	10000.00	1250.00	40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c7i.12xlarge	15000.00	1875.00	60000.00	✓	default
c7i.16xlarge	20000.00	2500.00	80000.00	✓	default
c7i.24xlarge	30000.00	3750.00	120000.00	✓	default
c7i.48xlarge	40000.00	5000.00	240000.00	✓	default
c7i.metal -24xl	30000.00	3750.00	120000.00	✓	default
c7i.metal -48xl	40000.00	5000.00	240000.00	✓	default
C7i-flex					
c7i-flex.large [1]	312.00 / 10000.00	39.06 / 1250.00	2500.00 / 40000.00	✓	default
c7i-flex. xlarge [1]	625.00 / 10000.00	78.12 / 1250.00	3600.00 / 40000.00	✓	default
c7i-flex. 2xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c7i-flex. 4xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c7i-flex. 8xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
C8g					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
c8g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
c8g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
c8g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
c8g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
c8g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
c8g.8xlarge	10000.00	1250.00	40000.00	✓	default
c8g.12xlarge	15000.00	1875.00	60000.00	✓	default
c8g.16xlarge	20000.00	2500.00	80000.00	✓	default
c8g.24xlarge	30000.00	3750.00	120000.00	✓	default
c8g.48xlarge	40000.00	5000.00	240000.00	✓	default
c8g.metal -24xl	30000.00	3750.00	120000.00	✓	default
c8g.metal -48xl	40000.00	5000.00	240000.00	✓	default

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.
[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

The following table shows the instance store volume configuration for supported instance types, along with the aggregated IOPS performance with 4,096 byte block size at queue depth saturation.

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
C5ad					
c5ad.large	1 x 75 GB	NVMe SSD	16,283 / 7,105		✓
c5ad.xlarge	1 x 150 GB	NVMe SSD	32,566 / 14,211		✓
c5ad.2xlarge	1 x 300 GB	NVMe SSD	65,132 / 28,421		✓
c5ad.4xlarge	2 x 300 GB	NVMe SSD	130,262 / 56,842		✓
c5ad.8xlarge	2 x 600 GB	NVMe SSD	260,526 / 113,684		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
c5ad.12xlarge	2 x 900 GB	NVMe SSD	412,500 / 180,000		✓
c5ad.16xlarge	2 x 1200 GB	NVMe SSD	521,052 / 227,368		✓
c5ad.24xlarge	2 x 1900 GB	NVMe SSD	825,000 / 360,000		✓
C5d					
c5d.large	1 x 50 GB	NVMe SSD	20,000 / 9,000		✓
c5d.xlarge	1 x 100 GB	NVMe SSD	40,000 / 18,000		✓
c5d.2xlarge	1 x 200 GB	NVMe SSD	80,000 / 37,000		✓
c5d.4xlarge	1 x 400 GB	NVMe SSD	175,000 / 75,000		✓
c5d.9xlarge	1 x 900 GB	NVMe SSD	350,000 / 170,000		✓
c5d.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
c5d.18xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
c5d.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
c5d.metal	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓
C6gd					
c6gd.medium	1 x 59 GB	NVMe SSD	13,438 / 5,625		✓
c6gd.large	1 x 118 GB	NVMe SSD	26,875 / 11,250		✓
c6gd.xlarge	1 x 237 GB	NVMe SSD	53,750 / 22,500		✓
c6gd.2xlarge	1 x 474 GB	NVMe SSD	107,500 / 45,000		✓
c6gd.4xlarge	1 x 950 GB	NVMe SSD	215,000 / 90,000		✓
c6gd.8xlarge	1 x 1900 GB	NVMe SSD	430,000 / 180,000		✓
c6gd.12xlarge	2 x 1425 GB	NVMe SSD	645,000 / 270,000		✓
c6gd.16xlarge	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
c6gd.metal	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
C6id					
c6id.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
c6id.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
c6id.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
c6id.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓
c6id.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
c6id.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
c6id.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
c6id.24xlarge	4 x 1425 GB	NVMe SSD	1,609,996 / 805,000		✓
c6id.32xlarge	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
c6id.metal	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
C7gd					
c7gd.medium	1 x 59 GB	NVMe SSD	16,771 / 8,385		✓
c7gd.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
c7gd.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
c7gd.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
c7gd.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓
c7gd.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
c7gd.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
c7gd.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
c7gd.metal	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
C5						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c5.large	✓	Instance store not supported	✗	✗	✓	✗
c5.xlarge	✓	Instance store not supported	✗	✗	✓	✓
c5.2xlarge	✓	Instance store not supported	✗	✗	✓	✓
c5.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
c5.9xlarge	✓	Instance store not supported	✗	✗	✓	✓
c5.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
c5.18xlarge	✓	Instance store not supported	✗	✗	✓	✓
c5.24xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c5.metal	✓	Instance store not supported	✗	✗	✗	✗
C5a						
c5a.large	✓	Instance store not supported	✓	✗	✓	✗
c5a.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5a.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5a.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5a.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5a.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5a.16xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c5a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
C5ad						
c5ad.large	✓	✓	✓	✗	✓	✗
c5ad.xlarge	✓	✓	✓	✗	✓	✓
c5ad.2xlarge	✓	✓	✓	✗	✓	✓
c5ad.4xlarge	✓	✓	✓	✗	✓	✓
c5ad.8xlarge	✓	✓	✓	✗	✓	✓
c5ad.12xlarge	✓	✓	✓	✗	✓	✓
c5ad.16xlarge	✓	✓	✓	✗	✓	✓
c5ad.24xlarge	✓	✓	✓	✗	✓	✓
C5d						
c5d.large	✓	✓	✗	✗	✓	✗
c5d.xlarge	✓	✓	✗	✗	✓	✓
c5d.2xlarge	✓	✓	✗	✗	✓	✓
c5d.4xlarge	✓	✓	✗	✗	✓	✓
c5d.9xlarge	✓	✓	✗	✗	✓	✓
c5d.12xlarge	✓	✓	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c5d.18xlarge	✓	✓	✗	✗	✓	✓
c5d.24xlarge	✓	✓	✗	✗	✓	✓
c5d.metal	✓	✓	✗	✗	✗	✗
C5n						
c5n.large	✓	Instance store not supported	✓	✗	✓	✗
c5n.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5n.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5n.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5n.9xlarge	✓	Instance store not supported	✓	✗	✓	✓
c5n.18xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c5n.metal	✓	Instance store not supported	✓	✗	✗	✗
C6a						
c6a.large	✓	Instance store not supported	✓	✓	✓	✗
c6a.xlarge	✓	Instance store not supported	✓	✓	✓	✓
c6a.2xlarge	✓	Instance store not supported	✓	✓	✓	✓
c6a.4xlarge	✓	Instance store not supported	✓	✓	✓	✓
c6a.8xlarge	✓	Instance store not supported	✓	✓	✓	✓
c6a.12xlarge	✓	Instance store not supported	✓	✓	✓	✓
c6a.16xlarge	✓	Instance store not supported	✓	✓	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6a.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6a.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6a.metal	✓	Instance store not supported	✓	✗	✗	✗
C6g						
c6g.medium	✓	Instance store not supported	✗	✗	✓	✗
c6g.large	✓	Instance store not supported	✗	✗	✓	✓
c6g.xlarge	✓	Instance store not supported	✗	✗	✓	✓
c6g.2xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6g.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
c6g.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
c6g.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
c6g.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
c6g.metal	✓	Instance store not supported	✗	✗	✗	✗
C6gd						
c6gd.medium	✓	✓	✗	✗	✓	✗
c6gd.large	✓	✓	✗	✗	✓	✓
c6gd.xlarge	✓	✓	✗	✗	✓	✓
c6gd.2xlarge	✓	✓	✗	✗	✓	✓
c6gd.4xlarge	✓	✓	✗	✗	✓	✓
c6gd.8xlarge	✓	✓	✗	✗	✓	✓
c6gd.12xlarge	✓	✓	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6gd.16xlarge	✓	✓	✗	✗	✓	✓
c6gd.metal	✓	✓	✗	✗	✗	✗
C6gn						
c6gn.medium	✓	Instance store not supported	✓	✗	✓	✗
c6gn.large	✓	Instance store not supported	✓	✗	✓	✓
c6gn.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6gn.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6gn.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6gn.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6gn.12xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6gn.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
C6i						
c6i.large	✓	Instance store not supported	✓	✗	✓	✗
c6i.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.16xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6i.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6i.metal	✓	Instance store not supported	✓	✗	✗	✗
C6id						
c6id.large	✓	✓	✓	✗	✓	✗
c6id.xlarge	✓	✓	✓	✗	✓	✓
c6id.2xlarge	✓	✓	✓	✗	✓	✓
c6id.4xlarge	✓	✓	✓	✗	✓	✓
c6id.8xlarge	✓	✓	✓	✗	✓	✓
c6id.12xlarge	✓	✓	✓	✗	✓	✓
c6id.16xlarge	✓	✓	✓	✗	✓	✓
c6id.24xlarge	✓	✓	✓	✗	✓	✓
c6id.32xlarge	✓	✓	✓	✗	✓	✓
c6id.metal	✓	✓	✓	✗	✗	✗
C6in						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6in.large	✓	Instance store not supported	✓	✗	✓	✗
c6in.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.24xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c6in.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
c6in.metal	✓	Instance store not supported	✓	✗	✗	✗
C7a						
c7a.medium	✓	Instance store not supported	✓	✗	✓	✗
c7a.large	✓	Instance store not supported	✓	✗	✓	✗
c7a.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.8xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c7a.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7a.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
C7g						
c7g.medium	✓	Instance store not supported	✓	✗	✓	✗
c7g.large	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c7g.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7g.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7g.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7g.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7g.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7g.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7g.metal	✓	Instance store not supported	✓	✗	✗	✗
C7gd						
c7gd.medium	✓	✓	✓	✗	✓	✗
c7gd.large	✓	✓	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c7gd.xlarge	✓	✓	✓	✗	✓	✗
c7gd.2xlarge	✓	✓	✓	✗	✓	✗
c7gd.4xlarge	✓	✓	✓	✗	✓	✗
c7gd.8xlarge	✓	✓	✓	✗	✓	✗
c7gd.12xlarge	✓	✓	✓	✗	✓	✗
c7gd.16xlarge	✓	✓	✓	✗	✓	✗
c7gd.metal	✓	✓	✓	✗	✗	✗
C7gn						
c7gn.medium	✓	Instance store not supported	✓	✗	✓	✗
c7gn.large	✓	Instance store not supported	✓	✗	✓	✗
c7gn.xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7gn.2xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7gn.4xlarge	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c7gn.8xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7gn.12xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7gn.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7gn.metal	✓	Instance store not supported	✓	✗	✗	✗
C7i						
c7i.large	✓	Instance store not supported	✓	✗	✓	✗
c7i.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7i.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7i.4xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c7i.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7i.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c7i.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7i.24xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7i.48xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7i.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗
c7i.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
C7i-flex						
c7i-flex.large	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c7i-flex.xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7i-flex.2xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7i-flex.4xlarge	✓	Instance store not supported	✓	✗	✓	✗
c7i-flex.8xlarge	✓	Instance store not supported	✓	✗	✓	✗
C8g						
c8g.medium	✓	Instance store not supported	✓	✗	✓	✗
c8g.large	✓	Instance store not supported	✓	✗	✓	✓
c8g.xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.2xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c8g.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
c8g.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗
c8g.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗

Specifications for Amazon EC2 memory optimized instances

Memory optimized instances are designed to deliver fast performance for workloads that process large data sets in memory.

For information on previous generation instance types of this category, such as R4 instances, see Specifications for Amazon EC2 previous generation instances.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications
- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
R5	r5.large | r5.xlarge | r5.2xlarge | r5.4xlarge | r5.8xlarge | r5.12xlarge | r5.16xlarge | r5.24xlarge | r5.metal
R5a	r5a.large | r5a.xlarge | r5a.2xlarge | r5a.4xlarge | r5a.8xlarge | r5a.12xlarge | r5a.16xlarge | r5a.24xlarge
R5ad	r5ad.large | r5ad.xlarge | r5ad.2xlarge | r5ad.4xlarge | r5ad.8xlarge | r5ad.12xlarge | r5ad.16xlarge | r5ad.24xlarge
R5b	r5b.large | r5b.xlarge | r5b.2xlarge | r5b.4xlarge | r5b.8xlarge | r5b.12xlarge | r5b.16xlarge | r5b.24xlarge | r5b.metal

Instance family	Available instance types
R5d	r5d.large |r5d.xlarge |r5d.2xlarge |r5d.4xlarge |r5d.8xlarge |r5d.12xlarge |r5d.16xlarge |r5d.24xlarge |r5d.metal
R5dn	r5dn.large |r5dn.xlarge |r5dn.2xlarge |r5dn.4xlarge |r5dn.8xlarge |r5dn.12xlarge |r5dn.16xlarge |r5dn.24xlarge |r5dn.metal
R5n	r5n.large |r5n.xlarge |r5n.2xlarge |r5n.4xlarge |r5n.8xlarge |r5n.12xlarge |r5n.16xlarge |r5n.24xlarge |r5n.metal
R6a	r6a.large |r6a.xlarge |r6a.2xlarge |r6a.4xlarge |r6a.8xlarge |r6a.12xlarge |r6a.16xlarge |r6a.24xlarge |r6a.32xlarge |r6a.48xlarge |r6a.metal
R6g	r6g.medium |r6g.large |r6g.xlarge |r6g.2xlarge |r6g.4xlarge |r6g.8xlarge |r6g.12xlarge |r6g.16xlarge |r6g.metal
R6gd	r6gd.medium |r6gd.large |r6gd.xlarge |r6gd.2xlarge |r6gd.4xlarge |r6gd.8xlarge |r6gd.12xlarge |r6gd.16xlarge |r6gd.metal
R6i	r6i.large |r6i.xlarge |r6i.2xlarge |r6i.4xlarge |r6i.8xlarge |r6i.12xlarge |r6i.16xlarge |r6i.24xlarge |r6i.32xlarge |r6i.metal
R6idn	r6idn.large |r6idn.xlarge |r6idn.2xlarge |r6idn.4xlarge |r6idn.8xlarge |r6idn.12xlarge |r6idn.16xlarge |r6idn.24xlarge |r6idn.32xlarge |r6idn.metal
R6in	r6in.large |r6in.xlarge |r6in.2xlarge |r6in.4xlarge |r6in.8xlarge |r6in.12xlarge |r6in.16xlarge |r6in.24xlarge |r6in.32xlarge |r6in.metal
R6id	r6id.large |r6id.xlarge |r6id.2xlarge |r6id.4xlarge |r6id.8xlarge |r6id.12xlarge |r6id.16xlarge |r6id.24xlarge |r6id.32xlarge |r6id.metal

Instance family	Available instance types
R7a	r7a.medium |r7a.large |r7a.xlarge |r7a.2xlarge |r7a.4xlarge |r7a.8xlarge |r7a.12xlarge |r7a.16xlarge |r7a.24xlarge |r7a.32xlarge |r7a.48xlarge |r7a.metal-48xl
R7g	r7g.medium |r7g.large |r7g.xlarge |r7g.2xlarge |r7g.4xlarge |r7g.8xlarge |r7g.12xlarge |r7g.16xlarge |r7g.metal
R7gd	r7gd.medium |r7gd.large |r7gd.xlarge |r7gd.2xlarge |r7gd.4xlarge |r7gd.8xlarge |r7gd.12xlarge |r7gd.16xlarge |r7gd.metal
R7i	r7i.large |r7i.xlarge |r7i.2xlarge |r7i.4xlarge |r7i.8xlarge |r7i.12xlarge |r7i.16xlarge |r7i.24xlarge |r7i.48xlarge |r7i.metal-24xl |r7i.metal-48xl
R7iz	r7iz.large |r7iz.xlarge |r7iz.2xlarge |r7iz.4xlarge |r7iz.8xlarge |r7iz.12xlarge |r7iz.16xlarge |r7iz.32xlarge |r7iz.metal-16xl |r7iz.metal-32xl
R8g	r8g.medium |r8g.large |r8g.xlarge |r8g.2xlarge |r8g.4xlarge |r8g.8xlarge |r8g.12xlarge |r8g.16xlarge |r8g.24xlarge |r8g.48xlarge |r8g.metal-24xl |r8g.metal-48xl
U-3tb1	u-3tb1.56xlarge
U-6tb1	u-6tb1.56xlarge |u-6tb1.112xlarge |u-6tb1.metal
U-9tb1	u-9tb1.112xlarge |u-9tb1.metal
U-12tb1	u-12tb1.112xlarge |u-12tb1.metal
U-18tb1	u-18tb1.112xlarge |u-18tb1.metal
U-24tb1	u-24tb1.112xlarge |u-24tb1.metal
U7i-12tb	u7i-12tb.224xlarge

Instance family	Available instance types
U7in-16tb	u7in-16tb.224xlarge
U7in-24tb	u7in-24tb.224xlarge
U7in-32tb	u7in-32tb.224xlarge
X1	x1.16xlarge |x1.32xlarge
X1e	x1e.xlarge |x1e.2xlarge |x1e.4xlarge |x1e.8xlarge |x1e.16xlarge |x1e.32xlarge
X2gd	x2gd.medium |x2gd.large |x2gd.xlarge |x2gd.2xlarge | x2gd.4xlarge |x2gd.8xlarge |x2gd.12xlarge |x2gd.16xlarge | x2gd.metal
X2idn	x2idn.16xlarge |x2idn.24xlarge |x2idn.32xlarge |x2idn.metal
X2iedn	x2iedn.xlarge |x2iedn.2xlarge |x2iedn.4xlarge |x2iedn.8xlarge |x2iedn.16xlarge |x2iedn.24xlarge |x2iedn.32xlarge | x2iedn.metal
X2iezn	x2iezn.2xlarge |x2iezn.4xlarge |x2iezn.6xlarge |x2iezn.8xlarge |x2iezn.12xlarge |x2iezn.metal
X8g	x8g.medium |x8g.large |x8g.xlarge |x8g.2xlarge |x8g.4xlarge |x8g.8xlarge |x8g.12xlarge |x8g.16xlarge |x8g.24xlarge | x8g.48xlarge |x8g.metal-24xl |x8g.metal-48xl
z1d	z1d.large |z1d.xlarge |z1d.2xlarge |z1d.3xlarge |z1d.6xlarge |z1d.12xlarge |z1d.metal

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
R5	Nitro v2	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
R5a	Nitro v2	AMD (x86_64)	✗	✓	✓	✓	Windows | Linux
R5ad	Nitro v2	AMD (x86_64)	✗	✗	✓	✓	Windows | Linux
R5b	Nitro v2	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R5d	Nitro v2	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
R5dn	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R5n	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R6a	Nitro v4	AMD (x86_64)	✓	✓	✓	✗	Windows | Linux
R6g	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
R6gd	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✓	Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
R6i	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R6idn	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R6in	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R6id	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
R7a	Nitro v4	AMD (x86_64)	✓	✓	✓	✓	Windows | Linux
R7g	Nitro v4	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
R7gd	Nitro v4	AWS Graviton (arm64)	✓	✓	✓	✓	Linux
R7i	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
R7iz	Nitro v4	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
R8g	Nitro v5	AWS Graviton (arm64)	✓	✓	✓	✓	Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
U-3tb1	Nitro v3	Intel (x86_64)	✗	✗	✗	✗	Windows | Linux
U-6tb1	Nitro v3	Intel (x86_64)	✓	✓	✗	✗	Windows | Linux
U-9tb1	Nitro v3	Intel (x86_64)	✓	✓	✗	✗	Windows | Linux
U-12tb1	Nitro v3	Intel (x86_64)	✓	✓	✗	✗	Windows | Linux
U-18tb1	Nitro v3	Intel (x86_64)	✓	✓	✗	✗	Windows | Linux
U-24tb1	Nitro v3	Intel (x86_64)	✓	✓	✗	✗	Windows | Linux
U7i-12tb	Nitro v4	Intel (x86_64)	✗	✓	✗	✗	Windows | Linux
U7in-16t	Nitro v4	Intel (x86_64)	✗	✓	✗	✗	Windows | Linux
U7in-24t	Nitro v4	Intel (x86_64)	✗	✓	✗	✗	Windows | Linux
U7in-32t	Nitro v4	Intel (x86_64)	✗	✓	✗	✗	Windows | Linux
X1	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
X1e	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
X2gd	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✗	Linux
X2idn	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
X2iedn	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
X2iezn	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
X8g	Nitro v5	AWS Graviton (arm64)	✓	✓	✓	✗	Linux
z1d	Nitro v2	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux

Performance specifications

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
R5								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r5.large	✗	16.00	Intel Xeon Platinum 8175	2	1	2	✗	✗
r5.xlarge	✗	32.00	Intel Xeon Platinum 8175	4	2	2	✗	✗
r5.2xlarge	✗	64.00	Intel Xeon Platinum 8175	8	4	2	✗	✗
r5.4xlarge	✗	128.00	Intel Xeon Platinum 8175	16	8	2	✗	✗
r5.8xlarge	✗	256.00	Intel Xeon Platinum 8175	32	16	2	✗	✗
r5.12xlarge	✗	384.00	Intel Xeon Platinum 8175	48	24	2	✗	✗
r5.16xlarge	✗	512.00	Intel Xeon Platinum 8175	64	32	2	✗	✗
r5.24xlarge	✗	768.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
r5.metal	✗	768.00	Intel Xeon Platinum 8175	96	48	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
R5a								
r5a.large	✗	16.00	AMD EPYC 7571	2	1	2	✗	✗
r5a.xlarge	✗	32.00	AMD EPYC 7571	4	2	2	✗	✗
r5a.2xlarge	✗	64.00	AMD EPYC 7571	8	4	2	✗	✗
r5a.4xlarge	✗	128.00	AMD EPYC 7571	16	8	2	✗	✗
r5a.8xlarge	✗	256.00	AMD EPYC 7571	32	16	2	✗	✗
r5a.12xlarge	✗	384.00	AMD EPYC 7571	48	24	2	✗	✗
r5a.16xlarge	✗	512.00	AMD EPYC 7571	64	32	2	✗	✗
r5a.24xlarge	✗	768.00	AMD EPYC 7571	96	48	2	✗	✗
R5ad								
r5ad.large	✗	16.00	AMD EPYC 7571	2	1	2	✗	✗
r5ad.xlarge	✗	32.00	AMD EPYC 7571	4	2	2	✗	✗
r5ad.2xlarge	✗	64.00	AMD EPYC 7571	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r5ad.4xlarge	✗	128.00	AMD EPYC 7571	16	8	2	✗	✗
r5ad.8xlarge	✗	256.00	AMD EPYC 7571	32	16	2	✗	✗
r5ad.12xlarge	✗	384.00	AMD EPYC 7571	48	24	2	✗	✗
r5ad.16xlarge	✗	512.00	AMD EPYC 7571	64	32	2	✗	✗
r5ad.24xlarge	✗	768.00	AMD EPYC 7571	96	48	2	✗	✗
R5b								
r5b.large	✗	16.00	Intel Xeon Platinum 8259	2	1	2	✗	✗
r5b.xlarge	✗	32.00	Intel Xeon Platinum 8259	4	2	2	✗	✗
r5b.2xlarge	✗	64.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
r5b.4xlarge	✗	128.00	Intel Xeon Platinum 8259	16	8	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r5b.8xlarge	✗	256.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
r5b.12xlarge	✗	384.00	Intel Xeon Platinum 8259	48	24	2	✗	✗
r5b.16xlarge	✗	512.00	Intel Xeon Platinum 8259	64	32	2	✗	✗
r5b.24xlarge	✗	768.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
r5b.metal	✗	768.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
R5d								
r5d.large	✗	16.00	Intel Xeon Platinum 8175	2	1	2	✗	✗
r5d.xlarge	✗	32.00	Intel Xeon Platinum 8175	4	2	2	✗	✗
r5d.2xlarge	✗	64.00	Intel Xeon Platinum 8175	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r5d.4xlarge	✗	128.00	Intel Xeon Platinum 8175	16	8	2	✗	✗
r5d.8xlarge	✗	256.00	Intel Xeon Platinum 8175	32	16	2	✗	✗
r5d.12xlarge	✗	384.00	Intel Xeon Platinum 8175	48	24	2	✗	✗
r5d.16xlarge	✗	512.00	Intel Xeon Platinum 8175	64	32	2	✗	✗
r5d.24xlarge	✗	768.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
r5d.metal	✗	768.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
R5dn								
r5dn.large	✗	16.00	Intel Xeon Platinum 8259	2	1	2	✗	✗
r5dn.xlarge	✗	32.00	Intel Xeon Platinum 8259	4	2	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r5dn.2xlarge	✗	64.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
r5dn.4xlarge	✗	128.00	Intel Xeon Platinum 8259	16	8	2	✗	✗
r5dn.8xlarge	✗	256.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
r5dn.12xlarge	✗	384.00	Intel Xeon Platinum 8259	48	24	2	✗	✗
r5dn.16xlarge	✗	512.00	Intel Xeon Platinum 8259	64	32	2	✗	✗
r5dn.24xlarge	✗	768.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
r5dn.metal	✗	768.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
R5n								
r5n.large	✗	16.00	Intel Xeon Platinum 8259	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r5n.xlarge	✗	32.00	Intel Xeon Platinum 8259	4	2	2	✗	✗
r5n.2xlarge	✗	64.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
r5n.4xlarge	✗	128.00	Intel Xeon Platinum 8259	16	8	2	✗	✗
r5n.8xlarge	✗	256.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
r5n.12xlarge	✗	384.00	Intel Xeon Platinum 8259	48	24	2	✗	✗
r5n.16xlarge	✗	512.00	Intel Xeon Platinum 8259	64	32	2	✗	✗
r5n.24xlarge	✗	768.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
r5n.metal	✗	768.00	Intel Xeon Platinum 8259	96	48	2	✗	✗
R6a								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r6a.large	✗	16.00	AMD EPYC 7R13	2	1	2	✗	✗
r6a.xlarge	✗	32.00	AMD EPYC 7R13	4	2	2	✗	✗
r6a.2xlarge	✗	64.00	AMD EPYC 7R13	8	4	2	✗	✗
r6a.4xlarge	✗	128.00	AMD EPYC 7R13	16	8	2	✗	✗
r6a.8xlarge	✗	256.00	AMD EPYC 7R13	32	16	2	✗	✗
r6a.12xlarge	✗	384.00	AMD EPYC 7R13	48	24	2	✗	✗
r6a.16xlarge	✗	512.00	AMD EPYC 7R13	64	32	2	✗	✗
r6a.24xlarge	✗	768.00	AMD EPYC 7R13	96	48	2	✗	✗
r6a.32xlarge	✗	1024.00	AMD EPYC 7R13	128	64	2	✗	✗
r6a.48xlarge	✗	1536.00	AMD EPYC 7R13	192	96	2	✗	✗
r6a.metal	✗	1536.00	AMD EPYC 7R13	192	96	2	✗	✗
R6g								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r6g.medium	✗	8.00	AWS Graviton2 Processor	1	1	1	✗	✗
r6g.large	✗	16.00	AWS Graviton2 Processor	2	2	1	✗	✗
r6g.xlarge	✗	32.00	AWS Graviton2 Processor	4	4	1	✗	✗
r6g.2xlarge	✗	64.00	AWS Graviton2 Processor	8	8	1	✗	✗
r6g.4xlarge	✗	128.00	AWS Graviton2 Processor	16	16	1	✗	✗
r6g.8xlarge	✗	256.00	AWS Graviton2 Processor	32	32	1	✗	✗
r6g.12xlarge	✗	384.00	AWS Graviton2 Processor	48	48	1	✗	✗
r6g.16xlarge	✗	512.00	AWS Graviton2 Processor	64	64	1	✗	✗
r6g.metal	✗	512.00	AWS Graviton2 Processor	64	64	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
R6gd								
r6gd.medium	✗	8.00	AWS Graviton2 Processor	1	1	1	✗	✗
r6gd.large	✗	16.00	AWS Graviton2 Processor	2	2	1	✗	✗
r6gd.xlarge	✗	32.00	AWS Graviton2 Processor	4	4	1	✗	✗
r6gd.2xlarge	✗	64.00	AWS Graviton2 Processor	8	8	1	✗	✗
r6gd.4xlarge	✗	128.00	AWS Graviton2 Processor	16	16	1	✗	✗
r6gd.8xlarge	✗	256.00	AWS Graviton2 Processor	32	32	1	✗	✗
r6gd.12xlarge	✗	384.00	AWS Graviton2 Processor	48	48	1	✗	✗
r6gd.16xlarge	✗	512.00	AWS Graviton2 Processor	64	64	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r6gd.metal	✗	512.00	AWS Graviton2 Processor	64	64	1	✗	✗
R6i								
r6i.large	✗	16.00	Intel Xeon Ice Lake	2	1	2	✗	✗
r6i.xlarge	✗	32.00	Intel Xeon Ice Lake	4	2	2	✗	✗
r6i.2xlarge	✗	64.00	Intel Xeon Ice Lake	8	4	2	✗	✗
r6i.4xlarge	✗	128.00	Intel Xeon Ice Lake	16	8	2	✗	✗
r6i.8xlarge	✗	256.00	Intel Xeon Ice Lake	32	16	2	✗	✗
r6i.12xlarge	✗	384.00	Intel Xeon Ice Lake	48	24	2	✗	✗
r6i.16xlarge	✗	512.00	Intel Xeon Ice Lake	64	32	2	✗	✗
r6i.24xlarge	✗	768.00	Intel Xeon Ice Lake	96	48	2	✗	✗
r6i.32xlarge	✗	1024.0(	Intel Xeon Ice Lake	128	64	2	✗	✗
r6i.metal	✗	1024.0(	Intel Xeon Ice Lake	128	64	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
R6idn								
r6idn.large	✗	16.00	Intel Xeon Ice Lake	2	1	2	✗	✗
r6idn.xlarge	✗	32.00	Intel Xeon Ice Lake	4	2	2	✗	✗
r6idn.2xlarge	✗	64.00	Intel Xeon Ice Lake	8	4	2	✗	✗
r6idn.4xlarge	✗	128.00	Intel Xeon Ice Lake	16	8	2	✗	✗
r6idn.8xlarge	✗	256.00	Intel Xeon Ice Lake	32	16	2	✗	✗
r6idn.12xlarge	✗	384.00	Intel Xeon Ice Lake	48	24	2	✗	✗
r6idn.16xlarge	✗	512.00	Intel Xeon Ice Lake	64	32	2	✗	✗
r6idn.24xlarge	✗	768.00	Intel Xeon Ice Lake	96	48	2	✗	✗
r6idn.32xlarge	✗	1024.0(	Intel Xeon Ice Lake	128	64	2	✗	✗
r6idn.metal	✗	1024.0(	Intel Xeon Ice Lake	128	64	2	✗	✗
R6in								
r6in.large	✗	16.00	Intel Xeon Ice Lake	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r6in.xlarge	✗	32.00	Intel Xeon Ice Lake	4	2	2	✗	✗
r6in.2xlarge	✗	64.00	Intel Xeon Ice Lake	8	4	2	✗	✗
r6in.4xlarge	✗	128.00	Intel Xeon Ice Lake	16	8	2	✗	✗
r6in.8xlarge	✗	256.00	Intel Xeon Ice Lake	32	16	2	✗	✗
r6in.12xlarge	✗	384.00	Intel Xeon Ice Lake	48	24	2	✗	✗
r6in.16xlarge	✗	512.00	Intel Xeon Ice Lake	64	32	2	✗	✗
r6in.24xlarge	✗	768.00	Intel Xeon Ice Lake	96	48	2	✗	✗
r6in.32xlarge	✗	1024.00	Intel Xeon Ice Lake	128	64	2	✗	✗
r6in.metal	✗	1024.00	Intel Xeon Ice Lake	128	64	2	✗	✗
R6id								
r6id.large	✗	16.00	Intel Xeon Ice Lake	2	1	2	✗	✗
r6id.xlarge	✗	32.00	Intel Xeon Ice Lake	4	2	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r6id.2xlarge	✗	64.00	Intel Xeon Ice Lake	8	4	2	✗	✗
r6id.4xlarge	✗	128.00	Intel Xeon Ice Lake	16	8	2	✗	✗
r6id.8xlarge	✗	256.00	Intel Xeon Ice Lake	32	16	2	✗	✗
r6id.12xlarge	✗	384.00	Intel Xeon Ice Lake	48	24	2	✗	✗
r6id.16xlarge	✗	512.00	Intel Xeon Ice Lake	64	32	2	✗	✗
r6id.24xlarge	✗	768.00	Intel Xeon Ice Lake	96	48	2	✗	✗
r6id.32xlarge	✗	1024.00	Intel Xeon Ice Lake	128	64	2	✗	✗
r6id.metal	✗	1024.00	Intel Xeon Ice Lake	128	64	2	✗	✗
R7a								
r7a.medium	✗	8.00	AMD EPYC 9R14	1	1	1	✗	✗
r7a.large	✗	16.00	AMD EPYC 9R14	2	2	1	✗	✗
r7a.xlarge	✗	32.00	AMD EPYC 9R14	4	4	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r7a.2xlarge	✗	64.00	AMD EPYC 9R14	8	8	1	✗	✗
r7a.4xlarge	✗	128.00	AMD EPYC 9R14	16	16	1	✗	✗
r7a.8xlarge	✗	256.00	AMD EPYC 9R14	32	32	1	✗	✗
r7a.12xlarge	✗	384.00	AMD EPYC 9R14	48	48	1	✗	✗
r7a.16xlarge	✗	512.00	AMD EPYC 9R14	64	64	1	✗	✗
r7a.24xlarge	✗	768.00	AMD EPYC 9R14	96	96	1	✗	✗
r7a.32xlarge	✗	1024.0(	AMD EPYC 9R14	128	128	1	✗	✗
r7a.48xlarge	✗	1536.0(	AMD EPYC 9R14	192	192	1	✗	✗
r7a.metal -48xl	✗	1536.0(	AMD EPYC 9R14	192	192	1	✗	✗
R7g								
r7g.medium	✗	8.00	AWS Graviton3 Processor	1	1	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r7g.large	✗	16.00	AWS Graviton3 Processor	2	2	1	✗	✗
r7g.xlarge	✗	32.00	AWS Graviton3 Processor	4	4	1	✗	✗
r7g.2xlarge	✗	64.00	AWS Graviton3 Processor	8	8	1	✗	✗
r7g.4xlarge	✗	128.00	AWS Graviton3 Processor	16	16	1	✗	✗
r7g.8xlarge	✗	256.00	AWS Graviton3 Processor	32	32	1	✗	✗
r7g.12xlarge	✗	384.00	AWS Graviton3 Processor	48	48	1	✗	✗
r7g.16xlarge	✗	512.00	AWS Graviton3 Processor	64	64	1	✗	✗
r7g.metal	✗	512.00	AWS Graviton3 Processor	64	64	1	✗	✗
R7gd								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r7gd.medium	✗	8.00	AWS Graviton3 Processor	1	1	1	✗	✗
r7gd.large	✗	16.00	AWS Graviton3 Processor	2	2	1	✗	✗
r7gd.xlarge	✗	32.00	AWS Graviton3 Processor	4	4	1	✗	✗
r7gd.2xlarge	✗	64.00	AWS Graviton3 Processor	8	8	1	✗	✗
r7gd.4xlarge	✗	128.00	AWS Graviton3 Processor	16	16	1	✗	✗
r7gd.8xlarge	✗	256.00	AWS Graviton3 Processor	32	32	1	✗	✗
r7gd.12xlarge	✗	384.00	AWS Graviton3 Processor	48	48	1	✗	✗
r7gd.16xlarge	✗	512.00	AWS Graviton3 Processor	64	64	1	✗	✗
r7gd.metal	✗	512.00	AWS Graviton3 Processor	64	64	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
R7i								
r7i.large	✗	16.00	Intel Xeon Sapphire Rapids	2	1	2	✗	✗
r7i.xlarge	✗	32.00	Intel Xeon Sapphire Rapids	4	2	2	✗	✗
r7i.2xlarge	✗	64.00	Intel Xeon Sapphire Rapids	8	4	2	✗	✗
r7i.4xlarge	✗	128.00	Intel Xeon Sapphire Rapids	16	8	2	✗	✗
r7i.8xlarge	✗	256.00	Intel Xeon Sapphire Rapids	32	16	2	✗	✗
r7i.12xlarge	✗	384.00	Intel Xeon Sapphire Rapids	48	24	2	✗	✗
r7i.16xlarge	✗	512.00	Intel Xeon Sapphire Rapids	64	32	2	✗	✗
r7i.24xlarge	✗	768.00	Intel Xeon Sapphire Rapids	96	48	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r7i.48xlarge	✗	1536.00	Intel Xeon Sapphire Rapids	192	96	2	✗	✗
r7i.metal-24xl	✗	768.00	Intel Xeon Sapphire Rapids	96	48	2	✗	✗
r7i.metal-48xl	✗	1536.00	Intel Xeon Sapphire Rapids	192	96	2	✗	✗
R7iz								
r7iz.large	✗	16.00	Intel Xeon Sapphire Rapids	2	1	2	✗	✗
r7iz.xlarge	✗	32.00	Intel Xeon Sapphire Rapids	4	2	2	✗	✗
r7iz.2xlarge	✗	64.00	Intel Xeon Sapphire Rapids	8	4	2	✗	✗
r7iz.4xlarge	✗	128.00	Intel Xeon Sapphire Rapids	16	8	2	✗	✗
r7iz.8xlarge	✗	256.00	Intel Xeon Sapphire Rapids	32	16	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r7iz.12xlarge	✗	384.00	Intel Xeon Sapphire Rapids	48	24	2	✗	✗
r7iz.16xlarge	✗	512.00	Intel Xeon Sapphire Rapids	64	32	2	✗	✗
r7iz.32xlarge	✗	1024.00	Intel Xeon Sapphire Rapids	128	64	2	✗	✗
r7iz.metal-16xl	✗	512.00	Intel Xeon Sapphire Rapids	64	32	2	✗	✗
r7iz.metal-32xl	✗	1024.00	Intel Xeon Sapphire Rapids	128	64	2	✗	✗
R8g								
r8g.medium	✗	8.00	AWS Graviton4 Processor	1	1	1	✗	✗
r8g.large	✗	16.00	AWS Graviton4 Processor	2	2	1	✗	✗
r8g.xlarge	✗	32.00	AWS Graviton4 Processor	4	4	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r8g.2xlarge	✗	64.00	AWS Graviton4 Processor	8	8	1	✗	✗
r8g.4xlarge	✗	128.00	AWS Graviton4 Processor	16	16	1	✗	✗
r8g.8xlarge	✗	256.00	AWS Graviton4 Processor	32	32	1	✗	✗
r8g.12xlarge	✗	384.00	AWS Graviton4 Processor	48	48	1	✗	✗
r8g.16xlarge	✗	512.00	AWS Graviton4 Processor	64	64	1	✗	✗
r8g.24xlarge	✗	768.00	AWS Graviton4 Processor	96	96	1	✗	✗
r8g.48xlarge	✗	1536.0(	AWS Graviton4 Processor	192	192	1	✗	✗
r8g.metal-24xl	✗	768.00	AWS Graviton4 Processor	96	96	1	✗	✗
r8g.metal-48xl	✗	1536.0(	AWS Graviton4 Processor	192	192	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
U-3tb1								
u-3tb1.56xlarge	✗	3072.0C	Intel Xeon Platinum 8176M	224	112	2	✗	✗
U-6tb1								
u-6tb1.56xlarge	✗	6144.0C	Intel Xeon Platinum 8176M	224	224	1	✗	✗
u-6tb1.112xlarge	✗	6144.0C	Intel Xeon Platinum 8176M	448	224	2	✗	✗
u-6tb1.metal	✗	6144.0C	Intel Xeon Platinum 8176M	448	224	2	✗	✗
U-9tb1								
u-9tb1.112xlarge	✗	9216.0C	Intel Xeon Platinum 8176M	448	224	2	✗	✗
u-9tb1.metal	✗	9216.0C	Intel Xeon Platinum 8176M	448	224	2	✗	✗
U-12tb1								
u-12tb1.112xlarge	✗	12288.C	Intel Xeon Platinum 8176M	448	224	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
u-12tb1.metal	✗	12288.0	Intel Xeon Platinum 8176M	448	224	2	✗	✗
U-18tb1								
u-18tb1.112xlarge	✗	18432.0	Intel Xeon Platinum 8280L	448	224	2	✗	✗
u-18tb1.metal	✗	18432.0	Intel Xeon Platinum 8280L	448	224	2	✗	✗
U-24tb1								
u-24tb1.112xlarge	✗	24576.0	Intel Xeon Platinum 8280L	448	224	2	✗	✗
u-24tb1.metal	✗	24576.0	Intel Xeon Platinum 8280L	448	224	2	✗	✗
U7i-12tb								
u7i-12tb.224xlarge	✗	12288.0	Intel Xeon Sapphire Rapids	896	448	2	✗	✗
U7in-16tb								
u7in-16tb.224xlarge	✗	16384.0	Intel Xeon Sapphire Rapids	896	448	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
U7in-24tb								
u7in-24tb.224xlarge	✗	24576.0	Intel Xeon Sapphire Rapids	896	448	2	✗	✗
U7in-32tb								
u7in-32tb.224xlarge	✗	32768.0	Intel Xeon Sapphire Rapids	896	448	2	✗	✗
X1								
x1.16xlarge	✗	976.00	Intel Xeon E7 8880 v3	64	32	2	✗	✗
x1.32xlarge	✗	1952.00	Intel Xeon E7 8880 v3	128	64	2	✗	✗
X1e								
x1e.xlarge	✗	122.00	Intel Haswell E7 8880v3	4	2	2	✗	✗
x1e.2xlarge	✗	244.00	Intel Haswell E7 8880v3	8	4	2	✗	✗
x1e.4xlarge	✗	488.00	Intel Haswell E7 8880v3	16	8	2	✗	✗
x1e.8xlarge	✗	976.00	Intel Haswell E7 8880v3	32	16	2	✗	✗
x1e.16xlarge	✗	1952.00	Intel Haswell E7 8880v3	64	32	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
x1e.32xlarge	✗	3904.00	Intel Haswell E7 8880v3	128	64	2	✗	✗
X2gd								
x2gd.medium	✗	16.00	AWS Graviton2 Processor	1	1	1	✗	✗
x2gd.large	✗	32.00	AWS Graviton2 Processor	2	2	1	✗	✗
x2gd.xlarge	✗	64.00	AWS Graviton2 Processor	4	4	1	✗	✗
x2gd.2xlarge	✗	128.00	AWS Graviton2 Processor	8	8	1	✗	✗
x2gd.4xlarge	✗	256.00	AWS Graviton2 Processor	16	16	1	✗	✗
x2gd.8xlarge	✗	512.00	AWS Graviton2 Processor	32	32	1	✗	✗
x2gd.12xlarge	✗	768.00	AWS Graviton2 Processor	48	48	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
x2gd.16xlarge	✗	1024.00	AWS Graviton2 Processor	64	64	1	✗	✗
x2gd.metal	✗	1024.00	AWS Graviton2 Processor	64	64	1	✗	✗
X2idn								
x2idn.16xlarge	✗	1024.00	Intel Xeon Ice Lake	64	32	2	✗	✗
x2idn.24xlarge	✗	1536.00	Intel Xeon Ice Lake	96	48	2	✗	✗
x2idn.32xlarge	✗	2048.00	Intel Xeon Ice Lake	128	64	2	✗	✗
x2idn.metal	✗	2048.00	Intel Xeon Ice Lake	128	64	2	✗	✗
X2iedn								
x2iedn.xlarge	✗	128.00	Intel Xeon Ice Lake	4	2	2	✗	✗
x2iedn.2xlarge	✗	256.00	Intel Xeon Ice Lake	8	4	2	✗	✗
x2iedn.4xlarge	✗	512.00	Intel Xeon Ice Lake	16	8	2	✗	✗
x2iedn.8xlarge	✗	1024.00	Intel Xeon Ice Lake	32	16	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
x2iedn.16xlarge	✗	2048.00	Intel Xeon Ice Lake	64	32	2	✗	✗
x2iedn.24xlarge	✗	3072.00	Intel Xeon Ice Lake	96	48	2	✗	✗
x2iedn.32xlarge	✗	4096.00	Intel Xeon Ice Lake	128	64	2	✗	✗
x2iedn.metal	✗	4096.00	Intel Xeon Ice Lake	128	64	2	✗	✗
X2iezn								
x2iezn.2xlarge	✗	256.00	Intel Xeon Platinum 8252	8	4	2	✗	✗
x2iezn.4xlarge	✗	512.00	Intel Xeon Platinum 8252	16	8	2	✗	✗
x2iezn.6xlarge	✗	768.00	Intel Xeon Platinum 8252	24	12	2	✗	✗
x2iezn.8xlarge	✗	1024.00	Intel Xeon Platinum 8252	32	16	2	✗	✗
x2iezn.12xlarge	✗	1536.00	Intel Xeon Platinum 8252	48	24	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
x2iezn.metal	✗	1536.00	Intel Xeon Platinum 8252	48	24	2	✗	✗
X8g								
x8g.medium	✗	16.00	AWS Graviton4 Processor	1	1	1	✗	✗
x8g.large	✗	32.00	AWS Graviton4 Processor	2	2	1	✗	✗
x8g.xlarge	✗	64.00	AWS Graviton4 Processor	4	4	1	✗	✗
x8g.2xlarge	✗	128.00	AWS Graviton4 Processor	8	8	1	✗	✗
x8g.4xlarge	✗	256.00	AWS Graviton4 Processor	16	16	1	✗	✗
x8g.8xlarge	✗	512.00	AWS Graviton4 Processor	32	32	1	✗	✗
x8g.12xlarge	✗	768.00	AWS Graviton4 Processor	48	48	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
x8g.16xlarge	✗	1024.0C	AWS Graviton4 Processor	64	64	1	✗	✗
x8g.24xlarge	✗	1536.0C	AWS Graviton4 Processor	96	96	1	✗	✗
x8g.48xlarge	✗	3072.0C	AWS Graviton4 Processor	192	192	1	✗	✗
x8g.metal-24xl	✗	1536.0C	AWS Graviton4 Processor	96	96	1	✗	✗
x8g.metal-48xl	✗	3072.0C	AWS Graviton4 Processor	192	192	1	✗	✗
z1d								
z1d.large	✗	16.00	Intel Xeon Platinum 8151	2	1	2	✗	✗
z1d.xlarge	✗	32.00	Intel Xeon Platinum 8151	4	2	2	✗	✗
z1d.2xlarge	✗	64.00	Intel Xeon Platinum 8151	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
z1d.3xlarge	✗	96.00	Intel Xeon Platinum 8151	12	6	2	✗	✗
z1d.6xlarge	✗	192.00	Intel Xeon Platinum 8151	24	12	2	✗	✗
z1d.12xlarge	✗	384.00	Intel Xeon Platinum 8151	48	24	2	✗	✗
z1d.metal	✗	384.00	Intel Xeon Platinum 8151	48	24	2	✗	✗

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
R5								
r5.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r5.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r5.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r5.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r5.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r5.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
r5.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
r5.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
r5.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
R5a								
r5a.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r5a.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r5a.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r5a.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r5a.8xlarge [1]	7.5 / 10.0	✗	✓	✗	1	8	30	✓
r5a.12xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
r5a.16xlarge	12 Gigabit	✗	✓	✗	1	15	50	✓
r5a.24xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
R5ad								
r5ad.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r5ad.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r5ad.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r5ad.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r5ad.8xlarge [1]	7.5 / 10.0	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r5ad.12xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
r5ad.16xlarge	12 Gigabit	✗	✓	✗	1	15	50	✓
r5ad.24xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
R5b								
r5b.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r5b.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r5b.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r5b.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r5b.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
r5b.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
r5b.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
r5b.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
r5b.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
R5d								
r5d.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r5d.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r5d.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r5d.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r5d.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r5d.12xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
r5d.16xlarge	20 Gigabit	✗	✓	✗	1	15	50	✓
r5d.24xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
r5d.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
R5dn								
r5dn.large [1]	2.1 / 25.0	✗	✓	✗	1	3	10	✓
r5dn.xlarge [1]	4.1 / 25.0	✗	✓	✗	1	4	15	✓
r5dn.2xlarge [1]	8.125 / 25.0	✗	✓	✗	1	4	15	✓
r5dn.4xlarge [1]	16.25 / 25.0	✗	✓	✗	1	8	30	✓
r5dn.8xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
r5dn.12xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
r5dn.16xlarge	75 Gigabit	✗	✓	✗	1	15	50	✓
r5dn.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
r5dn.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
R5n								
r5n.large [1]	2.1 / 25.0	✗	✓	✗	1	3	10	✓
r5n.xlarge [1]	4.1 / 25.0	✗	✓	✗	1	4	15	✓
r5n.2xlarge [1]	8.125 / 25.0	✗	✓	✗	1	4	15	✓
r5n.4xlarge [1]	16.25 / 25.0	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r5n.8xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
r5n.12xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
r5n.16xlarge	75 Gigabit	✗	✓	✗	1	15	50	✓
r5n.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
r5n.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
R6a								
r6a.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
r6a.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
r6a.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
r6a.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
r6a.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
r6a.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
r6a.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
r6a.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
r6a.32xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
r6a.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
r6a.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
R6g								
r6g.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r6g.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r6g.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r6g.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r6g.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r6g.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
r6g.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
r6g.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
r6g.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
R6gd								
r6gd.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓
r6gd.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r6gd.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r6gd.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r6gd.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r6gd.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
r6gd.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
r6gd.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
r6gd.metal	25 Gigabit	✗	✓	✗	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
R6i								
r6i.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
r6i.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
r6i.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
r6i.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
r6i.8xlarge	12.5 Gigabit	✗	✓	✓	1	8	30	✓
r6i.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
r6i.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
r6i.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
r6i.32xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
r6i.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
R6idn								
r6idn.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
r6idn.xlarge [1]	6.25 / 30.0	✗	✓	✗	1	4	15	✓
r6idn.2xlarge [1]	12.5 / 40.0	✗	✓	✗	1	4	15	✓
r6idn.4xlarge [1]	25.0 / 50.0	✗	✓	✗	1	8	30	✓
r6idn.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r6idn.12xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
r6idn.16xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
r6idn.24xlarge	150 Gigabit	✗	✓	✗	1	15	50	✓
r6idn.32xlarge	200 Gigabit	✓	✓	✗	2	16	50	✓
r6idn.metal	200 Gigabit	✓	✓	✗	2	16	50	✓
R6in								
r6in.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
r6in.xlarge [1]	6.25 / 30.0	✗	✓	✗	1	4	15	✓
r6in.2xlarge [1]	12.5 / 40.0	✗	✓	✗	1	4	15	✓
r6in.4xlarge [1]	25.0 / 50.0	✗	✓	✗	1	8	30	✓
r6in.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
r6in.12xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
r6in.16xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
r6in.24xlarge	150 Gigabit	✗	✓	✗	1	15	50	✓
r6in.32xlarge	200 Gigabit	✓	✓	✗	2	16	50	✓
r6in.metal	200 Gigabit	✓	✓	✗	2	16	50	✓
R6id								
r6id.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
r6id.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r6id.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
r6id.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
r6id.8xlarge	12.5 Gigabit	✗	✓	✓	1	8	30	✓
r6id.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
r6id.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
r6id.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
r6id.32xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
r6id.metal	50 Gigabit	✓	✓	✓	1	15	50	✓
R7a								
r7a.medium [1]	0.39 / 12.5	✗	✓	✗	1	2	4	✓
r7a.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
r7a.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
r7a.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
r7a.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
r7a.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
r7a.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
r7a.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
r7a.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
r7a.32xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r7a.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
r7a.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
R7g								
r7g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
r7g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
r7g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
r7g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
r7g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
r7g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
r7g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
r7g.16xlarge	30 Gigabit	✓	✓	✓	1	15	50	✓
r7g.metal	30 Gigabit	✓	✓	✓	1	15	50	✓
R7gd								
r7gd.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
r7gd.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
r7gd.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
r7gd.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r7gd.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
r7gd.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
r7gd.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
r7gd.16xlarge	30 Gigabit	✓	✓	✓	1	15	50	✓
r7gd.metal	30 Gigabit	✓	✓	✓	1	15	50	✓
R7i								
r7i.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓
r7i.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
r7i.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
r7i.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
r7i.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
r7i.12xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
r7i.16xlarge	25 Gigabit	✗	✓	✓	1	15	50	✓
r7i.24xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
r7i.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
r7i.metal-24xl	37.5 Gigabit	✗	✓	✓	1	15	50	✓
r7i.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
R7iz								
r7iz.large [1]	0.781 / 12.5	✗	✓	✗	1	3	10	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r7iz.xlarge [1]	1.562 / 12.5	✗	✓	✗	1	4	15	✓
r7iz.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
r7iz.4xlarge [1]	6.25 / 12.5	✗	✓	✗	1	8	30	✓
r7iz.8xlarge	12.5 Gigabit	✗	✓	✗	1	8	30	✓
r7iz.12xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
r7iz.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
r7iz.32xlarge	50 Gigabit	✓	✓	✗	1	15	50	✓
r7iz.metal-16xl	25 Gigabit	✗	✓	✗	1	15	50	✓
r7iz.metal-32xl	50 Gigabit	✓	✓	✗	1	15	50	✓
R8g								
r8g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
r8g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
r8g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓
r8g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
r8g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
r8g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
r8g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r8g.16xlarge	30 Gigabit	✗	✓	✓	1	15	50	✓
r8g.24xlarge	40 Gigabit	✓	✓	✓	1	15	50	✓
r8g.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
r8g.metal-24xl	40 Gigabit	✓	✓	✓	1	15	50	✓
r8g.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
U-3tb1								
u-3tb1.56xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
U-6tb1								
u-6tb1.56xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
u-6tb1.112xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
u-6tb1.metal	100	✗	✓	✗	1	5	30	✓
U-9tb1								
u-9tb1.112xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
u-9tb1.metal	100	✗	✓	✗	1	5	30	✓
U-12tb1								

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
u-12tb1.112xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
u-12tb1.metal	100	✗	✓	✗	1	5	30	✓
U-18tb1								
u-18tb1.112xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
u-18tb1.metal	100 Gigabit	✗	✓	✗	1	15	50	✓
U-24tb1								
u-24tb1.112xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
u-24tb1.metal	100 Gigabit	✗	✓	✗	1	15	50	✓
U7i-12tb								
u7i-12tb.224xlarge	100 Gigabit	✓	✓	✓	1	15	50	✓
U7in-16tb								
u7in-16tb.224xlarge	200 Gigabit	✓	✓	✓	2	16	50	✓
U7in-24tb								
u7in-24tb.224xlarge	200 Gigabit	✓	✓	✓	2	16	50	✓
U7in-32tb								

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
u7in-32tb.224xlarge	200 Gigabit	✓	✓	✓	2	16	50	✓
X1								
x1.16xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
x1.32xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
X1e								
x1e.xlarge [1]	0.625 / 10.0	✗	✓	✗	1	3	10	✓
x1e.2xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
x1e.4xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
x1e.8xlarge [1]	5.0 / 10.0	✗	✓	✗	1	4	15	✓
x1e.16xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
x1e.32xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
X2gd								
x2gd.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓
x2gd.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
x2gd.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
x2gd.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
x2gd.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
x2gd.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
x2gd.12xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
x2gd.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
x2gd.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
X2idn								
x2idn.16xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
x2idn.24xlarge	75 Gigabit	✗	✓	✓	1	15	50	✓
x2idn.32xlarge	100 Gigabit	✓	✓	✓	1	15	50	✓
x2idn.metal	100 Gigabit	✓	✓	✓	1	15	50	✓
X2iedn								
x2iedn.xlarge [1]	1.875 / 25.0	✗	✓	✗	1	4	15	✓
x2iedn.2xlarge [1]	5.0 / 25.0	✗	✓	✗	1	4	15	✓
x2iedn.4xlarge [1]	12.5 / 25.0	✗	✓	✗	1	8	30	✓
x2iedn.8xlarge	25 Gigabit	✗	✓	✓	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
x2iedn.16xlarge	50 Gigabit	✗	✓	✓	1	15	50	✓
x2iedn.24xlarge	75 Gigabit	✗	✓	✓	1	15	50	✓
x2iedn.32xlarge	100 Gigabit	✓	✓	✓	1	15	50	✓
x2iedn.metal	100 Gigabit	✓	✓	✓	1	15	50	✓
X2iezn								
x2iezn.2xlarge [1]	12.5 / 25.0	✗	✓	✗	1	4	15	✓
x2iezn.4xlarge [1]	15.0 / 25.0	✗	✓	✗	1	8	30	✓
x2iezn.6xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓
x2iezn.8xlarge	75 Gigabit	✗	✓	✗	1	8	30	✓
x2iezn.12xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
x2iezn.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
X8g								
x8g.medium [1]	0.52 / 12.5	✗	✓	✗	1	2	4	✓
x8g.large [1]	0.937 / 12.5	✗	✓	✗	1	3	10	✓
x8g.xlarge [1]	1.876 / 12.5	✗	✓	✗	1	4	15	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
x8g.2xlarge [1]	3.75 / 15.0	✗	✓	✗	1	4	15	✓
x8g.4xlarge [1]	7.5 / 15.0	✗	✓	✗	1	8	30	✓
x8g.8xlarge	15 Gigabit	✗	✓	✗	1	8	30	✓
x8g.12xlarge	22.5 Gigabit	✗	✓	✓	1	8	30	✓
x8g.16xlarge	30 Gigabit	✗	✓	✓	1	15	50	✓
x8g.24xlarge	40 Gigabit	✓	✓	✓	1	15	50	✓
x8g.48xlarge	50 Gigabit	✓	✓	✓	1	15	50	✓
x8g.metal-24xl	40 Gigabit	✓	✓	✓	1	15	50	✓
x8g.metal-48xl	50 Gigabit	✓	✓	✓	1	15	50	✓
z1d								
z1d.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
z1d.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
z1d.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
z1d.3xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
z1d.6xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
z1d.12xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
z1d.metal	25 Gigabit	✗	✓	✗	1	15	50	✓

Note

[1] These instances have a baseline bandwidth and can use a network I/O credit mechanism to burst beyond their baseline bandwidth on a best effort basis. Other instances types can sustain their maximum performance indefinitely. For more information, see instance network bandwidth.

For `32xlarge` and `metal` instance types that support 200 Gbps, at least 2 ENIs, each attached to a different network card, are required on the instance to achieve 200 Gbps throughput. Each ENI attached to a network card can achieve a max of 170 Gbps. `u-6tb1.metal`, `u-9tb1.metal`, and `u-12tb1.metal` instances launched after March 12, 2020 provide network performance of 100 Gbps. `u-6tb1.metal`, `u-9tb1.metal`, and `u-12tb1.metal` instances launched before March 12, 2020 mightonly provide network performance of 25 Gbps. To ensure that instances launched before March 12, 2020 have a network performance of 100 Gbps, contact your account team to upgrade your instance at no additional cost.

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5 gp3 volumes provisioned with `16,000` IOPS each (5 volumes x `16,000` IOPS = `80,000` IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
R5					
r5.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default
r5.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
r5.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
r5.4xlarge	4750.00	593.75	18750.00	✓	default
r5.8xlarge	6800.00	850.00	30000.00	✓	default
r5.12xlarge	9500.00	1187.50	40000.00	✓	default
r5.16xlarge	13600.00	1700.00	60000.00	✓	default
r5.24xlarge	19000.00	2375.00	80000.00	✓	default
r5.metal	19000.00	2375.00	80000.00	✓	default
R5a					
r5a.large [1]	650.00 / 2880.00	81.25 / 360.00	3600.00 / 16000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r5a.xlarge [1]	1085.00 / 2880.00	135.62 / 360.00	6000.00 / 16000.00	✓	default
r5a.2xlarge [1]	1580.00 / 2880.00	197.50 / 360.00	8333.00 / 16000.00	✓	default
r5a.4xlarge	2880.00	360.00	16000.00	✓	default
r5a.8xlarge	4750.00	593.75	20000.00	✓	default
r5a.12xlarge	6780.00	847.50	30000.00	✓	default
r5a.16xlarge	9500.00	1187.50	40000.00	✓	default
r5a.24xlarge	13570.00	1696.25	60000.00	✓	default
R5ad					
r5ad.large [1]	650.00 / 2880.00	81.25 / 360.00	3600.00 / 16000.00	✓	default
r5ad.xlarge [1]	1085.00 / 2880.00	135.62 / 360.00	6000.00 / 16000.00	✓	default
r5ad.2xlarge [1]	1580.00 / 2880.00	197.50 / 360.00	8333.00 / 16000.00	✓	default
r5ad.4xlarge	2880.00	360.00	16000.00	✓	default
r5ad.8xlarge	4750.00	593.75	20000.00	✓	default
r5ad.12xlarge	6780.00	847.50	30000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r5ad.16xlarge	9500.00	1187.50	40000.00	✓	default
r5ad.24xlarge	13570.00	1696.25	60000.00	✓	default
R5b					
r5b.large [1]	1250.00 / 10000.00	156.25 / 1250.00	5417.00 / 43333.00	✓	default
r5b.xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	10833.00 / 43333.00	✓	default
r5b.2xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	21667.00 / 43333.00	✓	default
r5b.4xlarge	10000.00	1250.00	43333.00	✓	default
r5b.8xlarge	20000.00	2500.00	86667.00	✓	default
r5b.12xlarge	30000.00	3750.00	130000.00	✓	default
r5b.16xlarge	40000.00	5000.00	173333.00	✓	default
r5b.24xlarge	60000.00	7500.00	260000.00	✓	default
r5b.metal	60000.00	7500.00	260000.00	✓	default
R5d					
r5d.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r5d.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
r5d.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
r5d.4xlarge	4750.00	593.75	18750.00	✓	default
r5d.8xlarge	6800.00	850.00	30000.00	✓	default
r5d.12xlarge	9500.00	1187.50	40000.00	✓	default
r5d.16xlarge	13600.00	1700.00	60000.00	✓	default
r5d.24xlarge	19000.00	2375.00	80000.00	✓	default
r5d.metal	19000.00	2375.00	80000.00	✓	default
R5dn					
r5dn.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default
r5dn.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
r5dn.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
r5dn.4xlarge	4750.00	593.75	18750.00	✓	default
r5dn.8xlarge	6800.00	850.00	30000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r5dn.12xlarge	9500.00	1187.50	40000.00	✓	default
r5dn.16xlarge	13600.00	1700.00	60000.00	✓	default
r5dn.24xlarge	19000.00	2375.00	80000.00	✓	default
r5dn.metal	19000.00	2375.00	80000.00	✓	default
R5n					
r5n.large [1]	650.00 / 4750.00	81.25 / 593.75	3600.00 / 18750.00	✓	default
r5n.xlarge [1]	1150.00 / 4750.00	143.75 / 593.75	6000.00 / 18750.00	✓	default
r5n.2xlarge [1]	2300.00 / 4750.00	287.50 / 593.75	12000.00 / 18750.00	✓	default
r5n.4xlarge	4750.00	593.75	18750.00	✓	default
r5n.8xlarge	6800.00	850.00	30000.00	✓	default
r5n.12xlarge	9500.00	1187.50	40000.00	✓	default
r5n.16xlarge	13600.00	1700.00	60000.00	✓	default
r5n.24xlarge	19000.00	2375.00	80000.00	✓	default
r5n.metal	19000.00	2375.00	80000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
R6a					
r6a.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
r6a.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r6a.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r6a.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r6a.8xlarge	10000.00	1250.00	40000.00	✓	default
r6a.12xlarge	15000.00	1875.00	60000.00	✓	default
r6a.16xlarge	20000.00	2500.00	80000.00	✓	default
r6a.24xlarge	30000.00	3750.00	120000.00	✓	default
r6a.32xlarge	40000.00	5000.00	160000.00	✓	default
r6a.48xlarge	40000.00	5000.00	240000.00	✓	default
r6a.metal	40000.00	5000.00	240000.00	✓	default
R6g					
r6g.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r6g.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default
r6g.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
r6g.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
r6g.4xlarge	4750.00	593.75	20000.00	✓	default
r6g.8xlarge	9500.00	1187.50	40000.00	✓	default
r6g.12xlarge	14250.00	1781.25	50000.00	✓	default
r6g.16xlarge	19000.00	2375.00	80000.00	✓	default
r6g.metal	19000.00	2375.00	80000.00	✓	default
R6gd					
r6gd.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default
r6gd.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default
r6gd.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
r6gd.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
r6gd.4xlarge	4750.00	593.75	20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r6gd.8xlarge	9500.00	1187.50	40000.00	✓	default
r6gd.12xlarge	14250.00	1781.25	50000.00	✓	default
r6gd.16xlarge	19000.00	2375.00	80000.00	✓	default
r6gd.metal	19000.00	2375.00	80000.00	✓	default
R6i					
r6i.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
r6i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r6i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r6i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r6i.8xlarge	10000.00	1250.00	40000.00	✓	default
r6i.12xlarge	15000.00	1875.00	60000.00	✓	default
r6i.16xlarge	20000.00	2500.00	80000.00	✓	default
r6i.24xlarge	30000.00	3750.00	120000.00	✓	default
r6i.32xlarge	40000.00	5000.00	160000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r6i.metal	40000.00	5000.00	160000.00	✓	default
R6idn					
r6idn.large [1]	1562.00 / 25000.00	195.31 / 3125.00	6250.00 / 100000.00	✓	default
r6idn.xlarge [1]	3125.00 / 25000.00	390.62 / 3125.00	12500.00 / 100000.00	✓	default
r6idn.2xlarge [1]	6250.00 / 25000.00	781.25 / 3125.00	25000.00 / 100000.00	✓	default
r6idn.4xlarge [1]	12500.00 / 25000.00	1562.50 / 3125.00	50000.00 / 100000.00	✓	default
r6idn.8xlarge	25000.00	3125.00	100000.00	✓	default
r6idn.12x large	37500.00	4687.50	150000.00	✓	default
r6idn.16x large	50000.00	6250.00	200000.00	✓	default
r6idn.24x large	75000.00	9375.00	300000.00	✓	default
r6idn.32x large	100000.00	12500.00	400000.00	✓	default
r6idn.metal	100000.00	12500.00	400000.00	✓	default
R6in					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r6in.large [1]	1562.00 / 25000.00	195.31 / 3125.00	6250.00 / 100000.00	✓	default
r6in.xlarge [1]	3125.00 / 25000.00	390.62 / 3125.00	12500.00 / 100000.00	✓	default
r6in.2xlarge [1]	6250.00 / 25000.00	781.25 / 3125.00	25000.00 / 100000.00	✓	default
r6in.4xlarge [1]	12500.00 / 25000.00	1562.50 / 3125.00	50000.00 / 100000.00	✓	default
r6in.8xlarge	25000.00	3125.00	100000.00	✓	default
r6in.12xlarge	37500.00	4687.50	150000.00	✓	default
r6in.16xlarge	50000.00	6250.00	200000.00	✓	default
r6in.24xlarge	75000.00	9375.00	300000.00	✓	default
r6in.32xlarge	100000.00	12500.00	400000.00	✓	default
r6in.metal	100000.00	12500.00	400000.00	✓	default
R6id					
r6id.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
r6id.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r6id.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r6id.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r6id.8xlarge	10000.00	1250.00	40000.00	✓	default
r6id.12xlarge	15000.00	1875.00	60000.00	✓	default
r6id.16xlarge	20000.00	2500.00	80000.00	✓	default
r6id.24xlarge	30000.00	3750.00	120000.00	✓	default
r6id.32xlarge	40000.00	5000.00	160000.00	✓	default
r6id.metal	40000.00	5000.00	160000.00	✓	default
R7a					
r7a.medium [1]	325.00 / 10000.00	40.62 / 1250.00	2500.00 / 40000.00	✓	default
r7a.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
r7a.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r7a.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r7a.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r7a.8xlarge	10000.00	1250.00	40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r7a.12xlarge	15000.00	1875.00	60000.00	✓	default
r7a.16xlarge	20000.00	2500.00	80000.00	✓	default
r7a.24xlarge	30000.00	3750.00	120000.00	✓	default
r7a.32xlarge	40000.00	5000.00	160000.00	✓	default
r7a.48xlarge	40000.00	5000.00	240000.00	✓	default
r7a.metal -48xl	40000.00	5000.00	240000.00	✓	default
R7g					
r7g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
r7g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
r7g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r7g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r7g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r7g.8xlarge	10000.00	1250.00	40000.00	✓	default
r7g.12xlarge	15000.00	1875.00	60000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r7g.16xlarge	20000.00	2500.00	80000.00	✓	default
r7g.metal	20000.00	2500.00	80000.00	✓	default
R7gd					
r7gd.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
r7gd.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
r7gd.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r7gd.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r7gd.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r7gd.8xlarge	10000.00	1250.00	40000.00	✓	default
r7gd.12xlarge	15000.00	1875.00	60000.00	✓	default
r7gd.16xlarge	20000.00	2500.00	80000.00	✓	default
r7gd.metal	20000.00	2500.00	80000.00	✓	default
R7i					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r7i.large [1]	650.00 / 10000.00	81.25 / 1250.00	3600.00 / 40000.00	✓	default
r7i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
r7i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r7i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r7i.8xlarge	10000.00	1250.00	40000.00	✓	default
r7i.12xlarge	15000.00	1875.00	60000.00	✓	default
r7i.16xlarge	20000.00	2500.00	80000.00	✓	default
r7i.24xlarge	30000.00	3750.00	120000.00	✓	default
r7i.48xlarge	40000.00	5000.00	240000.00	✓	default
r7i.metal -24xl	30000.00	3750.00	120000.00	✓	default
r7i.metal -48xl	40000.00	5000.00	240000.00	✓	default
R7iz					
r7iz.large [1]	792.00 / 10000.00	99.00 / 1250.00	3600.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r7iz.xlarge [1]	1584.00 / 10000.00	198.00 / 1250.00	6667.00 / 40000.00	✓	default
r7iz.2xlarge [1]	3168.00 / 10000.00	396.00 / 1250.00	13333.00 / 40000.00	✓	default
r7iz.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r7iz.8xlarge	10000.00	1250.00	40000.00	✓	default
r7iz.12xlarge	19000.00	2375.00	76000.00	✓	default
r7iz.16xlarge	20000.00	2500.00	80000.00	✓	default
r7iz.32xlarge	40000.00	5000.00	160000.00	✓	default
r7iz.metal-16xl	20000.00	2500.00	80000.00	✓	default
r7iz.metal-32xl	40000.00	5000.00	160000.00	✓	default
R8g					
r8g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
r8g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
r8g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
r8g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
r8g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
r8g.8xlarge	10000.00	1250.00	40000.00	✓	default
r8g.12xlarge	15000.00	1875.00	60000.00	✓	default
r8g.16xlarge	20000.00	2500.00	80000.00	✓	default
r8g.24xlarge	30000.00	3750.00	120000.00	✓	default
r8g.48xlarge	40000.00	5000.00	240000.00	✓	default
r8g.metal-24xl	30000.00	3750.00	120000.00	✓	default
r8g.metal-48xl	40000.00	5000.00	240000.00	✓	default
U-3tb1					
u-3tb1.56xlarge	19000.00	2375.00	80000.00	✓	default
U-6tb1					
u-6tb1.56xlarge	38000.00	4750.00	160000.00	✓	default
u-6tb1.112xlarge	38000.00	4750.00	160000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
u-6tb1.metal	38000.00	4750.00	160000.00	✓	default
U-9tb1					
u-9tb1.112xlarge	38000.00	4750.00	160000.00	✓	default
u-9tb1.metal	38000.00	4750.00	160000.00	✓	default
U-12tb1					
u-12tb1.112xlarge	38000.00	4750.00	160000.00	✓	default
u-12tb1.metal	38000.00	4750.00	160000.00	✓	default
U-18tb1					
u-18tb1.112xlarge	38000.00	4750.00	160000.00	✓	default
u-18tb1.metal	38000.00	4750.00	160000.00	✓	default
U-24tb1					
u-24tb1.112xlarge	38000.00	4750.00	160000.00	✓	default
u-24tb1.metal	38000.00	4750.00	160000.00	✓	default
U7i-12tb					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
u7i-12tb.224xlarge	60000.00	7500.00	420000.00	✓	default
U7in-16tb					
u7in-16tb.224xlarge	100000.00	12500.00	420000.00	✓	default
U7in-24tb					
u7in-24tb.224xlarge	100000.00	12500.00	420000.00	✓	default
U7in-32tb					
u7in-32tb.224xlarge	100000.00	12500.00	420000.00	✓	default
X1					
x1.16xlarge	7000.00	875.00	40000.00	✗	default
x1.32xlarge	14000.00	1750.00	80000.00	✗	default
X1e					
x1e.xlarge	500.00	62.50	3700.00	✗	default
x1e.2xlarge	1000.00	125.00	7400.00	✗	default
x1e.4xlarge	1750.00	218.75	10000.00	✗	default
x1e.8xlarge	3500.00	437.50	20000.00	✗	default
x1e.16xlarge	7000.00	875.00	40000.00	✗	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
x1e.32xlarge	14000.00	1750.00	80000.00	✗	default
X2gd					
x2gd.medium [1]	315.00 / 4750.00	39.38 / 593.75	2500.00 / 20000.00	✓	default
x2gd.large [1]	630.00 / 4750.00	78.75 / 593.75	3600.00 / 20000.00	✓	default
x2gd.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
x2gd.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
x2gd.4xlarge	4750.00	593.75	20000.00	✓	default
x2gd.8xlarge	9500.00	1187.50	40000.00	✓	default
x2gd.12xlarge	14250.00	1781.25	60000.00	✓	default
x2gd.16xlarge	19000.00	2375.00	80000.00	✓	default
x2gd.metal	19000.00	2375.00	80000.00	✓	default
X2idn					
x2idn.16xlarge	40000.00	5000.00	173333.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
x2idn.24xlarge	60000.00	7500.00	260000.00	✓	default
x2idn.32xlarge	80000.00	10000.00	260000.00	✓	default
x2idn.metal	80000.00	10000.00	260000.00	✓	default
X2iedn					
x2iedn.xlarge [1]	2500.00 / 20000.00	312.50 / 2500.00	8125.00 / 65000.00	✓	default
x2iedn.2xlarge [1]	5000.00 / 20000.00	625.00 / 2500.00	16250.00 / 65000.00	✓	default
x2iedn.4xlarge [1]	10000.00 / 20000.00	1250.00 / 2500.00	32500.00 / 65000.00	✓	default
x2iedn.8xlarge	20000.00	2500.00	65000.00	✓	default
x2iedn.16xlarge	40000.00	5000.00	130000.00	✓	default
x2iedn.24xlarge	60000.00	7500.00	195000.00	✓	default
x2iedn.32xlarge	80000.00	10000.00	260000.00	✓	default
x2iedn.metal	80000.00	10000.00	260000.00	✓	default
X2iezn					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
x2iezn.2xlarge	3170.00	396.25	13333.00	✓	default
x2iezn.4xlarge	4750.00	593.75	20000.00	✓	default
x2iezn.6xlarge	9500.00	1187.50	40000.00	✓	default
x2iezn.8xlarge	12000.00	1500.00	55000.00	✓	default
x2iezn.12xlarge	19000.00	2375.00	80000.00	✓	default
x2iezn.metal	19000.00	2375.00	80000.00	✓	default
X8g					
x8g.medium [1]	315.00 / 10000.00	39.38 / 1250.00	2500.00 / 40000.00	✓	default
x8g.large [1]	630.00 / 10000.00	78.75 / 1250.00	3600.00 / 40000.00	✓	default
x8g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
x8g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	12000.00 / 40000.00	✓	default
x8g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
x8g.8xlarge	10000.00	1250.00	40000.00	✓	default
x8g.12xlarge	15000.00	1875.00	60000.00	✓	default
x8g.16xlarge	20000.00	2500.00	80000.00	✓	default
x8g.24xlarge	30000.00	3750.00	120000.00	✓	default
x8g.48xlarge	40000.00	5000.00	240000.00	✓	default
x8g.metal-24xl	30000.00	3750.00	120000.00	✓	default
x8g.metal-48xl	40000.00	5000.00	240000.00	✓	default
z1d					
z1d.large [1]	800.00 / 3170.00	100.00 / 396.25	3333.00 / 13333.00	✓	default
z1d.xlarge [1]	1580.00 / 3170.00	197.50 / 396.25	6667.00 / 13333.00	✓	default
z1d.2xlarge	3170.00	396.25	13333.00	✓	default
z1d.3xlarge	4750.00	593.75	20000.00	✓	default
z1d.6xlarge	9500.00	1187.50	40000.00	✓	default
z1d.12xlarge	19000.00	2375.00	80000.00	✓	default
z1d.metal	19000.00	2375.00	80000.00	✓	default

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.
[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

The following table shows the instance store volume configuration for supported instance types, along with the aggregated IOPS performance with 4,096 byte block size at queue depth saturation.

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
			R5ad		
r5ad.large	1 x 75 GB	NVMe SSD	30,000 / 15,000		✓
r5ad.xlarge	1 x 150 GB	NVMe SSD	59,000 / 29,000		✓
r5ad.2xlarge	1 x 300 GB	NVMe SSD	117,000 / 57,000		✓
r5ad.4xlarge	2 x 300 GB	NVMe SSD	234,000 / 114,000		✓
r5ad.8xlarge	2 x 600 GB	NVMe SSD	466,666 / 233,334		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r5ad.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
r5ad.16xlarge	4 x 600 GB	NVMe SSD	933,332 / 466,668		✓
r5ad.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓
R5d					
r5d.large	1 x 75 GB	NVMe SSD	30,000 / 15,000		✓
r5d.xlarge	1 x 150 GB	NVMe SSD	59,000 / 29,000		✓
r5d.2xlarge	1 x 300 GB	NVMe SSD	117,000 / 57,000		✓
r5d.4xlarge	2 x 300 GB	NVMe SSD	234,000 / 114,000		✓
r5d.8xlarge	2 x 600 GB	NVMe SSD	466,666 / 233,334		✓
r5d.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
r5d.16xlarge	4 x 600 GB	NVMe SSD	933,332 / 466,668		✓
r5d.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r5d.metal	4 x 900 GB	NVMe SSD	1,400,000 / 680,000		✓
R5dn					
r5dn.large	1 x 75 GB	NVMe SSD	29,000 / 14,500		✓
r5dn.xlarge	1 x 150 GB	NVMe SSD	58,000 / 29,000		✓
r5dn.2xlarge	1 x 300 GB	NVMe SSD	116,000 / 58,000		✓
r5dn.4xlarge	2 x 300 GB	NVMe SSD	232,000 / 116,000		✓
r5dn.8xlarge	2 x 600 GB	NVMe SSD	464,000 / 232,000		✓
r5dn.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 350,000		✓
r5dn.16xlarge	4 x 600 GB	NVMe SSD	930,000 / 465,000		✓
r5dn.24xlarge	4 x 900 GB	NVMe SSD	1,400,000 / 700,000		✓
r5dn.metal	4 x 900 GB	NVMe SSD	1,400,000 / 700,000		✓
R6gd					
r6gd.medium	1 x 59 GB	NVMe SSD	13,438 / 5,625		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r6gd.large	1 x 118 GB	NVMe SSD	26,875 / 11,250		✓
r6gd.xlarge	1 x 237 GB	NVMe SSD	53,750 / 22,500		✓
r6gd.2xlarge	1 x 474 GB	NVMe SSD	107,500 / 45,000		✓
r6gd.4xlarge	1 x 950 GB	NVMe SSD	215,000 / 90,000		✓
r6gd.8xlarge	1 x 1900 GB	NVMe SSD	430,000 / 180,000		✓
r6gd.12xlarge	2 x 1425 GB	NVMe SSD	645,000 / 270,000		✓
r6gd.16xlarge	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
r6gd.metal	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
R6idn					
r6idn.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓
r6idn.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
r6idn.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r6idn.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓
r6idn.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
r6idn.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
r6idn.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
r6idn.24xlarge	4 x 1425 GB	NVMe SSD	1,609,996 / 805,000		✓
r6idn.32xlarge	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
r6idn.metal	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
R6id					
r6id.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓
r6id.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
r6id.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
r6id.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r6id.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
r6id.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
r6id.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
r6id.24xlarge	4 x 1425 GB	NVMe SSD	1,609,996 / 805,000		✓
r6id.32xlarge	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
r6id.metal	4 x 1900 GB	NVMe SSD	2,146,664 / 1,073,336		✓
R7gd					
r7gd.medium	1 x 59 GB	NVMe SSD	16,771 / 8,385		✓
r7gd.large	1 x 118 GB	NVMe SSD	33,542 / 16,771		✓
r7gd.xlarge	1 x 237 GB	NVMe SSD	67,083 / 33,542		✓
r7gd.2xlarge	1 x 474 GB	NVMe SSD	134,167 / 67,084		✓
r7gd.4xlarge	1 x 950 GB	NVMe SSD	268,333 / 134,167		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r7gd.8xlarge	1 x 1900 GB	NVMe SSD	536,666 / 268,334		✓
r7gd.12xlarge	2 x 1425 GB	NVMe SSD	804,998 / 402,500		✓
r7gd.16xlarge	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
r7gd.metal	2 x 1900 GB	NVMe SSD	1,073,332 / 536,668		✓
X1					
x1.16xlarge	1 x 1920 GB	SSD		✓	
x1.32xlarge	2 x 1920 GB	SSD		✓	
X1e					
x1e.xlarge	1 x 120 GB	SSD		✓	
x1e.2xlarge	1 x 240 GB	SSD		✓	
x1e.4xlarge	1 x 480 GB	SSD		✓	
x1e.8xlarge	1 x 960 GB	SSD		✓	
x1e.16xlarge	1 x 1920 GB	SSD		✓	
x1e.32xlarge	2 x 1920 GB	SSD		✓	
X2gd					
x2gd.medium	1 x 59 GB	NVMe SSD	13,438 / 5,625		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
x2gd.large	1 x 118 GB	NVMe SSD	26,875 / 11,250		✓
x2gd.xlarge	1 x 237 GB	NVMe SSD	53,750 / 22,500		✓
x2gd.2xlarge	1 x 475 GB	NVMe SSD	107,500 / 45,000		✓
x2gd.4xlarge	1 x 950 GB	NVMe SSD	215,000 / 90,000		✓
x2gd.8xlarge	1 x 1900 GB	NVMe SSD	430,000 / 180,000		✓
x2gd.12xlarge	2 x 1425 GB	NVMe SSD	645,000 / 270,000		✓
x2gd.16xlarge	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
x2gd.metal	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
X2idn					
x2idn.16xlarge	1 x 1900 GB	NVMe SSD	430,000 / 180,000		✓
x2idn.24xlarge	2 x 1425 GB	NVMe SSD	645,000 / 270,000		✓
x2idn.32xlarge	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
x2idn.metal	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
X2iedn					
x2iedn.xlarge	1 x 118 GB	NVMe SSD	26,875 / 11,250		✓
x2iedn.2xlarge	1 x 237 GB	NVMe SSD	53,750 / 22,500		✓
x2iedn.4xlarge	1 x 475 GB	NVMe SSD	107,500 / 45,000		✓
x2iedn.8xlarge	1 x 950 GB	NVMe SSD	215,000 / 90,000		✓
x2iedn.16xlarge	1 x 1900 GB	NVMe SSD	430,000 / 180,000		✓
x2iedn.24xlarge	2 x 1425 GB	NVMe SSD	645,000 / 270,000		✓
x2iedn.32xlarge	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
x2iedn.metal	2 x 1900 GB	NVMe SSD	860,000 / 360,000		✓
z1d					
z1d.large	1 x 75 GB	NVMe SSD	30,000 / 15,000		✓
z1d.xlarge	1 x 150 GB	NVMe SSD	59,000 / 29,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
z1d.2xlarge	1 x 300 GB	NVMe SSD	117,000 / 57,000		✓
z1d.3xlarge	1 x 450 GB	NVMe SSD	175,000 / 75,000		✓
z1d.6xlarge	1 x 900 GB	NVMe SSD	350,000 / 170,000		✓
z1d.12xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
z1d.metal	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			R5			
r5.large	✓	Instance store not supported	✗	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r5.xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.2xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.24xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5.metal	✓	Instance store not supported	✗	✗	✗	✗
R5a						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r5a.large	✓	Instance store not supported	✗	✗	✓	✗
r5a.xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5a.2xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5a.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5a.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5a.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5a.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5a.24xlarge	✓	Instance store not supported	✗	✗	✓	✓
R5ad						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r5ad.large	✓	✓	✗	✗	✓	✗
r5ad.xlarge	✓	✓	✗	✗	✓	✓
r5ad.2xlarge	✓	✓	✗	✗	✓	✓
r5ad.4xlarge	✓	✓	✗	✗	✓	✓
r5ad.8xlarge	✓	✓	✗	✗	✓	✓
r5ad.12xlarge	✓	✓	✗	✗	✓	✓
r5ad.16xlarge	✓	✓	✗	✗	✓	✓
r5ad.24xlarge	✓	✓	✗	✗	✓	✓
			R5b			
r5b.large	✓	Instance store not supported	✗	✗	✓	✗
r5b.xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5b.2xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5b.4xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r5b.8xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5b.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5b.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5b.24xlarge	✓	Instance store not supported	✗	✗	✓	✓
r5b.metal	✓	Instance store not supported	✗	✗	✗	✗
			R5d			
r5d.large	✓	✓	✗	✗	✓	✗
r5d.xlarge	✓	✓	✗	✗	✓	✓
r5d.2xlarge	✓	✓	✗	✗	✓	✓
r5d.4xlarge	✓	✓	✗	✗	✓	✓
r5d.8xlarge	✓	✓	✗	✗	✓	✓
r5d.12xlarge	✓	✓	✗	✗	✓	✓
r5d.16xlarge	✓	✓	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r5d.24xlarge	✓	✓	✗	✗	✓	✓
r5d.metal	✓	✓	✗	✗	✗	✗
R5dn						
r5dn.large	✓	✓	✓	✗	✓	✗
r5dn.xlarge	✓	✓	✓	✗	✓	✓
r5dn.2xlarge	✓	✓	✓	✗	✓	✓
r5dn.4xlarge	✓	✓	✓	✗	✓	✓
r5dn.8xlarge	✓	✓	✓	✗	✓	✓
r5dn.12xlarge	✓	✓	✓	✗	✓	✓
r5dn.16xlarge	✓	✓	✓	✗	✓	✓
r5dn.24xlarge	✓	✓	✓	✗	✓	✓
r5dn.metal	✓	✓	✓	✗	✗	✗
R5n						
r5n.large	✓	Instance store not supported	✓	✗	✓	✗
r5n.xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r5n.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r5n.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r5n.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r5n.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r5n.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
r5n.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
r5n.metal	✓	Instance store not supported	✓	✗	✗	✗
R6a						
r6a.large	✓	Instance store not supported	✓	✓	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6a.xlarge	✓	Instance store not supported	✓	✓	✓	✓
r6a.2xlarge	✓	Instance store not supported	✓	✓	✓	✓
r6a.4xlarge	✓	Instance store not supported	✓	✓	✓	✓
r6a.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6a.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6a.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6a.32xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6a.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6a.metal	✓	Instance store not supported	✓	✗	✗	✗
R6g						
r6g.medium	✓	Instance store not supported	✗	✗	✓	✗
r6g.large	✓	Instance store not supported	✗	✗	✓	✓
r6g.xlarge	✓	Instance store not supported	✗	✗	✓	✓
r6g.2xlarge	✓	Instance store not supported	✗	✗	✓	✓
r6g.4xlarge	✓	Instance store not supported	✗	✗	✓	✓
r6g.8xlarge	✓	Instance store not supported	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6g.12xlarge	✓	Instance store not supported	✗	✗	✓	✓
r6g.16xlarge	✓	Instance store not supported	✗	✗	✓	✓
r6g.metal	✓	Instance store not supported	✗	✗	✗	✗
R6gd						
r6gd.medium	✓	✓	✗	✗	✓	✗
r6gd.large	✓	✓	✗	✗	✓	✓
r6gd.xlarge	✓	✓	✗	✗	✓	✓
r6gd.2xlarge	✓	✓	✗	✗	✓	✓
r6gd.4xlarge	✓	✓	✗	✗	✓	✓
r6gd.8xlarge	✓	✓	✗	✗	✓	✓
r6gd.12xlarge	✓	✓	✗	✗	✓	✓
r6gd.16xlarge	✓	✓	✗	✗	✓	✓
r6gd.metal	✓	✓	✗	✗	✗	✗
R6i						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6i.large	✓	Instance store not supported	✓	✗	✓	✗
r6i.xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.24xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6i.32xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6i.metal	✓	Instance store not supported	✓	✗	✗	✗
R6idn						
r6idn.large	✓	✓	✓	✗	✓	✗
r6idn.xlarge	✓	✓	✓	✗	✓	✓
r6idn.2xlarge	✓	✓	✓	✗	✓	✓
r6idn.4xlarge	✓	✓	✓	✗	✓	✓
r6idn.8xlarge	✓	✓	✓	✗	✓	✓
r6idn.12xlarge	✓	✓	✓	✗	✓	✓
r6idn.16xlarge	✓	✓	✓	✗	✓	✓
r6idn.24xlarge	✓	✓	✓	✗	✓	✓
r6idn.32xlarge	✓	✓	✓	✗	✓	✓
r6idn.metal	✓	✓	✓	✗	✗	✗
R6in						
r6in.large	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6in.xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
r6in.32xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r6in.metal	✓	Instance store not supported	✓	✗	✗	✗
R6id						
r6id.large	✓	✓	✓	✗	✓	✗
r6id.xlarge	✓	✓	✓	✗	✓	✓
r6id.2xlarge	✓	✓	✓	✗	✓	✓
r6id.4xlarge	✓	✓	✓	✗	✓	✓
r6id.8xlarge	✓	✓	✓	✗	✓	✓
r6id.12xlarge	✓	✓	✓	✗	✓	✓
r6id.16xlarge	✓	✓	✓	✗	✓	✓
r6id.24xlarge	✓	✓	✓	✗	✓	✓
r6id.32xlarge	✓	✓	✓	✗	✓	✓
r6id.metal	✓	✓	✓	✗	✗	✗
R7a						
r7a.medium	✓	Instance store not supported	✓	✗	✓	✗
r7a.large	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r7a.xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.32xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r7a.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7a.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
R7g						
r7g.medium	✓	Instance store not supported	✓	✗	✓	✗
r7g.large	✓	Instance store not supported	✓	✗	✓	✗
r7g.xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7g.2xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7g.4xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7g.8xlarge	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r7g.12xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7g.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7g.metal	✓	Instance store not supported	✓	✗	✗	✗
R7gd						
r7gd.medium	✓	✓	✓	✗	✓	✗
r7gd.large	✓	✓	✓	✗	✓	✗
r7gd.xlarge	✓	✓	✓	✗	✓	✗
r7gd.2xlarge	✓	✓	✓	✗	✓	✗
r7gd.4xlarge	✓	✓	✓	✗	✓	✗
r7gd.8xlarge	✓	✓	✓	✗	✓	✗
r7gd.12xlarge	✓	✓	✓	✗	✓	✗
r7gd.16xlarge	✓	✓	✓	✗	✓	✗
r7gd.metal	✓	✓	✓	✗	✗	✗
R7i						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r7i.large	✓	Instance store not supported	✓	✗	✓	✗
r7i.xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7i.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7i.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7i.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7i.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7i.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7i.24xlarge	✓	Instance store not supported	✓	✗	✓	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r7i.48xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7i.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗
r7i.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
R7iz						
r7iz.large	✓	Instance store not supported	✓	✗	✓	✗
r7iz.xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7iz.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7iz.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7iz.8xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r7iz.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r7iz.16xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7iz.32xlarge	✓	Instance store not supported	✓	✗	✓	✗
r7iz.metal-16xl	✓	Instance store not supported	✓	✗	✗	✗
r7iz.metal-32xl	✓	Instance store not supported	✓	✗	✗	✗
R8g						
r8g.medium	✓	Instance store not supported	✓	✗	✓	✗
r8g.large	✓	Instance store not supported	✓	✗	✓	✓
r8g.xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r8g.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.8xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
r8g.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r8g.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
U-3tb1						
u-3tb1.56xlarge	✓	Instance store not supported	✓	✗	✗	✗
U-6tb1						
u-6tb1.56xlarge	✓	Instance store not supported	✓	✗	✗	✗
u-6tb1.112xlarge	✓	Instance store not supported	✓	✗	✗	✗
u-6tb1.metal	✓	Instance store not supported	✓	✗	✗	✗
U-9tb1						
u-9tb1.112xlarge	✓	Instance store not supported	✓	✗	✗	✗
u-9tb1.metal	✓	Instance store not supported	✓	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
U-12tb1						
u-12tb1.112xlarge	✓	Instance store not supported	✓	✗	✗	✗
u-12tb1.metal	✓	Instance store not supported	✓	✗	✗	✗
U-18tb1						
u-18tb1.112xlarge	✓	Instance store not supported	✓	✗	✗	✗
u-18tb1.metal	✓	Instance store not supported	✓	✗	✗	✗
U-24tb1						
u-24tb1.112xlarge	✓	Instance store not supported	✓	✗	✗	✗
u-24tb1.metal	✓	Instance store not supported	✓	✗	✗	✗
U7i-12tb						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
u7i-12tb.224xlarge	✓	Instance store not supported	✓	✗	✓	✗
U7in-16tb						
u7in-16tb.224xlarge	✓	Instance store not supported	✓	✗	✓	✗
U7in-24tb						
u7in-24tb.224xlarge	✓	Instance store not supported	✓	✗	✓	✗
U7in-32tb						
u7in-32tb.224xlarge	✓	Instance store not supported	✓	✗	✓	✗
X1						
x1.16xlarge	✓	✗	✗	✗	✗	✗
x1.32xlarge	✓	✗	✗	✗	✗	✗
X1e						
x1e.xlarge	✓	✗	✗	✗	✗	✗
x1e.2xlarge	✓	✗	✗	✗	✗	✗
x1e.4xlarge	✓	✗	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
x1e.8xlarge	✓	✗	✗	✗	✗	✗
x1e.16xlarge	✓	✗	✗	✗	✗	✗
x1e.32xlarge	✓	✗	✗	✗	✗	✗
X2gd						
x2gd.medium	✓	✓	✗	✗	✗	✗
x2gd.large	✓	✓	✗	✗	✗	✓
x2gd.xlarge	✓	✓	✗	✗	✗	✓
x2gd.2xlarge	✓	✓	✗	✗	✗	✓
x2gd.4xlarge	✓	✓	✗	✗	✗	✓
x2gd.8xlarge	✓	✓	✗	✗	✗	✓
x2gd.12xlarge	✓	✓	✗	✗	✗	✓
x2gd.16xlarge	✓	✓	✗	✗	✗	✓
x2gd.metal	✓	✓	✗	✗	✗	✗
X2idn						
x2idn.16xlarge	✓	✓	✓	✗	✓	✓
x2idn.24xlarge	✓	✓	✓	✗	✓	✓
x2idn.32xlarge	✓	✓	✓	✗	✓	✓
x2idn.metal	✓	✓	✓	✗	✗	✗
X2iedn						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
x2iedn.xlarge	✓	✓	✓	✗	✓	✓
x2iedn.2xlarge	✓	✓	✓	✗	✓	✓
x2iedn.4xlarge	✓	✓	✓	✗	✓	✓
x2iedn.8xlarge	✓	✓	✓	✗	✓	✓
x2iedn.16xlarge	✓	✓	✓	✗	✓	✓
x2iedn.24xlarge	✓	✓	✓	✗	✓	✓
x2iedn.32xlarge	✓	✓	✓	✗	✓	✓
x2iedn.metal	✓	✓	✓	✗	✗	✗
X2iezn						
x2iezn.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
x2iezn.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
x2iezn.6xlarge	✓	Instance store not supported	✓	✗	✓	✓
x2iezn.8xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
x2iezn.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
x2iezn.metal	✓	Instance store not supported	✓	✗	✗	✗
			X8g			
x8g.medium	✓	Instance store not supported	✓	✗	✓	✗
x8g.large	✓	Instance store not supported	✓	✗	✓	✓
x8g.xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.4xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.8xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
x8g.12xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.16xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
x8g.metal-24xl	✓	Instance store not supported	✓	✗	✗	✗
x8g.metal-48xl	✓	Instance store not supported	✓	✗	✗	✗
z1d						
z1d.large	✓	✓	✗	✗	✓	✗
z1d.xlarge	✓	✓	✗	✗	✓	✓
z1d.2xlarge	✓	✓	✗	✗	✓	✓
z1d.3xlarge	✓	✓	✗	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
z1d.6xlarge	✓	✓	✗	✗	✓	✓
z1d.12xlarge	✓	✓	✗	✗	✓	✓
z1d.metal	✓	✓	✗	✗	✗	✗

Specifications for Amazon EC2 storage optimized instances

Storage optimized instances are designed for workloads that require high, sequential read and write access to very large data sets on local storage. They are optimized to deliver tens of thousands of low-latency, random I/O operations per second (IOPS) to applications.

For information on previous generation instance types of this category, such as I2 instances, see Specifications for Amazon EC2 previous generation instances.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications
- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
D2	d2.xlarge |d2.2xlarge |d2.4xlarge |d2.8xlarge
D3	d3.xlarge |d3.2xlarge |d3.4xlarge |d3.8xlarge
D3en	d3en.xlarge |d3en.2xlarge |d3en.4xlarge |d3en.6xlarge | d3en.8xlarge |d3en.12xlarge
H1	h1.2xlarge |h1.4xlarge |h1.8xlarge |h1.16xlarge
I3	i3.large|i3.xlarge |i3.2xlarge |i3.4xlarge |i3.8xlarge | i3.16xlarge |i3.metal
I3en	i3en.large |i3en.xlarge |i3en.2xlarge |i3en.3xlarge | i3en.6xlarge |i3en.12xlarge |i3en.24xlarge |i3en.metal
I4g	i4g.large |i4g.xlarge |i4g.2xlarge |i4g.4xlarge |i4g.8xlarge |i4g.16xlarge
I4i	i4i.large |i4i.xlarge |i4i.2xlarge |i4i.4xlarge |i4i.8xlarge |i4i.12xlarge |i4i.16xlarge |i4i.24xlarge |i4i.32xlarge | i4i.metal
Im4gn	im4gn.large |im4gn.xlarge |im4gn.2xlarge |im4gn.4xlarge | im4gn.8xlarge |im4gn.16xlarge
Is4gen	is4gen.medium |is4gen.large |is4gen.xlarge |is4gen.2xlarge | is4gen.4xlarge |is4gen.8xlarge

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
D2	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
D3	Nitro v3	Intel (x86_64)	✗	✗	✓	✗	Windows | Linux
D3en	Nitro v3	Intel (x86_64)	✗	✗	✓	✗	Windows | Linux
H1	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
I3	Xen *	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
I3en	Nitro v3	Intel (x86_64)	✓	✓	✓	✓	Windows | Linux
I4g	Nitro v4	AWS Graviton (arm64)	✗	✓	✓	✗	Linux
I4i	Nitro v4	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
Im4gn	Nitro v4	AWS Graviton (arm64)	✗	✓	✓	✗	Linux
Is4gen	Nitro v4	AWS Graviton (arm64)	✗	✗	✓	✗	Linux

Note

* `i3.metal` instances are built on the AWS Nitro System.

Performance specifications

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
			D2					
d2.xlarge	✗	30.50	Intel Xeon E52676v3	4	2	2	✗	✗
d2.2xlarge	✗	61.00	Intel Xeon E52676v3	8	4	2	✗	✗
d2.4xlarge	✗	122.00	Intel Xeon E52676v3	16	8	2	✗	✗
d2.8xlarge	✗	244.00	Intel Xeon E52676v3	36	18	2	✗	✗
			D3					
d3.xlarge	✗	32.00	Intel Xeon Platinum 8259	4	2	2	✗	✗
d3.2xlarge	✗	64.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
d3.4xlarge	✗	128.00	Intel Xeon Platinum 8259	16	8	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
d3.8xlarge	✗	256.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
D3en								
d3en.xlarge	✗	16.00	Intel Xeon Platinum 8259	4	2	2	✗	✗
d3en.2xlarge	✗	32.00	Intel Xeon Platinum 8259	8	4	2	✗	✗
d3en.4xlarge	✗	64.00	Intel Xeon Platinum 8259	16	8	2	✗	✗
d3en.6xlarge	✗	96.00	Intel Xeon Platinum 8259	24	12	2	✗	✗
d3en.8xlarge	✗	128.00	Intel Xeon Platinum 8259	32	16	2	✗	✗
d3en.12xlarge	✗	192.00	Intel Xeon Platinum 8259	48	24	2	✗	✗
H1								
h1.2xlarge	✗	32.00	Intel Broadwell E5-2686v4	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
h1.4xlarge	✗	64.00	Intel Broadwell E5-2686v4	16	8	2	✗	✗
h1.8xlarge	✗	128.00	Intel Broadwell E5-2686v4	32	16	2	✗	✗
h1.16xlarge	✗	256.00	Intel Broadwell E5-2686v4	64	32	2	✗	✗
I3								
i3.large	✗	15.25	Intel Broadwell E5-2686v4	2	1	2	✗	✗
i3.xlarge	✗	30.50	Intel Broadwell E5-2686v4	4	2	2	✗	✗
i3.2xlarge	✗	61.00	Intel Broadwell E5-2686v4	8	4	2	✗	✗
i3.4xlarge	✗	122.00	Intel Broadwell E5-2686v4	16	8	2	✗	✗
i3.8xlarge	✗	244.00	Intel Broadwell E5-2686v4	32	16	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
i3.16xlarge	✗	488.00	Intel Broadwell E5-2686v4	64	32	2	✗	✗
i3.metal	✗	512.00	Intel Broadwell E5-2686v4	72	36	2	✗	✗
I3en								
i3en.large	✗	16.00	Intel Xeon Platinum 8175	2	1	2	✗	✗
i3en.xlarge	✗	32.00	Intel Xeon Platinum 8175	4	2	2	✗	✗
i3en.2xlarge	✗	64.00	Intel Xeon Platinum 8175	8	4	2	✗	✗
i3en.3xlarge	✗	96.00	Intel Xeon Platinum 8175	12	6	2	✗	✗
i3en.6xlarge	✗	192.00	Intel Xeon Platinum 8175	24	12	2	✗	✗
i3en.12xlarge	✗	384.00	Intel Xeon Platinum 8175	48	24	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
i3en.24xlarge	✗	768.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
i3en.metal	✗	768.00	Intel Xeon Platinum 8175	96	48	2	✗	✗
I4g								
i4g.large	✗	16.00	AWS Graviton2 Processor	2	2	1	✗	✗
i4g.xlarge	✗	32.00	AWS Graviton2 Processor	4	4	1	✗	✗
i4g.2xlarge	✗	64.00	AWS Graviton2 Processor	8	8	1	✗	✗
i4g.4xlarge	✗	128.00	AWS Graviton2 Processor	16	16	1	✗	✗
i4g.8xlarge	✗	256.00	AWS Graviton2 Processor	32	32	1	✗	✗
i4g.16xlarge	✗	512.00	AWS Graviton2 Processor	64	64	1	✗	✗
I4i								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
i4i.large	✗	16.00	Intel Xeon Ice Lake	2	1	2	✗	✗
i4i.xlarge	✗	32.00	Intel Xeon Ice Lake	4	2	2	✗	✗
i4i.2xlarge	✗	64.00	Intel Xeon Ice Lake	8	4	2	✗	✗
i4i.4xlarge	✗	128.00	Intel Xeon Ice Lake	16	8	2	✗	✗
i4i.8xlarge	✗	256.00	Intel Xeon Ice Lake	32	16	2	✗	✗
i4i.12xlarge	✗	384.00	Intel Xeon Ice Lake	48	24	2	✗	✗
i4i.16xlarge	✗	512.00	Intel Xeon Ice Lake	64	32	2	✗	✗
i4i.24xlarge	✗	768.00	Intel Xeon Ice Lake	96	48	2	✗	✗
i4i.32xlarge	✗	1024.0(	Intel Xeon Ice Lake	128	64	2	✗	✗
i4i.metal	✗	1024.0(	Intel Xeon Ice Lake	128	64	2	✗	✗
Im4gn								
im4gn.large	✗	8.00	AWS Graviton2 Processor	2	2	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
im4gn.xlarge	✗	16.00	AWS Graviton2 Processor	4	4	1	✗	✗
im4gn.2xlarge	✗	32.00	AWS Graviton2 Processor	8	8	1	✗	✗
im4gn.4xlarge	✗	64.00	AWS Graviton2 Processor	16	16	1	✗	✗
im4gn.8xlarge	✗	128.00	AWS Graviton2 Processor	32	32	1	✗	✗
im4gn.16xlarge	✗	256.00	AWS Graviton2 Processor	64	64	1	✗	✗
Is4gen								
is4gen.medium	✗	6.00	AWS Graviton2 Processor	1	1	1	✗	✗
is4gen.large	✗	12.00	AWS Graviton2 Processor	2	2	1	✗	✗
is4gen.xlarge	✗	24.00	AWS Graviton2 Processor	4	4	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
is4gen.2xlarge	✗	48.00	AWS Graviton2 Processor	8	8	1	✗	✗
is4gen.4xlarge	✗	96.00	AWS Graviton2 Processor	16	16	1	✗	✗
is4gen.8xlarge	✗	192.00	AWS Graviton2 Processor	32	32	1	✗	✗

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
D2								
d2.xlarge	Moderate	✗	✗ [2]	✗	1	4	15	✓
d2.2xlarge	High	✗	✗ [2]	✗	1	4	15	✓
d2.4xlarge	High	✗	✗ [2]	✗	1	8	30	✓
d2.8xlarge	10 Gigabit	✗	✗ [2]	✗	1	8	30	✓
D3								
d3.xlarge [1]	3.0 / 15.0	✗	✓	✗	1	4	3	✓
d3.2xlarge [1]	6.0 / 15.0	✗	✓	✗	1	4	5	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
d3.4xlarge [1]	12.5 / 15.0	✗	✓	✗	1	4	10	✓
d3.8xlarge	25 Gigabit	✗	✓	✗	1	3	20	✓
D3en								
d3en.xlarge [1]	6.0 / 25.0	✗	✓	✗	1	4	3	✓
d3en.2xlarge [1]	12.5 / 25.0	✗	✓	✗	1	4	5	✓
d3en.4xlarge	25 Gigabit	✗	✓	✗	1	4	10	✓
d3en.6xlarge	40 Gigabit	✗	✓	✗	1	4	15	✓
d3en.8xlarge	50 Gigabit	✗	✓	✗	1	4	20	✓
d3en.12xlarge	75 Gigabit	✗	✓	✗	1	3	30	✓
H1								
h1.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
h1.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
h1.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
h1.16xlarge	25 Gigabit	✗	✓	✗	1	8	50	✓
I3								
i3.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
i3.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
i3.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
i3.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
i3.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
i3.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
i3.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
I3en								
i3en.large [1]	2.1 / 25.0	✗	✓	✗	1	3	10	✓
i3en.xlarge [1]	4.2 / 25.0	✗	✓	✗	1	4	15	✓
i3en.2xlarge [1]	8.4 / 25.0	✗	✓	✗	1	4	15	✓
i3en.3xlarge [1]	12.5 / 25.0	✗	✓	✗	1	4	15	✓
i3en.6xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
i3en.12xlarge	50 Gigabit	✓	✓	✗	1	8	30	✓
i3en.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
i3en.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
I4g								
i4g.large [1]	0.781 / 10.0	✗	✓	✗	1	3	10	✓
i4g.xlarge [1]	1.875 / 10.0	✗	✓	✗	1	4	15	✓
i4g.2xlarge [1]	4.687 / 12.0	✗	✓	✗	1	4	15	✓
i4g.4xlarge [1]	9.375 / 25.0	✗	✓	✓	1	8	30	✓
i4g.8xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
i4g.16xlarge	37.5 Gigabit	✓	✓	✓	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
I4i								
i4i.large [1]	0.781 / 10.0	✗	✓	✗	1	3	10	✓
i4i.xlarge [1]	1.875 / 10.0	✗	✓	✗	1	4	15	✓
i4i.2xlarge [1]	4.687 / 12.0	✗	✓	✗	1	4	15	✓
i4i.4xlarge [1]	9.375 / 25.0	✗	✓	✗	1	8	30	✓
i4i.8xlarge	18.75 Gigabit	✗	✓	✓	1	8	30	✓
i4i.12xlarge	28.12 Gigabit	✗	✓	✓	1	8	30	✓
i4i.16xlarge	37.5 Gigabit	✗	✓	✓	1	15	50	✓
i4i.24xlarge	56.25 Gigabit	✗	✓	✓	1	15	30	✓
i4i.32xlarge	75 Gigabit	✓	✓	✓	1	15	50	✓
i4i.metal	75 Gigabit	✓	✓	✓	1	15	50	✓
Im4gn								
im4gn.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
im4gn.xlarge [1]	6.25 / 25.0	✗	✓	✗	1	4	15	✓
im4gn.2xlarge [1]	12.5 / 25.0	✗	✓	✗	1	4	15	✓
im4gn.4xlarge	25 Gigabit	✗	✓	✓	1	8	30	✓
im4gn.8xlarge	50 Gigabit	✗	✓	✓	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
im4gn.16xlarge	100 Gigabit	✓	✓	✓	1	15	50	✓
Is4gen								
is4gen.medium [1]	1.562 / 25.0	✗	✓	✗	1	2	4	✓
is4gen.large [1]	3.125 / 25.0	✗	✓	✗	1	3	10	✓
is4gen.xlarge [1]	6.25 / 25.0	✗	✓	✗	1	4	15	✓
is4gen.2xlarge [1]	12.5 / 25.0	✗	✓	✗	1	4	15	✓
is4gen.4xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
is4gen.8xlarge	50 Gigabit	✗	✓	✗	1	8	30	✓

Note

[1] These instances have a baseline bandwidth and can use a network I/O credit mechanism to burst beyond their baseline bandwidth on a best effort basis. Other instances types can sustain their maximum performance indefinitely. For more information, see instance network bandwidth.

[2] These instances support enhanced networking using the Intel 82599 VF interface.

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated

bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5 gp3 volumes provisioned with `16,000` IOPS each (5 volumes x `16,000` IOPS = `80,000` IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
D2					
d2.xlarge	750.00	93.75	6000.00	✗	default
d2.2xlarge	1000.00	125.00	8000.00	✗	default
d2.4xlarge	2000.00	250.00	16000.00	✗	default
d2.8xlarge	4000.00	500.00	32000.00	✗	default
D3					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
d3.xlarge [1]	850.00 / 2800.00	106.25 / 350.00	5000.00 / 15000.00	✓	default
d3.2xlarge [1]	1700.00 / 2800.00	212.50 / 350.00	10000.00 / 15000.00	✓	default
d3.4xlarge	2800.00	350.00	15000.00	✓	default
d3.8xlarge	5000.00	625.00	30000.00	✓	default
D3en					
d3en.xlarge [1]	850.00 / 2800.00	106.25 / 350.00	5000.00 / 15000.00	✓	default
d3en.2xlarge [1]	1700.00 / 2800.00	212.50 / 350.00	10000.00 / 15000.00	✓	default
d3en.4xlarge	2800.00	350.00	15000.00	✓	default
d3en.6xlarge	4000.00	500.00	25000.00	✓	default
d3en.8xlarge	5000.00	625.00	30000.00	✓	default
d3en.12xlarge	7000.00	875.00	40000.00	✓	default
H1					
h1.2xlarge	1750.00	218.75	12000.00	✗	default
h1.4xlarge	3500.00	437.50	20000.00	✗	default
h1.8xlarge	7000.00	875.00	40000.00	✗	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
h1.16xlarge	14000.00	1750.00	80000.00	✗	default
I3					
i3.large	425.00	53.12	3000.00	✗	default
i3.xlarge	850.00	106.25	6000.00	✗	default
i3.2xlarge	1700.00	212.50	12000.00	✗	default
i3.4xlarge	3500.00	437.50	16000.00	✗	default
i3.8xlarge	7000.00	875.00	32500.00	✗	default
i3.16xlarge	14000.00	1750.00	65000.00	✗	default
i3.metal	19000.00	2375.00	80000.00	✓	default
I3en					
i3en.large [1]	576.00 / 4750.00	72.10 / 593.75	3000.00 / 20000.00	✓	default
i3en.xlarge [1]	1153.00 / 4750.00	144.20 / 593.75	6000.00 / 20000.00	✓	default
i3en.2xlarge [1]	2307.00 / 4750.00	288.39 / 593.75	12000.00 / 20000.00	✓	default
i3en.3xlarge [1]	3800.00 / 4750.00	475.00 / 593.75	15000.00 / 20000.00	✓	default
i3en.6xlarge	4750.00	593.75	20000.00	✓	default
i3en.12xlarge	9500.00	1187.50	40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
i3en.24xlarge	19000.00	2375.00	80000.00	✓	default
i3en.metal	19000.00	2375.00	80000.00	✓	default
I4g					
i4g.large [1]	625.00 / 10000.00	78.12 / 1250.00	2500.00 / 40000.00	✓	default
i4g.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	5000.00 / 40000.00	✓	default
i4g.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	10000.00 / 40000.00	✓	default
i4g.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
i4g.8xlarge	10000.00	1250.00	40000.00	✓	default
i4g.16xlarge	20000.00	2500.00	80000.00	✓	default
I4i					
i4i.large [1]	625.00 / 10000.00	78.12 / 1250.00	2500.00 / 40000.00	✓	default
i4i.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	5000.00 / 40000.00	✓	default
i4i.2xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	10000.00 / 40000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
i4i.4xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
i4i.8xlarge	10000.00	1250.00	40000.00	✓	default
i4i.12xlarge	15000.00	1875.00	60000.00	✓	default
i4i.16xlarge	20000.00	2500.00	80000.00	✓	default
i4i.24xlarge	30000.00	3750.00	120000.00	✓	default
i4i.32xlarge	40000.00	5000.00	160000.00	✓	default
i4i.metal	40000.00	5000.00	160000.00	✓	default
Im4gn					
im4gn.large [1]	1250.00 / 10000.00	156.25 / 1250.00	5000.00 / 40000.00	✓	default
im4gn.xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	10000.00 / 40000.00	✓	default
im4gn.2xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
im4gn.4xlarge	10000.00	1250.00	40000.00	✓	default
im4gn.8xlarge	20000.00	2500.00	80000.00	✓	default
im4gn.16xlarge	40000.00	5000.00	160000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
Is4gen					
is4gen.medium [1]	625.00 / 10000.00	78.12 / 1250.00	2500.00 / 40000.00	✓	default
is4gen.large [1]	1250.00 / 10000.00	156.25 / 1250.00	5000.00 / 40000.00	✓	default
is4gen.xlarge [1]	2500.00 / 10000.00	312.50 / 1250.00	10000.00 / 40000.00	✓	default
is4gen.2xlarge [1]	5000.00 / 10000.00	625.00 / 1250.00	20000.00 / 40000.00	✓	default
is4gen.4xlarge	10000.00	1250.00	40000.00	✓	default
is4gen.8xlarge	20000.00	2500.00	80000.00	✓	default

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.

[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

The following table shows the instance store volume configuration for supported instance types, along with the aggregated IOPS performance with 4,096 byte block size at queue depth saturation.

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
D2					
d2.xlarge	3 x 2048 GB	HDD		✓	
d2.2xlarge	6 x 2048 GB	HDD		✓	
d2.4xlarge	12 x 2048 GB	HDD		✓	
d2.8xlarge	24 x 2048 GB	HDD		✓	
D3					
d3.xlarge	3 x 1980 GB	NVMe HDD			✓
d3.2xlarge	6 x 1980 GB	NVMe HDD			✓
d3.4xlarge	12 x 1980 GB	NVMe HDD			✓
d3.8xlarge	24 x 1980 GB	NVMe HDD			✓
D3en					
d3en.xlarge	2 x 13980 GB	NVMe HDD			✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
d3en.2xlarge	4 x 13980 GB	NVMe HDD			✓
d3en.4xlarge	8 x 13980 GB	NVMe HDD			✓
d3en.6xlarge	12 x 13980 GB	NVMe HDD			✓
d3en.8xlarge	16 x 13980 GB	NVMe HDD			✓
d3en.12xlarge	24 x 13980 GB	NVMe HDD			✓
H1					
h1.2xlarge	1 x 2000 GB	HDD		✓	
h1.4xlarge	2 x 2000 GB	HDD		✓	
h1.8xlarge	4 x 2000 GB	HDD		✓	
h1.16xlarge	8 x 2000 GB	HDD		✓	
I3					
i3.large	1 x 475 GB	NVMe SSD	103,125 / 35,000		✓
i3.xlarge	1 x 950 GB	NVMe SSD	206,250 / 70,000		✓
i3.2xlarge	1 x 1900 GB	NVMe SSD	412,500 / 180,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
i3.4xlarge	2 x 1900 GB	NVMe SSD	825,000 / 360,000		✓
i3.8xlarge	4 x 1900 GB	NVMe SSD	1,650,000 / 720,000		✓
i3.16xlarge	8 x 1900 GB	NVMe SSD	3,300,000 / 1,440,000		✓
i3.metal	8 x 1900 GB	NVMe SSD	3,300,000 / 1,440,000		✓
I3en					
i3en.large	1 x 1250 GB	NVMe SSD	42,500 / 32,500		✓
i3en.xlarge	1 x 2500 GB	NVMe SSD	85,000 / 65,000		✓
i3en.2xlarge	2 x 2500 GB	NVMe SSD	170,000 / 130,000		✓
i3en.3xlarge	1 x 7500 GB	NVMe SSD	250,000 / 200,000		✓
i3en.6xlarge	2 x 7500 GB	NVMe SSD	500,000 / 400,000		✓
i3en.12xlarge	4 x 7500 GB	NVMe SSD	1,000,000 / 800,000		✓
i3en.24xlarge	8 x 7500 GB	NVMe SSD	2,000,000 / 1,600,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
i3en.metal	8 x 7500 GB	NVMe SSD	2,000,000 / 1,600,000		✓
I4g					
i4g.large	1 x 468 GB	NVMe SSD	31,250 / 25,000		✓
i4g.xlarge	1 x 937 GB	NVMe SSD	62,500 / 50,000		✓
i4g.2xlarge	1 x 1875 GB	NVMe SSD	125,000 / 100,000		✓
i4g.4xlarge	1 x 3750 GB	NVMe SSD	250,000 / 200,000		✓
i4g.8xlarge	2 x 3750 GB	NVMe SSD	500,000 / 400,000		✓
i4g.16xlarge	4 x 3750 GB	NVMe SSD	1,000,000 / 800,000		✓
I4i					
i4i.large	1 x 468 GB	NVMe SSD	50,000 / 27,500		✓
i4i.xlarge	1 x 937 GB	NVMe SSD	100,000 / 55,000		✓
i4i.2xlarge	1 x 1875 GB	NVMe SSD	200,000 / 110,000		✓
i4i.4xlarge	1 x 3750 GB	NVMe SSD	400,000 / 220,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
i4i.8xlarge	2 x 3750 GB	NVMe SSD	800,000 / 440,000		✓
i4i.12xlarge	3 x 3750 GB	NVMe SSD	1,200,000 / 660,000		✓
i4i.16xlarge	4 x 3750 GB	NVMe SSD	1,600,000 / 880,000		✓
i4i.24xlarge	6 x 3750 GB	NVMe SSD	2,400,000 / 1,320,000		✓
i4i.32xlarge	8 x 3750 GB	NVMe SSD	3,200,000 / 1,760,000		✓
i4i.metal	8 x 3750 GB	NVMe SSD	3,200,000 / 1,760,000		✓
Im4gn					
im4gn.large	1 x 937 GB	NVMe SSD	31,250 / 25,000		✓
im4gn.xlarge	1 x 1875 GB	NVMe SSD	62,500 / 50,000		✓
im4gn.2xlarge	1 x 3750 GB	NVMe SSD	125,000 / 100,000		✓
im4gn.4xlarge	1 x 7500 GB	NVMe SSD	250,000 / 200,000		✓
im4gn.8xlarge	2 x 7500 GB	NVMe SSD	500,000 / 400,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
im4gn.16xlarge	4 x 7500 GB	NVMe SSD	1,000,000 / 800,000		✓
Is4gen					
is4gen.medium	1 x 937 GB	NVMe SSD	31,250 / 25,000		✓
is4gen.large	1 x 1875 GB	NVMe SSD	62,500 / 50,000		✓
is4gen.xlarge	1 x 3750 GB	NVMe SSD	125,000 / 100,000		✓
is4gen.2xlarge	1 x 7500 GB	NVMe SSD	250,000 / 200,000		✓
is4gen.4xlarge	2 x 7500 GB	NVMe SSD	500,000 / 400,000		✓
is4gen.8xlarge	4 x 7500 GB	NVMe SSD	1,000,000 / 800,000		✓

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			D2			
d2.xlarge	✓	✗	✗	✗	✗	✗
d2.2xlarge	✓	✗	✗	✗	✗	✗
d2.4xlarge	✓	✗	✗	✗	✗	✗
d2.8xlarge	✓	✗	✗	✗	✗	✗
			D3			
d3.xlarge	✓	✓	✓	✗	✓	✓
d3.2xlarge	✓	✓	✓	✗	✓	✓
d3.4xlarge	✓	✓	✓	✗	✓	✓
d3.8xlarge	✓	✓	✓	✗	✓	✓
			D3en			
d3en.xlarge	✓	✓	✓	✗	✓	✓
d3en.2xlarge	✓	✓	✓	✗	✓	✓
d3en.4xlarge	✓	✓	✓	✗	✓	✓
d3en.6xlarge	✓	✓	✓	✗	✓	✓
d3en.8xlarge	✓	✓	✓	✗	✓	✓
d3en.12xlarge	✓	✓	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			H1			
h1.2xlarge	✓	✓	✗	✗	✗	✗
h1.4xlarge	✓	✓	✗	✗	✗	✗
h1.8xlarge	✓	✓	✗	✗	✗	✗
h1.16xlarge	✓	✓	✗	✗	✗	✗
			I3			
i3.large	✓	✓	✗	✗	✗	✗
i3.xlarge	✓	✓	✗	✗	✗	✗
i3.2xlarge	✓	✓	✗	✗	✗	✗
i3.4xlarge	✓	✓	✗	✗	✗	✗
i3.8xlarge	✓	✓	✗	✗	✗	✗
i3.16xlarge	✓	✓	✗	✗	✗	✗
i3.metal	✓	✓	✗	✗	✗	✗
			I3en			
i3en.large	✓	✓	✓	✗	✓	✗
i3en.xlarge	✓	✓	✓	✗	✓	✓
i3en.2xlarge	✓	✓	✓	✗	✓	✓
i3en.3xlarge	✓	✓	✓	✗	✓	✓
i3en.6xlarge	✓	✓	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
i3en.12xlarge	✓	✓	✓	✗	✓	✓
i3en.24xlarge	✓	✓	✓	✗	✓	✓
i3en.metal	✓	✓	✓	✗	✗	✗
I4g						
i4g.large	✓	✓	✓	✗	✗	✓
i4g.xlarge	✓	✓	✓	✗	✗	✓
i4g.2xlarge	✓	✓	✓	✗	✗	✓
i4g.4xlarge	✓	✓	✓	✗	✗	✓
i4g.8xlarge	✓	✓	✓	✗	✗	✓
i4g.16xlarge	✓	✓	✓	✗	✗	✓
I4i						
i4i.large	✓	✓	✓	✗	✓	✗
i4i.xlarge	✓	✓	✓	✗	✓	✓
i4i.2xlarge	✓	✓	✓	✗	✓	✓
i4i.4xlarge	✓	✓	✓	✗	✓	✓
i4i.8xlarge	✓	✓	✓	✗	✓	✓
i4i.12xlarge	✓	✓	✓	✗	✓	✓
i4i.16xlarge	✓	✓	✓	✗	✓	✓
i4i.24xlarge	✓	✓	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
i4i.32xlarge	✓	✓	✓	✗	✓	✓
i4i.metal	✓	✓	✓	✗	✗	✗
Im4gn						
im4gn.large	✓	✓	✓	✗	✗	✗
im4gn.xlarge	✓	✓	✓	✗	✗	✗
im4gn.2xlarge	✓	✓	✓	✗	✗	✗
im4gn.4xlarge	✓	✓	✓	✗	✗	✗
im4gn.8xlarge	✓	✓	✓	✗	✗	✗
im4gn.16xlarge	✓	✓	✓	✗	✗	✗
Is4gen						
is4gen.medium	✓	✓	✓	✗	✗	✗
is4gen.large	✓	✓	✓	✗	✗	✗
is4gen.xlarge	✓	✓	✓	✗	✗	✗
is4gen.2xlarge	✓	✓	✓	✗	✗	✗
is4gen.4xlarge	✓	✓	✓	✗	✗	✗
is4gen.8xlarge	✓	✓	✓	✗	✗	✗

Specifications for Amazon EC2 accelerated computing instances

Accelerated computing instances use hardware accelerators, or co-processors, to perform functions, such as floating point number calculations, graphics processing, or data pattern matching, more efficiently than is possible in software running on CPUs.

For information on previous generation instance types of this category, such as G3 instances, see Specifications for Amazon EC2 previous generation instances.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications
- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
DL1	dl1.24xlarge
DL2q	dl2q.24xlarge
F1	f1.2xlarge | f1.4xlarge | f1.16xlarge
G4ad	g4ad.xlarge | g4ad.2xlarge | g4ad.4xlarge | g4ad.8xlarge | g4ad.16xlarge

Instance family	Available instance types
G4dn	g4dn.xlarge |g4dn.2xlarge |g4dn.4xlarge |g4dn.8xlarge | g4dn.12xlarge |g4dn.16xlarge |g4dn.metal
G5	g5.xlarge |g5.2xlarge |g5.4xlarge |g5.8xlarge |g5.12xlarge | g5.16xlarge |g5.24xlarge |g5.48xlarge
G5g	g5g.xlarge |g5g.2xlarge |g5g.4xlarge |g5g.8xlarge |g5g.16xlarge |g5g.metal
G6	g6.xlarge |g6.2xlarge |g6.4xlarge |g6.8xlarge |g6.12xlarge | g6.16xlarge |g6.24xlarge |g6.48xlarge
G6e	g6e.xlarge |g6e.2xlarge |g6e.4xlarge |g6e.8xlarge |g6e.12xlarge |g6e.16xlarge |g6e.24xlarge |g6e.48xlarge
Gr6	gr6.4xlarge |gr6.8xlarge
Inf1	inf1.xlarge |inf1.2xlarge |inf1.6xlarge |inf1.24xlarge
Inf2	inf2.xlarge |inf2.8xlarge |inf2.24xlarge |inf2.48xlarge
P2	p2.xlarge |p2.8xlarge |p2.16xlarge
P3	p3.2xlarge |p3.8xlarge |p3.16xlarge
P3dn	p3dn.24xlarge
P4d	p4d.24xlarge
P4de	p4de.24xlarge
P5	p5.48xlarge
P5e	p5e.48xlarge
Trn1	trn1.2xlarge |trn1.32xlarge
Trn1n	trn1n.32xlarge

Instance family	Available instance types
VT1	vt1.3xlarge | vt1.6xlarge | vt1.24xlarge

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
DL1	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Linux
DL2q	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Linux
F1	Xen	Intel (x86_64)	✗	✓	✓	✗	Linux
G4ad	Nitro v3	AMD (x86_64)	✗	✓	✓	✗	Windows | Linux
G4dn	Nitro v3	Intel (x86_64)	✓	✓	✓	✗	Windows | Linux
G5	Nitro v3	AMD (x86_64)	✗	✓	✓	✗	Windows | Linux
G5g	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✗	Linux
G6	Nitro v4	AMD (x86_64)	✗	✓	✓	✗	Windows | Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicate Hosts support	Spot support	Hibernation support	Supported operating systems
G6e	Nitro v4	AMD (x86_64)	✗	✓	✓	✗	Windows | Linux
Gr6	Nitro v4	AMD (x86_64)	✗	✗	✓	✗	Windows | Linux
Inf1	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Linux
Inf2	Nitro v4	AMD (x86_64)	✗	✓	✓	✗	Linux
P2	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
P3	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
P3dn	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
P4d	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Linux
P4de	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Linux
P5	Nitro v4	AMD (x86_64)	✗	✗	✓	✗	Linux
P5e	Nitro v4	AMD (x86_64)	✗	✓	✓	✗	Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
Trn1	Nitro v4	Intel (x86_64)	✗	✓	✓	✗	Linux
Trn1n	Nitro v4	Intel (x86_64)	✗	✗	✓	✗	Linux
VT1	Nitro v3	Intel (x86_64)	✗	✓	✓	✗	Linux

Performance specifications

Instance type	Burstable	Memory (GiB)	Processor	vCPUs	CPU cores	Threads per core	Accelerators	Accelerator memory
DL1								
dl1.24xlarge	✗	768.00	Intel Xeon P-8275CL	96	48	2	8 x Habana Gaudi HL-205 GPU	256 GiB (8 x 32 GiB)
DL2q								
dl2q.24xlarge	✗	768.00	Intel Xeon Cascade Lake	96	48	2	8 x Qualcomm Qualcomm AI100 inference accelerator	125 GiB (8 x 15 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
F1								
f1.2xlarge	✗	122.00	Intel Xeon E5-2686v4	8	4	2	1 x Xilinx Virtex UltraScale (VU9P) FPGA	64 GiB (1 x 64 GiB)
f1.4xlarge	✗	244.00	Intel Xeon E5-2686v4	16	8	2	2 x Xilinx Virtex UltraScale (VU9P) FPGA	128 GiB (2 x 64 GiB)
f1.16xlarge	✗	976.00	Intel Xeon E5-2686v4	64	32	2	8 x Xilinx Virtex UltraScale (VU9P) FPGA	512 GiB (8 x 64 GiB)
G4ad								
g4ad.xlarge	✗	16.00	2nd Gen AMD EPYC 7R32	4	2	2	1 x AMD Radeon Pro V520 GPU	8 GiB (1 x 8 GiB)
g4ad.2xlarge	✗	32.00	2nd Gen AMD EPYC 7R32	8	4	2	1 x AMD Radeon Pro V520 GPU	8 GiB (1 x 8 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g4ad.4xlarge	✗	64.00	2nd Gen AMD EPYC 7R32	16	8	2	1 x AMD Radeon Pro V520 GPU	8 GiB (1 x 8 GiB)
g4ad.8xlarge	✗	128.00	2nd Gen AMD EPYC 7R32	32	16	2	2 x AMD Radeon Pro V520 GPU	16 GiB (2 x 8 GiB)
g4ad.16xlarge	✗	256.00	2nd Gen AMD EPYC 7R32	64	32	2	4 x AMD Radeon Pro V520 GPU	32 GiB (4 x 8 GiB)
G4dn								
g4dn.xlarge	✗	16.00	Intel Xeon P-8259L	4	2	2	1 x NVIDIA T4 GPU	16 GiB (1 x 16 GiB)
g4dn.2xlarge	✗	32.00	Intel Xeon P-8259L	8	4	2	1 x NVIDIA T4 GPU	16 GiB (1 x 16 GiB)
g4dn.4xlarge	✗	64.00	Intel Xeon P-8259L	16	8	2	1 x NVIDIA T4 GPU	16 GiB (1 x 16 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g4dn.8xlarge	✗	128.00	Intel Xeon P-8259L	32	16	2	1 x NVIDIA T4 GPU	16 GiB (1 x 16 GiB)
g4dn.12xlarge	✗	192.00	Intel Xeon P-8259L	48	24	2	4 x NVIDIA T4 GPU	64 GiB (4 x 16 GiB)
g4dn.16xlarge	✗	256.00	Intel Xeon P-8259L	64	32	2	1 x NVIDIA T4 GPU	16 GiB (1 x 16 GiB)
g4dn.metal	✗	384.00	Intel Xeon P-8259L	96	48	2	8 x NVIDIA T4 GPU	128 GiB (8 x 16 GiB)
G5								
g5.xlarge	✗	16.00	2nd Gen AMD EPYC 7R32	4	2	2	1 x NVIDIA A10G GPU	24 GiB (1 x 24 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g5.2xlarge	✗	32.00	2nd Gen AMD EPYC 7R32	8	4	2	1 x NVIDIA A10G GPU	24 GiB (1 x 24 GiB)
g5.4xlarge	✗	64.00	2nd Gen AMD EPYC 7R32	16	8	2	1 x NVIDIA A10G GPU	24 GiB (1 x 24 GiB)
g5.8xlarge	✗	128.00	2nd Gen AMD EPYC 7R32	32	16	2	1 x NVIDIA A10G GPU	24 GiB (1 x 24 GiB)
g5.12xlarge	✗	192.00	2nd Gen AMD EPYC 7R32	48	24	2	4 x NVIDIA A10G GPU	96 GiB (4 x 24 GiB)
g5.16xlarge	✗	256.00	2nd Gen AMD EPYC 7R32	64	32	2	1 x NVIDIA A10G GPU	24 GiB (1 x 24 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g5.24xlarge	✗	384.00	2nd Gen AMD EPYC 7R32	96	48	2	4 x NVIDIA A10G GPU	96 GiB (4 x 24 GiB)
g5.48xlarge	✗	768.00	2nd Gen AMD EPYC 7R32	192	96	2	8 x NVIDIA A10G GPU	192 GiB (8 x 24 GiB)
G5g								
g5g.xlarge	✗	8.00	AWS Graviton2 Processor	4	4	1	1 x NVIDIA T4g GPU	16 GiB (1 x 16 GiB)
g5g.2xlarge	✗	16.00	AWS Graviton2 Processor	8	8	1	1 x NVIDIA T4g GPU	16 GiB (1 x 16 GiB)
g5g.4xlarge	✗	32.00	AWS Graviton2 Processor	16	16	1	1 x NVIDIA T4g GPU	16 GiB (1 x 16 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g5g.8xlarge	✗	64.00	AWS Graviton2 Processor	32	32	1	1 x NVIDIA T4g GPU	16 GiB (1 x 16 GiB)
g5g.16xlarge	✗	128.00	AWS Graviton2 Processor	64	64	1	2 x NVIDIA T4g GPU	32 GiB (2 x 16 GiB)
g5g.metal	✗	128.00	AWS Graviton2 Processor	64	64	1	2 x NVIDIA T4g GPU	32 GiB (2 x 16 GiB)
G6								
g6.xlarge	✗	16.00	AMD EPYC 7R13	4	2	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)
g6.2xlarge	✗	32.00	AMD EPYC 7R13	8	4	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g6.4xlarge	✗	64.00	AMD EPYC 7R13	16	8	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)
g6.8xlarge	✗	128.00	AMD EPYC 7R13	32	16	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)
g6.12xlarge	✗	192.00	AMD EPYC 7R13	48	24	2	4 x NVIDIA L4 GPU	357 GiB (4 x 89 GiB)
g6.16xlarge	✗	256.00	AMD EPYC 7R13	64	32	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)
g6.24xlarge	✗	384.00	AMD EPYC 7R13	96	48	2	4 x NVIDIA L4 GPU	357 GiB (4 x 89 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g6.48xlarge	✗	768.00	AMD EPYC 7R13	192	96	2	8 x NVIDIA L4 GPU	1430 GiB (8 x 178 GiB)
G6e								
g6e.xlarge	✗	32.00	AMD EPYC 7R13	4	2	2	1 x NVIDIA L40S GPU	44 GiB (1 x 44 GiB)
g6e.2xlarge	✗	64.00	AMD EPYC 7R13	8	4	2	1 x NVIDIA L40S GPU	44 GiB (1 x 44 GiB)
g6e.4xlarge	✗	128.00	AMD EPYC 7R13	16	8	2	1 x NVIDIA L40S GPU	44 GiB (1 x 44 GiB)
g6e.8xlarge	✗	256.00	AMD EPYC 7R13	32	16	2	1 x NVIDIA L40S GPU	44 GiB (1 x 44 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
g6e.12xlarge	✗	384.00	AMD EPYC 7R13	48	24	2	4 x NVIDIA L40S GPU	715 GiB (4 x 178 GiB)
g6e.16xlarge	✗	512.00	AMD EPYC 7R13	64	32	2	1 x NVIDIA L40S GPU	44 GiB (1 x 44 GiB)
g6e.24xlarge	✗	768.00	AMD EPYC 7R13	96	48	2	4 x NVIDIA L40S GPU	715 GiB (4 x 178 GiB)
g6e.48xlarge	✗	1536.00	AMD EPYC 7R13	192	96	2	8 x NVIDIA L40S GPU	2861 GiB (8 x 357 GiB)
Gr6								
gr6.4xlarge	✗	128.00	AMD EPYC 7R13	16	8	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
gr6.8xlarge	✗	256.00	AMD EPYC 7R13	32	16	2	1 x NVIDIA L4 GPU	22 GiB (1 x 22 GiB)
Inf1								
inf1.xlarge	✗	8.00	Intel Xeon P-8259L	4	2	2	1 x AWS Inferentia inference accelerator	8 GiB (1 x 8 GiB)
inf1.2xlarge	✗	16.00	Intel Xeon P-8259L	8	4	2	1 x AWS Inferentia inference accelerator	8 GiB (1 x 8 GiB)
inf1.6xlarge	✗	48.00	Intel Xeon P-8259L	24	12	2	4 x AWS Inferentia inference accelerator	32 GiB (4 x 8 GiB)
inf1.24xlarge	✗	192.00	Intel Xeon P-8259L	96	48	2	16 x AWS Inferentia inference accelerator	128 GiB (16 x 8 GiB)
Inf2								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
inf2.xlarge	✗	16.00	AMD EPYC 7R13	4	2	2	1 x AWS Inferentia inference accelerator	32 GiB (1 x 32 GiB)
inf2.8xlarge	✗	128.00	AMD EPYC 7R13	32	16	2	1 x AWS Inferentia inference accelerator	32 GiB (1 x 32 GiB)
inf2.24xlarge	✗	384.00	AMD EPYC 7R13	96	48	2	6 x AWS Inferentia inference accelerator	192 GiB (6 x 32 GiB)
inf2.48xlarge	✗	768.00	AMD EPYC 7R13	192	96	2	12 x AWS Inferentia inference accelerator	384 GiB (12 x 32 GiB)
P2								
p2.xlarge	✗	61.00	Intel Xeon E5-2686v4	4	2	2	1 x NVIDIA K80 GPU	12 GiB (1 x 12 GiB)

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
p2.8xlarge	✗	488.00	Intel Xeon E5-2686v4	32	16	2	8 x NVIDIA K80 GPU	96 GiB (8 x 12 GiB)
p2.16xlarge	✗	732.00	Intel Xeon E5-2686 v4	64	32	2	16 x NVIDIA K80 GPU	192 GiB (16 x 12 GiB)
P3								
p3.2xlarge	✗	61.00	Intel Xeon E5-2686 v4	8	4	2	1 x NVIDIA V100 GPU	16 GiB (1 x 16 GiB)
p3.8xlarge	✗	244.00	Intel Xeon E5-2686 v4	32	16	2	4 x NVIDIA V100 GPU	64 GiB (4 x 16 GiB)
p3.16xlarge	✗	488.00	Intel Xeon E5-2686 v4	64	32	2	8 x NVIDIA V100 GPU	128 GiB (8 x 16 GiB)
P3dn								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
p3dn.24xlarge	✗	768.00	Intel Xeon Platinum 8175	96	48	2	8 x NVIDIA V100 GPU	256 GiB (8 x 32 GiB)
P4d								
p4d.24xlarge	✗	1152.0C	Intel Xeon Platinum 8175	96	48	2	8 x NVIDIA A100 GPU	320 GiB (8 x 40 GiB)
P4de								
p4de.24xlarge	✗	1152.0C	Intel Xeon Platinum 8175	96	48	2	8 x NVIDIA A100 GPU	640 GiB (8 x 80 GiB)
P5								
p5.48xlarge	✗	2048.0C	AMD EPYC 7R13	192	96	2	8 x NVIDIA H100 GPU	640 GiB (8 x 80 GiB)
P5e								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
p5e.48xlarge	✗	2048.00	AMD EPYC 7R13	192	96	2	8 x NVIDIA H200 GPU	1128 GiB (8 x 141 GiB)
Trn1								
trn1.2xlarge	✗	32.00	Intel Xeon Ice Lake 8375C	8	4	2	1 x AWS Trainium accelerators	32 GiB (1 x 32 GiB)
trn1.32xlarge	✗	512.00	Intel Xeon Ice Lake 8375C	128	64	2	16 x AWS Trainium accelerators	512 GiB (16 x 32 GiB)
Trn1n								
trn1n.32xlarge	✗	512.00	Intel Xeon Ice Lake	128	64	2	16 x AWS Trainium accelerators	512 GiB (16 x 32 GiB)
VT1								

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
vt1.3xlarge	✗	24.00	Intel Cascade Lake P-8259CL	12	6	2	1 x Xilinx U30 media accelerator	24 GiB (1 x 24 GiB)
vt1.6xlarge	✗	48.00	Intel Cascade Lake P-8259CL	24	12	2	2 x Xilinx U30 media accelerator	48 GiB (2 x 24 GiB)
vt1.24xlarge	✗	192.00	Intel Cascade Lake P-8259CL	96	48	2	8 x Xilinx U30 media accelerator	192 GiB (8 x 24 GiB)

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
DL1								
dl1.24xlarge	4x 100 Gigabit	✓	✓	✗	4	60	50	✓
DL2q								
dl2q.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
			F1					
f1.2xlarge [1]	Up to 10 Gigabit	✗	✓	✗	1	4	15	✓
f1.4xlarge [1]	Up to 10 Gigabit	✗	✓	✗	1	8	30	✓
f1.16xlarge	25 Gigabit	✗	✓	✗	1	8	50	✓
			G4ad					
g4ad.xlarge [1]	2.0 / 10.0	✗	✓	✗	1	2	4	✓
g4ad.2xlarge [1]	4.167 / 10.0	✗	✓	✗	1	2	4	✓
g4ad.4xlarge [1]	8.333 / 10.0	✗	✓	✗	1	3	10	✓
g4ad.8xlarge	15 Gigabit	✗	✓	✗	1	4	15	✓
g4ad.16xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
			G4dn					
g4dn.xlarge [1]	5.0 / 25.0	✗	✓	✗	1	3	10	✓
g4dn.2xlarge [1]	10.0 / 25.0	✗	✓	✗	1	3	10	✓
g4dn.4xlarge [1]	20.0 / 25.0	✗	✓	✗	1	3	10	✓
g4dn.8xlarge	50 Gigabit	✓	✓	✗	1	4	15	✓
g4dn.12xlarge	50 Gigabit	✓	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
g4dn.16xlarge	50 Gigabit	✓	✓	✗	1	4	15	✓
g4dn.metal	100 Gigabit	✓	✓	✗	1	15	50	✓
				G5				
g5.xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
g5.2xlarge [1]	5.0 / 10.0	✗	✓	✗	1	4	15	✓
g5.4xlarge [1]	10.0 / 25.0	✗	✓	✗	1	8	30	✓
g5.8xlarge	25 Gigabit	✓	✓	✗	1	8	30	✓
g5.12xlarge	40 Gigabit	✓	✓	✗	1	15	50	✓
g5.16xlarge	25 Gigabit	✓	✓	✗	1	8	30	✓
g5.24xlarge	50 Gigabit	✓	✓	✗	1	15	50	✓
g5.48xlarge	100 Gigabit	✓	✓	✗	1	7	50	✓
				G5g				
g5g.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
g5g.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
g5g.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
g5g.8xlarge	12 Gigabit	✗	✓	✗	1	8	30	✓
g5g.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
g5g.metal	25 Gigabit	✗	✓	✗	1	15	50	✓
				G6				

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
g6.xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
g6.2xlarge [1]	5.0 / 10.0	✗	✓	✗	1	4	15	✓
g6.4xlarge [1]	10.0 / 25.0	✗	✓	✗	1	8	30	✓
g6.8xlarge	25 Gigabit	✓	✓	✗	1	8	30	✓
g6.12xlarge	40 Gigabit	✓	✓	✗	1	8	30	✓
g6.16xlarge	25 Gigabit	✓	✓	✗	1	15	50	✓
g6.24xlarge	50 Gigabit	✓	✓	✗	1	15	50	✓
g6.48xlarge	100 Gigabit	✓	✓	✓	1	15	50	✓
G6e								
g6e.xlarge [1]	2.5 / 20.0	✗	✓	✗	1	4	15	✓
g6e.2xlarge [1]	5.0 / 20.0	✗	✓	✗	1	4	15	✓
g6e.4xlarge	20 Gigabit	✗	✓	✗	1	8	30	✓
g6e.8xlarge	25 Gigabit	✓	✓	✗	1	8	30	✓
g6e.12xlarge	100 Gigabit	✓	✓	✓	1	10	30	✓
g6e.16xlarge	35 Gigabit	✓	✓	✗	1	15	50	✓
g6e.24xlarge	200 Gigabit	✓	✓	✓	2	20	50	✓
g6e.48xlarge	400 Gigabit	✓	✓	✓	4	40	50	✓
Gr6								
gr6.4xlarge [1]	10.0 / 25.0	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
gr6.8xlarge	25 Gigabit	✓	✓	✗	1	8	30	✓
				Inf1				
inf1.xlarge [1]	5.0 / 25.0	✗	✓	✗	1	4	10	✓
inf1.2xlarge [1]	5.0 / 25.0	✗	✓	✗	1	4	10	✓
inf1.6xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
inf1.24xlarge	100 Gigabit	✓	✓	✗	1	11	30	✓
				Inf2				
inf2.xlarge [1]	2.083 / 15.0	✗	✓	✗	1	4	15	✓
inf2.8xlarge [1]	16.667 / 25.0	✗	✓	✗	1	8	30	✓
inf2.24xlarge	50 Gigabit	✗	✓	✗	1	15	50	✓
inf2.48xlarge	100 Gigabit	✗	✓	✗	1	15	50	✓
				P2				
p2.xlarge	High	✗	✓	✗	1	4	15	✓
p2.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
p2.16xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
				P3				
p3.2xlarge [1]	Up to 10 Gigabit	✗	✓	✗	1	4	15	✓
p3.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
p3.16xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
P3dn								
p3dn.24xlarge	100 Gigabit	✓	✓	✗	1	15	50	✓
P4d								
p4d.24xlarge	4x 100 Gigabit	✓	✓	✗	4	60	50	✓
P4de								
p4de.24xlarge	4x 100 Gigabit	✓	✓	✗	4	60	50	✓
P5								
p5.48xlarge	3200 Gigabit	✓	✓	✗	32	64	50	✓
P5e								
p5e.48xlarge	3200 Gigabit	✓	✓	✗	32	64	50	✓
Trn1								
trn1.2xlarge [1]	3.125 / 12.5	✗	✓	✗	1	4	15	✓
trn1.32xlarge	8x 100 Gigabit	✓	✓	✗	8	40	50	✓
Trn1n								
trn1n.32xlarge	16x 100 Gigabit	✓	✓	✗	16	80	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
			VT1					
vt1.3xlarge	3.12 Gigabit	✗	✓	✗	1	4	15	✓
vt1.6xlarge	6.25 Gigabit	✗	✓	✗	1	8	30	✓
vt1.24xlarge	25 Gigabit	✓	✓	✗	1	15	50	✓

Note

[1] These instances have a baseline bandwidth and can use a network I/O credit mechanism to burst beyond their baseline bandwidth on a best effort basis. Other instances types can sustain their maximum performance indefinitely. For more information, see instance network bandwidth.

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5

gp3 volumes provisioned with 16,000 IOPS each (5 volumes x 16,000 IOPS = 80,000 IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
DL1					
dl1.24xlarge	19000.00	2375.00	80000.00	✓	default
DL2q					
dl2q.24xlarge	19000.00	2375.00	80000.00	✓	default
F1					
f1.2xlarge	1700.00	212.50	12000.00	✗	default
f1.4xlarge	3500.00	437.50	44000.00	✗	default
f1.16xlarge	14000.00	1750.00	75000.00	✗	default
G4ad					
g4ad.xlarge [1]	400.00 / 3170.00	50.00 / 396.25	1700.00 / 13333.00	✓	default
g4ad.2xlarge [1]	800.00 / 3170.00	100.00 / 396.25	3400.00 / 13333.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
g4ad.4xlarge [1]	1580.00 / 3170.00	197.50 / 396.25	6700.00 / 13333.00	✓	default
g4ad.8xlarge	3170.00	396.25	13333.00	✓	default
g4ad.16xlarge	6300.00	787.50	26667.00	✓	default
G4dn					
g4dn.xlarge [1]	950.00 / 3500.00	118.75 / 437.50	3000.00 / 20000.00	✓	default
g4dn.2xlarge [1]	1150.00 / 3500.00	143.75 / 437.50	6000.00 / 20000.00	✓	default
g4dn.4xlarge	4750.00	593.75	20000.00	✓	default
g4dn.8xlarge	9500.00	1187.50	40000.00	✓	default
g4dn.12xlarge	9500.00	1187.50	40000.00	✓	default
g4dn.16xlarge	9500.00	1187.50	40000.00	✓	default
g4dn.metal	19000.00	2375.00	80000.00	✓	default
G5					
g5.xlarge [1]	700.00 / 3500.00	87.50 / 437.50	3000.00 / 15000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
g5.2xlarge [1]	850.00 / 3500.00	106.25 / 437.50	3500.00 / 15000.00	✓	default
g5.4xlarge	4750.00	593.75	20000.00	✓	default
g5.8xlarge	16000.00	2000.00	65000.00	✓	default
g5.12xlarge	16000.00	2000.00	65000.00	✓	default
g5.16xlarge	16000.00	2000.00	65000.00	✓	default
g5.24xlarge	19000.00	2375.00	80000.00	✓	default
g5.48xlarge	19000.00	2375.00	80000.00	✓	default
G5g					
g5g.xlarge [1]	1188.00 / 4750.00	148.50 / 593.75	6000.00 / 20000.00	✓	default
g5g.2xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	12000.00 / 20000.00	✓	default
g5g.4xlarge	4750.00	593.75	20000.00	✓	default
g5g.8xlarge	9500.00	1187.50	40000.00	✓	default
g5g.16xlarge	19000.00	2375.00	80000.00	✓	default
g5g.metal	19000.00	2375.00	80000.00	✓	default
G6					
g6.xlarge [1]	1000.00 / 5000.00	125.00 / 625.00	4000.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
g6.2xlarge [1]	2000.00 / 5000.00	250.00 / 625.00	8000.00 / 20000.00	✓	default
g6.4xlarge	8000.00	1000.00	32000.00	✓	default
g6.8xlarge	16000.00	2000.00	64000.00	✓	default
g6.12xlarge	20000.00	2500.00	80000.00	✓	default
g6.16xlarge	20000.00	2500.00	80000.00	✓	default
g6.24xlarge	30000.00	3750.00	120000.00	✓	default
g6.48xlarge	60000.00	7500.00	240000.00	✓	default
G6e					
g6e.xlarge [1]	1000.00 / 5000.00	125.00 / 625.00	4000.00 / 20000.00	✓	default
g6e.2xlarge [1]	2000.00 / 5000.00	250.00 / 625.00	8000.00 / 20000.00	✓	default
g6e.4xlarge	8000.00	1000.00	32000.00	✓	default
g6e.8xlarge	16000.00	2000.00	64000.00	✓	default
g6e.12xlarge	20000.00	2500.00	80000.00	✓	default
g6e.16xlarge	20000.00	2500.00	80000.00	✓	default
g6e.24xlarge	30000.00	3750.00	120000.00	✓	default
g6e.48xlarge	60000.00	7500.00	240000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
Gr6					
gr6.4xlarge	8000.00	1000.00	32000.00	✓	default
gr6.8xlarge	16000.00	2000.00	64000.00	✓	default
Inf1					
inf1.xlarge [1]	1190.00 / 4750.00	148.75 / 593.75	4000.00 / 20000.00	✓	default
inf1.2xlarge [1]	1190.00 / 4750.00	148.75 / 593.75	6000.00 / 20000.00	✓	default
inf1.6xlarge	4750.00	593.75	20000.00	✓	default
inf1.24xlarge	19000.00	2375.00	80000.00	✓	default
Inf2					
inf2.xlarge [1]	1250.00 / 10000.00	156.25 / 1250.00	6000.00 / 40000.00	✓	default
inf2.8xlarge	10000.00	1250.00	40000.00	✓	default
inf2.24xlarge	30000.00	3750.00	120000.00	✓	default
inf2.48xlarge	60000.00	7500.00	240000.00	✓	default
P2					
p2.xlarge	750.00	93.75	6000.00	✗	default
p2.8xlarge	5000.00	625.00	32500.00	✗	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
p2.16xlarge	10000.00	1250.00	65000.00	✗	default
P3					
p3.2xlarge	1750.00	218.75	10000.00	✗	default
p3.8xlarge	7000.00	875.00	40000.00	✗	default
p3.16xlarge	14000.00	1750.00	80000.00	✗	default
P3dn					
p3dn.24xlarge	19000.00	2375.00	80000.00	✓	default
P4d					
p4d.24xlarge	19000.00	2375.00	80000.00	✓	default
P4de					
p4de.24xlarge	19000.00	2375.00	80000.00	✓	default
P5					
p5.48xlarge	80000.00	10000.00	260000.00	✓	default
P5e					
p5e.48xlarge	80000.00	10000.00	260000.00	✓	default
Trn1					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
trn1.2xlarge [1]	5000.00 / 20000.00	625.00 / 2500.00	16250.00 / 65000.00	✓	default
trn1.32xlarge	80000.00	10000.00	260000.00	✓	default
Trn1n					
trn1n.32x large	80000.00	10000.00	260000.00	✓	default
VT1					
vt1.3xlarge [1]	2375.00 / 4750.00	296.88 / 593.75	10000.00 / 20000.00	✓	default
vt1.6xlarge	4750.00	593.75	20000.00	✓	default
vt1.24xlarge	19000.00	2375.00	80000.00	✓	default

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.

[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

The following table shows the instance store volume configuration for supported instance types, along with the aggregated IOPS performance with 4,096 byte block size at queue depth saturation.

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
DL1					
dl1.24xlarge	4 x 1000 GB	NVMe SSD	1,000,000 / 800,000		✓
F1					
f1.2xlarge	1 x 470 GB	NVMe SSD			✓
f1.4xlarge	1 x 940 GB	NVMe SSD			✓
f1.16xlarge	4 x 940 GB	NVMe SSD			✓
G4ad					
g4ad.xlarge	1 x 150 GB	NVMe SSD	10,417 / 8,333		✓
g4ad.2xlarge	1 x 300 GB	NVMe SSD	20,833 / 16,667		✓
g4ad.4xlarge	1 x 600 GB	NVMe SSD	41,667 / 33,333		✓
g4ad.8xlarge	1 x 1200 GB	NVMe SSD	83,333 / 66,667		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
g4ad.16xlarge	2 x 1200 GB	NVMe SSD	166,666 / 133,332		✓
G4dn					
g4dn.xlarge	1 x 125 GB	NVMe SSD	42,500 / 32,500		✓
g4dn.2xlarge	1 x 225 GB	NVMe SSD	42,500 / 32,500		✓
g4dn.4xlarge	1 x 225 GB	NVMe SSD	85,000 / 65,000		✓
g4dn.8xlarge	1 x 900 GB	NVMe SSD	250,000 / 200,000		✓
g4dn.12xlarge	1 x 900 GB	NVMe SSD	250,000 / 200,000		✓
g4dn.16xlarge	1 x 900 GB	NVMe SSD	250,000 / 200,000		✓
g4dn.metal	2 x 900 GB	NVMe SSD	500,000 / 400,000		✓
G5					
g5.xlarge	1 x 250 GB	NVMe SSD	40,625 / 20,313		✓
g5.2xlarge	1 x 450 GB	NVMe SSD	40,625 / 20,313		✓
g5.4xlarge	1 x 600 GB	NVMe SSD	125,000 / 62,500		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
g5.8xlarge	1 x 900 GB	NVMe SSD	250,000 / 125,000		✓
g5.12xlarge	1 x 3800 GB	NVMe SSD	312,500 / 156,250		✓
g5.16xlarge	1 x 1900 GB	NVMe SSD	250,000 / 125,000		✓
g5.24xlarge	1 x 3800 GB	NVMe SSD	312,500 / 156,250		✓
g5.48xlarge	2 x 3800 GB	NVMe SSD	625,000 / 312,500		✓
G6					
g6.xlarge	1 x 250 GB	NVMe SSD	40,625 / 20,000		✓
g6.2xlarge	1 x 450 GB	NVMe SSD	40,625 / 20,000		✓
g6.4xlarge	1 x 600 GB	NVMe SSD	125,000 / 40,000		✓
g6.8xlarge	2 x 450 GB	NVMe SSD	250,000 / 80,000		✓
g6.12xlarge	4 x 940 GB	NVMe SSD	312,500 / 125,000		✓
g6.16xlarge	2 x 940 GB	NVMe SSD	250,000 / 80,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
g6.24xlarge	4 x 940 GB	NVMe SSD	312,500 / 156,248		✓
g6.48xlarge	8 x 940 GB	NVMe SSD	625,000 / 312,496		✓
G6e					
g6e.xlarge	1 x 250 GB	NVMe SSD	40,625 / 20,000		✓
g6e.2xlarge	1 x 450 GB	NVMe SSD	40,625 / 20,000		✓
g6e.4xlarge	1 x 600 GB	NVMe SSD	125,000 / 40,000		✓
g6e.8xlarge	2 x 450 GB	NVMe SSD	250,000 / 80,000		✓
g6e.12xlarge	2 x 1900 GB	NVMe SSD	312,500 / 125,000		✓
g6e.16xlarge	2 x 950 GB	NVMe SSD	250,000 / 80,000		✓
g6e.24xlarge	2 x 1900 GB	NVMe SSD	312,500 / 156,250		✓
g6e.48xlarge	4 x 1900 GB	NVMe SSD	625,000 / 312,500		✓
Gr6					
gr6.4xlarge	1 x 600 GB	NVMe SSD	125,000 / 40,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
gr6.8xlarge	2 x 450 GB	NVMe SSD	250,000 / 80,000		✓
P3dn					
p3dn.24xlarge	2 x 900 GB	NVMe SSD	700,000 / 340,000		✓
P4d					
p4d.24xlarge	8 x 1000 GB	NVMe SSD	2,000,000 / 1,600,000		✓
P4de					
p4de.24xlarge	8 x 1000 GB	NVMe SSD	2,000,000 / 1,600,000		✓
P5					
p5.48xlarge	8 x 3800 GB	NVMe SSD	4,400,000 / 2,200,000		✓
P5e					
p5e.48xlarge	8 x 3800 GB	NVMe SSD	4,400,000 / 2,200,000		✓
Trn1					
trn1.2xlarge	1 x 474 GB	NVMe SSD	107,500 / 45,000		✓
trn1.32xlarge	4 x 1900 GB	NVMe SSD	1,720,000 / 720,000		✓

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
Trn1n					
trn1n.32xlarge	4 x 1900 GB	NVMe SSD	1,720,000 / 720,000		✓

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
DL1						
dl1.24xlarge	✓	✓	✓	✗	✗	✓
DL2q						
dl2q.24xlarge	✓	Instance store not supported	✓	✗	✗	✓
F1						
f1.2xlarge	✓	✓	✗	✗	✗	✗
f1.4xlarge	✓	✓	✗	✗	✗	✗
f1.16xlarge	✓	✓	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
G4ad						
g4ad.xlarge	✓	✓	✓	✗	✗	✗
g4ad.2xlarge	✓	✓	✓	✗	✗	✗
g4ad.4xlarge	✓	✓	✓	✗	✗	✗
g4ad.8xlarge	✓	✓	✓	✗	✗	✗
g4ad.16xlarge	✓	✓	✓	✗	✗	✗
G4dn						
g4dn.xlarge	✓	✓	✓	✗	✓	✓
g4dn.2xlarge	✓	✓	✓	✗	✓	✓
g4dn.4xlarge	✓	✓	✓	✗	✓	✓
g4dn.8xlarge	✓	✓	✓	✗	✓	✓
g4dn.12xlarge	✓	✓	✓	✗	✓	✓
g4dn.16xlarge	✓	✓	✓	✗	✓	✓
g4dn.metal	✓	✓	✓	✗	✗	✗
G5						
g5.xlarge	✓	✓	✓	✗	✓	✓
g5.2xlarge	✓	✓	✓	✗	✓	✓
g5.4xlarge	✓	✓	✓	✗	✓	✓
g5.8xlarge	✓	✓	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
g5.12xlarge	✓	✓	✓	✗	✓	✓
g5.16xlarge	✓	✓	✓	✗	✓	✓
g5.24xlarge	✓	✓	✓	✗	✓	✓
g5.48xlarge	✓	✓	✓	✗	✓	✓
G5g						
g5g.xlarge	✓	Instance store not supported	✗	✗	✗	✗
g5g.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
g5g.4xlarge	✓	Instance store not supported	✗	✗	✗	✗
g5g.8xlarge	✓	Instance store not supported	✗	✗	✗	✗
g5g.16xlarge	✓	Instance store not supported	✗	✗	✗	✗
g5g.metal	✓	Instance store not supported	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			G6			
g6.xlarge	✓	✓	✓	✗	✓	✓
g6.2xlarge	✓	✓	✓	✗	✓	✓
g6.4xlarge	✓	✓	✓	✗	✓	✓
g6.8xlarge	✓	✓	✓	✗	✓	✓
g6.12xlarge	✓	✓	✓	✗	✓	✓
g6.16xlarge	✓	✓	✓	✗	✓	✓
g6.24xlarge	✓	✓	✓	✗	✓	✓
g6.48xlarge	✓	✓	✓	✗	✓	✓
			G6e			
g6e.xlarge	✓	✓	✓	✗	✓	✓
g6e.2xlarge	✓	✓	✓	✗	✓	✓
g6e.4xlarge	✓	✓	✓	✗	✓	✓
g6e.8xlarge	✓	✓	✓	✗	✓	✓
g6e.12xlarge	✓	✓	✓	✗	✓	✓
g6e.16xlarge	✓	✓	✓	✗	✓	✓
g6e.24xlarge	✓	✓	✓	✗	✓	✓
g6e.48xlarge	✓	✓	✓	✗	✓	✓
			Gr6			

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
gr6.4xlarge	✓	✓	✓	✗	✓	✓
gr6.8xlarge	✓	✓	✓	✗	✓	✓
Inf1						
inf1.xlarge	✓	Instance store not supported	✓	✗	✓	✓
inf1.2xlarge	✓	Instance store not supported	✓	✗	✓	✓
inf1.6xlarge	✓	Instance store not supported	✓	✗	✓	✓
inf1.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
Inf2						
inf2.xlarge	✓	Instance store not supported	✓	✗	✓	✓
inf2.8xlarge	✓	Instance store not supported	✓	✗	✓	✓

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
inf2.24xlarge	✓	Instance store not supported	✓	✗	✓	✓
inf2.48xlarge	✓	Instance store not supported	✓	✗	✓	✓
P2						
p2.xlarge	✓	Instance store not supported	✗	✗	✗	✗
p2.8xlarge	✓	Instance store not supported	✗	✗	✗	✗
p2.16xlarge	✓	Instance store not supported	✗	✗	✗	✗
P3						
p3.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
p3.8xlarge	✓	Instance store not supported	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
p3.16xlarge	✓	Instance store not supported	✗	✗	✗	✗
P3dn						
p3dn.24xlarge	✓	✓	✓	✗	✗	✓
P4d						
p4d.24xlarge	✓	✓	✓	✗	✗	✓
P4de						
p4de.24xlarge	✓	✓	✓	✗	✗	✓
P5						
p5.48xlarge	✓	✓	✓	✗	✗	✓
P5e						
p5e.48xlarge	✓	✓	✓	✗	✓	✓
Trn1						
trn1.2xlarge	✓	✓	✓	✗	✗	✗
trn1.32xlarge	✓	✓	✓	✗	✗	✗
Trn1n						
trn1n.32xlarge	✓	✓	✓	✗	✗	✗
VT1						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
vt1.3xlarge	✓	Instance store not supported	✓	✗	✗	✗
vt1.6xlarge	✓	Instance store not supported	✓	✗	✗	✗
vt1.24xlarge	✓	Instance store not supported	✓	✗	✗	✗

Specifications for Amazon EC2 high-performance computing instances

High-performance computing instances are purpose built to offer the best price performance for running HPC workloads at scale on AWS. These instances are ideal for applications that benefit from high-performance processors, such as large, complex simulations and deep learning workloads.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications
- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
Hpc6a	hpc6a.48xlarge
Hpc6id	hpc6id.32xlarge
Hpc7a	hpc7a.12xlarge | hpc7a.24xlarge | hpc7a.48xlarge | hpc7a.96xlarge
Hpc7g	hpc7g.4xlarge | hpc7g.8xlarge | hpc7g.16xlarge

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
Hpc6a	Nitro v4	AMD (x86_64)	✗	✗	✗	✗	Linux
Hpc6id	Nitro v4	Intel (x86_64)	✗	✗	✗	✗	Windows | Linux
Hpc7a	Nitro v4	AMD (x86_64)	✗	✗	✗	✗	Windows | Linux
Hpc7g	Nitro v5	AWS Graviton (arm64)	✗	✗	✗	✗	Linux

Performance specifications

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
Hpc6a								
hpc6a.48xlarge	✗	384.00	AMD EPYC 7R13	96	96	1	✗	✗
Hpc6id								
hpc6id.32xlarge	✗	1024.0(	Intel Xeon Ice Lake	64	64	1	✗	✗
Hpc7a								
hpc7a.12xlarge	✗	768.00	AMD EPYC 9R14	24	24	1	✗	✗
hpc7a.24xlarge	✗	768.00	AMD EPYC 9R14	48	48	1	✗	✗
hpc7a.48xlarge	✗	768.00	AMD EPYC 9R14	96	96	1	✗	✗
hpc7a.96xlarge	✗	768.00	AMD EPYC 9R14	192	192	1	✗	✗
Hpc7g								
hpc7g.4xlarge	✗	128.00	AWS Graviton3E Processor	16	16	1	✗	✗
hpc7g.8xlarge	✗	128.00	AWS Graviton3E Processor	32	32	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
hpc7g.16xlarge	✗	128.00	AWS Graviton3E Processor	64	64	1	✗	✗

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
Hpc6a								
hpc6a.48xlarge	100 Gigabit	✓	✓	✗	1	2	50	✓
Hpc6id								
hpc6id.32xlarge	200 Gigabit	✓	✓	✗	2	2	50	✓
Hpc7a								
hpc7a.12xlarge	300 Gigabit	✓	✓	✗	2	4	50	✓
hpc7a.24xlarge	300 Gigabit	✓	✓	✗	2	4	50	✓
hpc7a.48xlarge	300 Gigabit	✓	✓	✗	2	4	50	✓
hpc7a.96xlarge	300 Gigabit	✓	✓	✗	2	4	50	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
Hpc7g								
hpc7g.4xlarge	200 Gigabit	✓	✓	✗	1	4	50	✓
hpc7g.8xlarge	200 Gigabit	✓	✓	✗	1	4	50	✓
hpc7g.16xlarge	200 Gigabit	✓	✓	✗	1	4	50	✓

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5 gp3 volumes provisioned with `16,000` IOPS each (5 volumes x `16,000` IOPS = `80,000` IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
Hpc6a					
hpc6a.48xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
Hpc6id					
hpc6id.32xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
Hpc7a					
hpc7a.12xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
hpc7a.24xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
hpc7a.48xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
hpc7a.96xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
Hpc7g					
hpc7g.4xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default
hpc7g.8xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
hpc7g.16xlarge [1]	87.00 / 2085.00	10.88 / 260.62	500.00 / 11000.00	✓	default

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.
[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

The following table shows the instance store volume configuration for supported instance types, along with the aggregated IOPS performance with 4,096 byte block size at queue depth saturation.

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
Hpc6id					
hpc6id.32xlarge	4 x 3800 GB	NVMe SSD	2,146,664 / 1,073,336		✓

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
Hpc6a						
hpc6a.48xlarge	✓	Instance store not supported	✓	✗	✓	✗
Hpc6id						
hpc6id.32xlarge	✓	✓	✓	✗	✓	✗
Hpc7a						
hpc7a.12xlarge	✓	Instance store not supported	✓	✗	✗	✗
hpc7a.24xlarge	✓	Instance store not supported	✓	✗	✗	✗
hpc7a.48xlarge	✓	Instance store not supported	✓	✗	✗	✗
hpc7a.96xlarge	✓	Instance store not supported	✓	✗	✗	✗
Hpc7g						

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
hpc7g.4xlarge	✓	Instance store not supported	✓	✗	✗	✗
hpc7g.8xlarge	✓	Instance store not supported	✓	✗	✗	✗
hpc7g.16xlarge	✓	Instance store not supported	✓	✗	✗	✗

Specifications for Amazon EC2 previous generation instances

AWS offers previous generation instance types for users who have optimized their applications around them and have yet to upgrade. We encourage you to use current generation instance types to get the best performance, but we continue to support the following previous generation instance types.

Contents

- Instance families and instance types
- Instance family summary
- Performance specifications
- Network specifications
- Amazon EBS specifications
- Instance store specifications
- Security specifications

Pricing

For pricing information, see Amazon EC2 On-Demand Pricing.

Instance families and instance types

Instance family	Available instance types
A1	a1.medium |a1.large|a1.xlarge |a1.2xlarge |a1.4xlarge | a1.metal
C1	c1.medium |c1.xlarge
C3	c3.large|c3.xlarge |c3.2xlarge |c3.4xlarge |c3.8xlarge
C4	c4.large|c4.xlarge |c4.2xlarge |c4.4xlarge |c4.8xlarge
G3	g3.4xlarge |g3.8xlarge |g3.16xlarge
I2	i2.xlarge |i2.2xlarge |i2.4xlarge |i2.8xlarge
M1	m1.small|m1.medium |m1.large|m1.xlarge
M2	m2.xlarge |m2.2xlarge |m2.4xlarge
M3	m3.medium |m3.large|m3.xlarge |m3.2xlarge
M4	m4.large|m4.xlarge |m4.2xlarge |m4.4xlarge |m4.10xlarge | m4.16xlarge
R3	r3.large|r3.xlarge |r3.2xlarge |r3.4xlarge |r3.8xlarge
R4	r4.large|r4.xlarge |r4.2xlarge |r4.4xlarge |r4.8xlarge | r4.16xlarge
T1	t1.micro

Instance family summary

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
A1	Nitro v2	AWS Graviton (arm64)	✓	✓	✓	✗	Linux
C1	Xen	Intel (x86_64)	✗	✗	✓	✗	Windows | Linux
C3	Xen	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux
C4	Xen	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux
G3	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
I2	Xen	Intel (x86_64)	✗	✓	✓	✗	Windows | Linux
M1	Xen	Intel (x86_64)	✗	✗	✓	✗	Windows | Linux
M2	Xen	Intel (x86_64)	✗	✗	✓	✗	Windows | Linux
M3	Xen	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux
M4	Xen	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux

Instance family	Hypervisor	Processor type (architecture)	Metal instances available	Dedicated Hosts support	Spot support	Hibernation support	Supported operating systems
R3	Xen	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux
R4	Xen	Intel (x86_64)	✗	✓	✓	✓	Windows | Linux
T1	Xen	Intel (i386)	✗	✗	✓	✗	Windows | Linux

Performance specifications

Instance type	Burstable	Memory (GiB)	Processor	vCPUs	CPU cores	Threads per core	Accelerators	Accelerator memory
A1								
a1.medium	✗	2.00	AWS Graviton Processor	1	1	1	✗	✗
a1.large	✗	4.00	AWS Graviton Processor	2	2	1	✗	✗
a1.xlarge	✗	8.00	AWS Graviton Processor	4	4	1	✗	✗
a1.2xlarge	✗	16.00	AWS Graviton Processor	8	8	1	✗	✗
a1.4xlarge	✗	32.00	AWS Graviton Processor	16	16	1	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
a1.metal	✗	32.00	AWS Graviton Processor	16	16	1	✗	✗
C1								
c1.medium	✗	1.70	Intel Xeon Family	2	2	1	✗	✗
c1.xlarge	✗	7.00	Intel Xeon Family	8	8	1	✗	✗
C3								
c3.large	✗	3.75	Intel Xeon E5-2680v2	2	1	2	✗	✗
c3.xlarge	✗	7.50	Intel Xeon E5-2680v2	4	2	2	✗	✗
c3.2xlarge	✗	15.00	Intel Xeon E5-2680v2	8	4	2	✗	✗
c3.4xlarge	✗	30.00	Intel Xeon E5-2680v2	16	8	2	✗	✗
c3.8xlarge	✗	60.00	Intel Xeon E5-2680v2	32	16	2	✗	✗
C4								
c4.large	✗	3.75	Intel Xeon E5-2666v3	2	1	2	✗	✗
c4.xlarge	✗	7.50	Intel Xeon E5-2666v3	4	2	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
c4.2xlarge	✗	15.00	Intel Xeon E5-2666v3	8	4	2	✗	✗
c4.4xlarge	✗	30.00	Intel Xeon E5-2666v3	16	8	2	✗	✗
c4.8xlarge	✗	60.00	Intel Xeon E5-2666v3	36	18	2	✗	✗
G3								
g3.4xlarge	✗	122.00	Intel Xeon E5-2686 v4	16	8	2	1 x NVIDIA M60 GPU	8 GiB (1 x 8 GiB)
g3.8xlarge	✗	244.00	Intel Xeon E5-2686 v4	32	16	2	2 x NVIDIA M60 GPU	16 GiB (2 x 8 GiB)
g3.16xlarge	✗	488.00	Intel Xeon E5-2686 v4	64	32	2	4 x NVIDIA M60 GPU	32 GiB (4 x 8 GiB)
I2								
i2.xlarge	✗	30.50	Intel Xeon E5-2670v2	4	2	2	✗	✗
i2.2xlarge	✗	61.00	Intel Xeon E5-2670v2	8	4	2	✗	✗
i2.4xlarge	✗	122.00	Intel Xeon E5-2670v2	16	8	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
i2.8xlarge	✗	244.00	Intel Xeon E5-2670v2	32	16	2	✗	✗
M1								
m1.small	✗	1.70	Intel Xeon Family	1	1	1	✗	✗
m1.medium	✗	3.70	Intel Xeon Family	1	1	1	✗	✗
m1.large	✗	7.50	Intel Xeon Family	2	2	1	✗	✗
m1.xlarge	✗	15.00	Intel Xeon Family	4	4	1	✗	✗
M2								
m2.xlarge	✗	17.10	Intel Xeon Family	2	2	1	✗	✗
m2.2xlarge	✗	34.20	Intel Xeon Family	4	4	1	✗	✗
m2.4xlarge	✗	68.40	Intel Xeon Family	8	8	1	✗	✗
M3								
m3.medium	✗	3.75	Intel Xeon E5-2670v2	1	1	1	✗	✗
m3.large	✗	7.50	Intel Xeon E5-2670v2	2	1	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
m3.xlarge	✗	15.00	Intel Xeon E5-2670v2	4	2	2	✗	✗
m3.2xlarge	✗	30.00	Intel Xeon E5-2670v2	8	4	2	✗	✗
M4								
m4.large	✗	8.00	Intel Xeon E5-2676v3	2	1	2	✗	✗
m4.xlarge	✗	16.00	Intel Xeon E5-2676v3	4	2	2	✗	✗
m4.2xlarge	✗	32.00	Intel Xeon E5-2676v3	8	4	2	✗	✗
m4.4xlarge	✗	64.00	Intel Xeon E5-2676v3	16	8	2	✗	✗
m4.10xlarge	✗	160.00	Intel Xeon E5-2676v3	40	20	2	✗	✗
m4.16xlarge	✗	256.00	Intel Xeon E5-2686v4	64	32	2	✗	✗
R3								
r3.large	✗	15.00	Intel Xeon E5-2670v2	2	1	2	✗	✗
r3.xlarge	✗	30.50	Intel Xeon E5-2670v2	4	2	2	✗	✗
r3.2xlarge	✗	61.00	Intel Xeon E5-2670v2	8	4	2	✗	✗

Instance type	Burstabl	Memory (GiB)	Processor	vCPUs	CPU cores	Thread per core	Accelerators	Accelerator memory
r3.4xlarge	✗	122.00	Intel Xeon E5-2670v2	16	8	2	✗	✗
r3.8xlarge	✗	244.00	Intel Xeon E5-2670v2	32	16	2	✗	✗
R4								
r4.large	✗	15.25	Intel Broadwell E5-2686v4	2	1	2	✗	✗
r4.xlarge	✗	30.50	Intel Broadwell E5-2686v4	4	2	2	✗	✗
r4.2xlarge	✗	61.00	Intel Broadwell E5-2686v4	8	4	2	✗	✗
r4.4xlarge	✗	122.00	Intel Broadwell E5-2686v4	16	8	2	✗	✗
r4.8xlarge	✗	244.00	Intel Broadwell E5-2686v4	32	16	2	✗	✗
r4.16xlarge	✗	488.00	Intel Broadwell E5-2686v4	64	32	2	✗	✗
T1								
t1.micro	✗	0.61	Intel E5-2650	1	1	1	✗	✗

Network specifications

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
			A1					
a1.medium [1]	0.5 / 10.0	✗	✓	✗	1	2	4	✓
a1.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
a1.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
a1.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
a1.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
a1.metal [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
			C1					
c1.medium	Moderate	✗	✗	✗	1	2	6	✗
c1.xlarge	High	✗	✗	✗	1	4	15	✗
			C3					
c3.large	Moderate	✗	✗ [2]	✗	1	3	10	✓
c3.xlarge	Moderate	✗	✗ [2]	✗	1	4	15	✓
c3.2xlarge	High	✗	✗ [2]	✗	1	4	15	✓
c3.4xlarge	High	✗	✗ [2]	✗	1	8	30	✓
c3.8xlarge	10 Gigabit	✗	✗ [2]	✗	1	8	30	✓
			C4					

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
c4.large	Moderate	✗	✗ [2]	✗	1	3	10	✓
c4.xlarge	High	✗	✗ [2]	✗	1	4	15	✓
c4.2xlarge	High	✗	✗ [2]	✗	1	4	15	✓
c4.4xlarge	High	✗	✗ [2]	✗	1	8	30	✓
c4.8xlarge	10 Gigabit	✗	✗ [2]	✗	1	8	30	✓
G3								
g3.4xlarge [1]	Up to 10 Gigabit	✗	✓	✗	1	8	30	✓
g3.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
g3.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
I2								
i2.xlarge	Moderate	✗	✗ [2]	✗	1	4	15	✓
i2.2xlarge	High	✗	✗ [2]	✗	1	4	15	✓
i2.4xlarge	High	✗	✗ [2]	✗	1	8	30	✓
i2.8xlarge	10 Gigabit	✗	✗ [2]	✗	1	8	30	✓
M1								
m1.small	Low	✗	✗	✗	1	2	4	✗
m1.medium	Moderate	✗	✗	✗	1	2	6	✗
m1.large	Moderate	✗	✗	✗	1	3	10	✗

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
m1.xlarge	High	✗	✗	✗	1	4	15	✗
M2								
m2.xlarge	Moderate	✗	✗	✗	1	4	15	✗
m2.2xlarge	Moderate	✗	✗	✗	1	4	30	✗
m2.4xlarge	High	✗	✗	✗	1	8	30	✗
M3								
m3.medium	Moderate	✗	✗	✗	1	2	6	✗
m3.large	Moderate	✗	✗	✗	1	3	10	✗
m3.xlarge	High	✗	✗	✗	1	4	15	✗
m3.2xlarge	High	✗	✗	✗	1	4	30	✗
M4								
m4.large	Moderate	✗	✗ [2]	✗	1	2	10	✓
m4.xlarge	High	✗	✗ [2]	✗	1	4	15	✓
m4.2xlarge	High	✗	✗ [2]	✗	1	4	15	✓
m4.4xlarge	High	✗	✗ [2]	✗	1	8	30	✓
m4.10xlarge	10 Gigabit	✗	✗ [2]	✗	1	8	30	✓
m4.16xlarge	25 Gigabit	✗	✓	✗	1	8	30	✓
R3								
r3.large	Moderate	✗	✗ [2]	✗	1	3	10	✓

Instance type	Baseline / Burst bandwidth (Gbps)	EFA	ENA	ENA Express	Network cards	Max. network interfaces	IP addresses per interface	IPv6
r3.xlarge	Moderate	✗	✗ [2]	✗	1	4	15	✓
r3.2xlarge	High	✗	✗ [2]	✗	1	4	15	✓
r3.4xlarge	High	✗	✗ [2]	✗	1	8	30	✓
r3.8xlarge	10 Gigabit	✗	✗ [2]	✗	1	8	30	✓
R4								
r4.large [1]	0.75 / 10.0	✗	✓	✗	1	3	10	✓
r4.xlarge [1]	1.25 / 10.0	✗	✓	✗	1	4	15	✓
r4.2xlarge [1]	2.5 / 10.0	✗	✓	✗	1	4	15	✓
r4.4xlarge [1]	5.0 / 10.0	✗	✓	✗	1	8	30	✓
r4.8xlarge	10 Gigabit	✗	✓	✗	1	8	30	✓
r4.16xlarge	25 Gigabit	✗	✓	✗	1	15	50	✓
T1								
t1.micro	Very Low	✗	✗	✗	1	2	2	✗

Note

[1] These instances have a baseline bandwidth and can use a network I/O credit mechanism to burst beyond their baseline bandwidth on a best effort basis. Other instances types can sustain their maximum performance indefinitely. For more information, see instance network bandwidth.

[2] These instances support enhanced networking using the Intel 82599 VF interface.

Amazon EBS specifications

The following table indicates which instance types are Amazon EBS optimized by default and which optionally support it. It also describes their EBS-optimized performance, including dedicated bandwidth to Amazon EBS, the typical maximum aggregate throughput that can be achieved on that dedicated connection with a streaming read workload and 128 KiB I/O size, and the maximum IOPS the instance type can support when using a 16 KiB I/O size. Instance types not listed do not support Amazon EBS optimization.

Important

An instance's EBS performance is bounded by the instance's performance limits, or the aggregated performance of its attached volumes, whichever is smaller. To achieve maximum EBS performance, an instance must have attached volumes that provide a combined performance equal to or greater than the maximum instance performance. For example, to achieve `80,000` IOPS for `r6i.16xlarge`, the instance must have at least 5 gp3 volumes provisioned with `16,000` IOPS each (5 volumes x `16,000` IOPS = `80,000` IOPS).

We recommend that you choose an EBS–optimized instance type that provides more dedicated Amazon EBS throughput than your application needs; otherwise, the connection between Amazon EBS and Amazon EC2 can become a performance bottleneck.

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
A1					
a1.medium [1]	300.00 / 3500.00	37.50 / 437.50	2500.00 / 20000.00	✓	default
a1.large [1]	525.00 / 3500.00	65.62 / 437.50	4000.00 / 20000.00	✓	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
a1.xlarge [1]	800.00 / 3500.00	100.00 / 437.50	6000.00 / 20000.00	✓	default
a1.2xlarge [1]	1750.00 / 3500.00	218.75 / 437.50	10000.00 / 20000.00	✓	default
a1.4xlarge	3500.00	437.50	20000.00	✓	default
a1.metal	3500.00	437.50	20000.00	✓	default
C1					
c1.xlarge	1000.00	125.00	8000.00	✗	supported
C3					
c3.xlarge	500.00	62.50	4000.00	✗	supported
c3.2xlarge	1000.00	125.00	8000.00	✗	supported
c3.4xlarge	2000.00	250.00	16000.00	✗	supported
C4					
c4.large	500.00	62.50	4000.00	✗	default
c4.xlarge	750.00	93.75	6000.00	✗	default
c4.2xlarge	1000.00	125.00	8000.00	✗	default
c4.4xlarge	2000.00	250.00	16000.00	✗	default
c4.8xlarge	4000.00	500.00	32000.00	✗	default
G3					

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
g3.4xlarge	3500.00	437.50	20000.00	✗	default
g3.8xlarge	7000.00	875.00	40000.00	✗	default
g3.16xlarge	14000.00	1750.00	80000.00	✗	default
I2					
i2.xlarge	500.00	62.50	4000.00	✗	supported
i2.2xlarge	1000.00	125.00	8000.00	✗	supported
i2.4xlarge	2000.00	250.00	16000.00	✗	supported
M1					
m1.large	500.00	62.50	4000.00	✗	supported
m1.xlarge	1000.00	125.00	8000.00	✗	supported
M2					
m2.2xlarge	500.00	62.50	4000.00	✗	supported
m2.4xlarge	1000.00	125.00	8000.00	✗	supported
M3					
m3.xlarge	500.00	62.50	4000.00	✗	supported
m3.2xlarge	1000.00	125.00	8000.00	✗	supported
M4					
m4.large	450.00	56.25	3600.00	✗	default

Instance type	Baseline / Maximum bandwidth (Mbps)	Baseline / Maximum throughput (MB/s, 128 KiB I/O)	Baseline / Maximum IOPS (16 KiB I/O)	NVMe	EBS optimization [2]
m4.xlarge	750.00	93.75	6000.00	✗	default
m4.2xlarge	1000.00	125.00	8000.00	✗	default
m4.4xlarge	2000.00	250.00	16000.00	✗	default
m4.10xlarge	4000.00	500.00	32000.00	✗	default
m4.16xlarge	10000.00	1250.00	65000.00	✗	default
R3					
r3.xlarge	500.00	62.50	4000.00	✗	supported
r3.2xlarge	1000.00	125.00	8000.00	✗	supported
r3.4xlarge	2000.00	250.00	16000.00	✗	supported
R4					
r4.large	425.00	53.12	3000.00	✗	default
r4.xlarge	850.00	106.25	6000.00	✗	default
r4.2xlarge	1700.00	212.50	12000.00	✗	default
r4.4xlarge	3500.00	437.50	18750.00	✗	default
r4.8xlarge	7000.00	875.00	37500.00	✗	default
r4.16xlarge	14000.00	1750.00	75000.00	✗	default
T1					

Note

[1] These instances can support maximum performance for 30 minutes at least once every 24 hours, after which they revert to their baseline performance. Other instances can sustain the maximum performance indefinitely. If your workload requires sustained maximum performance for longer than 30 minutes, use one of these instances.
[2] `default` indicates that instances are enabled for EBS optimization by default. `supported` indicates that instances can optionally be enabled for EBS optimization For more information, see Amazon EBS–optimized instances.

Instance store specifications

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
		C1			
c1.medium	1 x 350 GB	HDD		✓	
c1.xlarge	4 x 420 GB	HDD		✓	
		C3			
c3.large	2 x 16 GB	SSD		✓	
c3.xlarge	2 x 40 GB	SSD		✓	
c3.2xlarge	2 x 80 GB	SSD		✓	
c3.4xlarge	2 x 160 GB	SSD		✓	
c3.8xlarge	2 x 320 GB	SSD		✓	
		I2			
i2.xlarge	1 x 800 GB	SSD		✓	

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
i2.2xlarge	2 x 800 GB	SSD		✓	
i2.4xlarge	4 x 800 GB	SSD		✓	
i2.8xlarge	8 x 800 GB	SSD		✓	
M1					
m1.small	1 x 160 GB	HDD		✓	
m1.medium	1 x 410 GB	HDD		✓	
m1.large	2 x 420 GB	HDD		✓	
m1.xlarge	4 x 420 GB	HDD		✓	
M2					
m2.xlarge	1 x 420 GB	HDD		✓	
m2.2xlarge	1 x 850 GB	HDD		✓	
m2.4xlarge	2 x 840 GB	HDD		✓	
M3					
m3.medium	1 x 4 GB	SSD		✓	
m3.large	1 x 32 GB	SSD		✓	
m3.xlarge	2 x 40 GB	SSD		✓	
m3.2xlarge	2 x 80 GB	SSD		✓	
R3					
r3.large	1 x 32 GB	SSD		✓	

Instance type	Instance store volumes	Instance store type	100% random read IOPS / Write IOPS	Needs initialization [1]	TRIM support [2]
r3.xlarge	1 x 80 GB	SSD		✓	
r3.2xlarge	1 x 160 GB	SSD		✓	
r3.4xlarge	1 x 320 GB	SSD		✓	
r3.8xlarge	2 x 320 GB	SSD		✓	

[1] Volumes attached to certain instances suffer a first-write penalty unless initialized. For more information, see Optimize disk performance for instance store volumes.

[2] For more information, see Instance store volume TRIM support.

Security specifications

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
			A1			
a1.medium	✓	Instance store not supported	✗	✗	✗	✗
a1.large	✓	Instance store not supported	✗	✗	✗	✗
a1.xlarge	✓	Instance store not supported	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
a1.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
a1.4xlarge	✓	Instance store not supported	✗	✗	✗	✗
a1.metal	✓	Instance store not supported	✗	✗	✗	✗
			C1			
c1.medium	✓	✗	✗	✗	✗	✗
c1.xlarge	✓	✗	✗	✗	✗	✗
			C3			
c3.large	✓	✗	✗	✗	✗	✗
c3.xlarge	✓	✗	✗	✗	✗	✗
c3.2xlarge	✓	✗	✗	✗	✗	✗
c3.4xlarge	✓	✗	✗	✗	✗	✗
c3.8xlarge	✓	✗	✗	✗	✗	✗
			C4			
c4.large	✓	Instance store not supported	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
c4.xlarge	✓	Instance store not supported	✗	✗	✗	✗
c4.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
c4.4xlarge	✓	Instance store not supported	✗	✗	✗	✗
c4.8xlarge	✓	Instance store not supported	✗	✗	✗	✗
G3						
g3.4xlarge	✓	Instance store not supported	✗	✗	✗	✗
g3.8xlarge	✓	Instance store not supported	✗	✗	✗	✗
g3.16xlarge	✓	Instance store not supported	✗	✗	✗	✗
I2						
i2.xlarge	✓	✗	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
i2.2xlarge	✓	✗	✗	✗	✗	✗
i2.4xlarge	✓	✗	✗	✗	✗	✗
i2.8xlarge	✓	✗	✗	✗	✗	✗
			M1			
m1.small	✓	✗	✗	✗	✗	✗
m1.medium	✓	✗	✗	✗	✗	✗
m1.large	✓	✗	✗	✗	✗	✗
m1.xlarge	✓	✗	✗	✗	✗	✗
			M2			
m2.xlarge	✓	✗	✗	✗	✗	✗
m2.2xlarge	✓	✗	✗	✗	✗	✗
m2.4xlarge	✓	✗	✗	✗	✗	✗
			M3			
m3.medium	✓	✗	✗	✗	✗	✗
m3.large	✓	✗	✗	✗	✗	✗
m3.xlarge	✓	✗	✗	✗	✗	✗
m3.2xlarge	✓	✗	✗	✗	✗	✗
			M4			

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
m4.large	✓	Instance store not supported	✗	✗	✗	✗
m4.xlarge	✓	Instance store not supported	✗	✗	✗	✗
m4.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
m4.4xlarge	✓	Instance store not supported	✗	✗	✗	✗
m4.10xlarge	✓	Instance store not supported	✗	✗	✗	✗
m4.16xlarge	✓	Instance store not supported	✗	✗	✗	✗
			R3			
r3.large	✓	✗	✗	✗	✗	✗
r3.xlarge	✓	✗	✗	✗	✗	✗
r3.2xlarge	✓	✗	✗	✗	✗	✗
r3.4xlarge	✓	✗	✗	✗	✗	✗

Instance type	EBS encryption	Instance store encryption	Encryption in transit	AMD SEV-SNP	NitroTPM	Nitro Enclaves
r3.8xlarge	✓	✗	✗	✗	✗	✗
			R4			
r4.large	✓	Instance store not supported	✗	✗	✗	✗
r4.xlarge	✓	Instance store not supported	✗	✗	✗	✗
r4.2xlarge	✓	Instance store not supported	✗	✗	✗	✗
r4.4xlarge	✓	Instance store not supported	✗	✗	✗	✗
r4.8xlarge	✓	Instance store not supported	✗	✗	✗	✗
r4.16xlarge	✓	Instance store not supported	✗	✗	✗	✗
			T1			
t1.micro	✓	Instance store not supported	✗	✗	✗	✗

Amazon EC2 instance types by Region

An Amazon EC2 instance is tied to the zone in which it was launched. The ID of an instance is tied to the Region for the instance, and can only be used in this Region.

When you create your AWS account, we set default quotas on these resources on a per-Region basis. We monitor your usage within each Region and raise your quotas automatically based on your use of Amazon EC2. For more information, see *Quotas*.

Each Region supports a subset of the available instance types.

US East (N. Virginia) — us-east-1

The following instance types are available in US East (N. Virginia).

- **General Purpose:** A1 | M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | M8g | Mac1 | Mac2 | Mac2-m1ultra | Mac2-m2 | Mac2-m2pro | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7gn | C7i | C7i-flex | C8g
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | R8g | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | U-24tb1 | U7i-12tb | U7in-16tb | U7in-24tb | U7in-32tb | X1 | X1e | X2gd | X2idn | X2iedn | X2iezn | X8g | z1d
- **Storage Optimized:** D2 | D3 | D3en | H1 | I2 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing:** DL1 | F1 | G3 | G4ad | G4dn | G5 | G5g | G6 | G6e | Gr6 | Inf1 | Inf2 | P2 | P3 | P3dn | P4d | P5 | Trn1 | Trn1n | VT1
- **High Performance Computing:** Hpc7g
- **Previous Generation:** A1 | C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

US East (Ohio) — us-east-2

The following instance types are available in US East (Ohio).

- **General Purpose:** A1 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | M8g | Mac1 | Mac2 | Mac2-m2 | Mac2-m2pro | T2 | T3 | T3a | T4g
- **Compute Optimized:** C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7gn | C7i | C7i-flex | C8g
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | R8g | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | X1 | X1e | X2gd | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | D3 | H1 | I2 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing:** G3 | G4ad | G4dn | G5 | G6 | G6e | Gr6 | Inf1 | Inf2 | P2 | P3 | P4d | P5 | P5e | Trn1 | Trn1n
- **High Performance Computing:** Hpc6a | Hpc6id | Hpc7a
- **Previous Generation:** A1 | C4 | G3 | I2 | M4 | R3 | R4

US West (N. California) — `us-west-1`

The following instance types are available in US West (N. California).

- **General Purpose:** M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5zn | M6a | M6g | M6gd | M6i | M6idn | M6in | M7g | M7gd | M7i | M7i-flex | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6in | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5d | R5n | R6a | R6g | R6gd | R6i | R7g | R7gd | R7i | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | I2 | I3 | I3en | I4i
- **Accelerated Computing:** G3 | G4dn | Inf1
- **Previous Generation:** C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

US West (Oregon) — `us-west-2`

The following instance types are available in US West (Oregon).

- **General Purpose:** A1 | M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | M8g | Mac1 | Mac2 | Mac2-m1ultra | Mac2-m2 | Mac2-m2pro | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7gn | C7i | C7i-flex | C8g
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | R8g | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | U-24tb1 | U7i-12tb | U7in-16tb | U7in-24tb | U7in-32tb | X1 | X1e | X2gd | X2idn | X2iedn | X2iezn | X8g | z1d
- **Storage Optimized:** D2 | D3 | D3en | H1 | I2 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing:** DL1 | DL2q | F1 | G3 | G4ad | G4dn | G5 | G5g | G6 | G6e | Gr6 | Inf1 | Inf2 | P2 | P3 | P3dn | P4d | P5 | Trn1 | Trn1n | VT1
- **Previous Generation:** A1 | C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

Africa (Cape Town) — `af-south-1`

The following instance types are available in Africa (Cape Town).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | T3 | T4g
- **Compute Optimized:** C5 | C5a | C5ad | C5d | C5n | C6g | C6i | C6in
- **Memory Optimized:** R5 | R5d | R5dn | R5n | R6g | R6i | U-6tb1 | U-12tb1 | X1 | X1e | X2idn | X2iedn
- **Storage Optimized:** D2 | I3 | I3en | I4i
- **Accelerated Computing:** G4dn | Inf1

Asia Pacific (Hong Kong) — `ap-east-1`

The following instance types are available in Asia Pacific (Hong Kong).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | T3 | T4g
- **Compute Optimized:** C5 | C5a | C5d | C5n | C6a | C6g | C6gn | C6i | C6in | C7g
- **Memory Optimized:** R5 | R5d | R5n | R6g | R6i | R7g | U-3tb1 | X1
- **Storage Optimized:** D2 | I3 | I3en | I4i
- **Accelerated Computing:** G4dn | Inf1

Asia Pacific (Hyderabad) — ap-south-2

The following instance types are available in Asia Pacific (Hyderabad).

- **General Purpose:** M5 | M5d | M6a | M6g | M6gd | M6i | M7g | T3 | T4g
- **Compute Optimized:** C5 | C5d | C6g | C6i | C6in | C7g
- **Memory Optimized:** R5 | R5d | R6g | R6i | R7g | U-9tb1 | X2idn | X2iedn
- **Storage Optimized:** I3 | I3en | I4i

Asia Pacific (Jakarta) — ap-southeast-3

The following instance types are available in Asia Pacific (Jakarta).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | T3 | T4g
- **Compute Optimized:** C5 | C5d | C5n | C6g | C6gd | C6gn | C6in
- **Memory Optimized:** R5 | R5d | R6g | R6gd | R7i | U-6tb1 | X2idn | X2iedn
- **Storage Optimized:** D3en | I3 | I3en | I4i
- **Accelerated Computing:** G5

Asia Pacific (Malaysia) — ap-southeast-5

The following instance types are available in Asia Pacific (Malaysia).

- **General Purpose:** M6g | M6gd | M6i | M6id | M7g | M7gd | M7i | T3 | T4g
- **Compute Optimized:** C6g | C6gn | C6i | C6id | C7g | C7gd | C7i
- **Memory Optimized:** R6g | R6i | R6id | R7g | R7gd | R7i | X2idn | X2iedn
- **Storage Optimized:** I3en | I4i
- **Accelerated Computing:** G6 | Gr6

Asia Pacific (Melbourne) — ap-southeast-4

The following instance types are available in Asia Pacific (Melbourne).

- **General Purpose:** M5 | M5d | M6g | M6gd | T3 | T4g

- **Compute Optimized:** C5 | C5d | C6g | C6in
- **Memory Optimized:** R5 | R5d | R6g
- **Storage Optimized:** I3 | I3en | I4i
- **Accelerated Computing:** Trn1

Asia Pacific (Mumbai) — ap-south-1

The following instance types are available in Asia Pacific (Mumbai).

- **General Purpose:** A1 | M4 | M5 | M5a | M5ad | M5d | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7g | M7gd | M7i | M7i-flex | Mac1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C4 | C5 | C5a | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6in | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5d | R5n | R6a | R6g | R6gd | R6i | R6id | R7g | R7gd | R7i | U-6tb1 | U-12tb1 | X1 | X1e | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | D3 | I2 | I3 | I3en | I4i | Is4gen
- **Accelerated Computing:** G4dn | G5 | G6 | Gr6 | Inf1 | Inf2 | P2
- **Previous Generation:** A1 | C4 | I2 | M4 | R3 | R4

Asia Pacific (Osaka) — ap-northeast-3

The following instance types are available in Asia Pacific (Osaka).

- **General Purpose:** M4 | M5 | M5d | M6g | M6gd | M6i | T2 | T3 | T4g
- **Compute Optimized:** C4 | C5 | C5d | C5n | C6g | C6gd | C6gn | C6i
- **Memory Optimized:** R4 | R5 | R5d | R6g | R6gd | R6i | X1 | X1e | X2idn | X2iedn
- **Storage Optimized:** D2 | I3 | I3en | I4i
- **Accelerated Computing:** G4dn
- **Previous Generation:** C4 | M4 | R4

Asia Pacific (Seoul) — ap-northeast-2

The following instance types are available in Asia Pacific (Seoul).

- **General Purpose:** M4 | M5 | M5a | M5ad | M5d | M5zn | M6g | M6gd | M6i | M6id | M7g | M7i | M7i-flex | Mac1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C4 | C5 | C5a | C5d | C5n | C6g | C6gd | C6gn | C6i | C6id | C6in | C7g | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6g | R6gd | R6i | R6id | R7g | R7i | U-6tb1 | U-9tb1 | U-12tb1 | U-24tb1 | U7in-16tb | X1 | X1e | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | I2 | I3 | I3en | I4i
- **Accelerated Computing:** G3 | G4dn | G5 | G5g | Inf1 | P2 | P3 | P4d
- **Previous Generation:** C4 | G3 | I2 | M4 | R3 | R4

Asia Pacific (Singapore) — `ap-southeast-1`

The following instance types are available in Asia Pacific (Singapore).

- **General Purpose:** A1 | M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7g | M7gd | M7i | M7i-flex | Mac1 | Mac2 | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7g | R7gd | R7i | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | X1 | X1e | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | D3 | D3en | I2 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing:** G3 | G4dn | G5g | Inf1 | Inf2 | P2 | P3
- **High Performance Computing:** Hpc6a
- **Previous Generation:** A1 | C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

Asia Pacific (Sydney) — `ap-southeast-2`

The following instance types are available in Asia Pacific (Sydney).

- **General Purpose:** A1 | M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7g | M7gd | M7i | M7i-flex | Mac1 | Mac2-m2 | Mac2-m2pro | T1 | T2 | T3 | T3a | T4g

- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7g | R7gd | R7i | U-3tb1 | U-6tb1 | U-12tb1 | U7in-16tb | X1 | X1e | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | D3 | D3en | I2 | I3 | I3en | I4i | Im4gn | Is4gen
- **Accelerated Computing:** F1 | G3 | G4dn | G5 | G6 | Gr6 | Inf1 | Inf2 | P2 | P3
- **High Performance Computing:** Hpc6a
- **Previous Generation:** A1 | C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

Asia Pacific (Tokyo) — `ap-northeast-1`

The following instance types are available in Asia Pacific (Tokyo).

- **General Purpose:** A1 | M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | Mac1 | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7gn | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | X1 | X1e | X2idn | X2iedn | X2iezn | z1d
- **Storage Optimized:** D2 | D3 | D3en | I2 | I3 | I3en | I4i | Im4gn | Is4gen
- **Accelerated Computing:** G3 | G4ad | G4dn | G5 | G5g | G6 | Gr6 | Inf1 | Inf2 | P2 | P3 | P3dn | P4d | VT1
- **High Performance Computing:** Hpc7g
- **Previous Generation:** A1 | C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

Canada (Central) — `ca-central-1`

The following instance types are available in Canada (Central).

- **General Purpose:** M4 | M5 | M5a | M5ad | M5d | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7g | M7i | M7i-flex | T2 | T3 | T3a | T4g

- **Compute Optimized:** C4 | C5 | C5a | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7g | C7i | C7i-flex
- **Memory Optimized:** R4 | R5 | R5a | R5ad | R5b | R5d | R5n | R6g | R6gd | R6i | R7g | R7i | U-3tb1 | U-6tb1 | X1 | X1e | X2idn | X2iedn
- **Storage Optimized:** D2 | D3 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing:** G3 | G4ad | G4dn | G5 | G6 | Gr6 | Inf1 | P3
- **Previous Generation:** C4 | G3 | M4 | R4

Canada West (Calgary) — `ca-west-1`

The following instance types are available in Canada West (Calgary).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | M6id | T3 | T4g
- **Compute Optimized:** C5 | C6g | C6gn | C6i | C6id
- **Memory Optimized:** R5 | R6g | R6i | R6id
- **Storage Optimized:** I3en | I4i

Europe (Frankfurt) — `eu-central-1`

The following instance types are available in Europe (Frankfurt).

- **General Purpose:** A1 | M3 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | M8g | Mac1 | Mac2-m2 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7i | C7i-flex | C8g
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | R8g | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | X1 | X1e | X2idn | X2iedn | X8g | z1d
- **Storage Optimized:** D2 | D3 | D3en | I2 | I3 | I3en | I4i | Im4gn | Is4gen
- **Accelerated Computing:** DL2q | F1 | G3 | G4ad | G4dn | G5 | G5g | G6 | Gr6 | Inf1 | Inf2 | P2 | P3 | P4d
- **Previous Generation:** A1 | C3 | C4 | G3 | I2 | M3 | M4 | R3 | R4

Europe (Ireland) — eu-west-1

The following instance types are available in Europe (Ireland).

- **General Purpose:** A1 | M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5dn | M5n | M5zn | M6a | M6g | M6gd | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | Mac1 | Mac2 | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7gn | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5dn | R5n | R6a | R6g | R6gd | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | X1 | X1e | X2gd | X2idn | X2iedn | X2iezn | z1d
- **Storage Optimized:** D2 | D3 | D3en | H1 | I2 | I3 | I3en | I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing:** F1 | G3 | G4ad | G4dn | G5 | Inf1 | Inf2 | P2 | P3 | P3dn | P4d | VT1
- **High Performance Computing:** Hpc7a | Hpc7g
- **Previous Generation:** A1 | C1 | C3 | C4 | G3 | I2 | M1 | M2 | M3 | M4 | R3 | R4 | T1

Europe (London) — eu-west-2

The following instance types are available in Europe (London).

- **General Purpose:** M4 | M5 | M5a | M5ad | M5d | M6a | M6g | M6gd | M6i | M6id | M7g | M7i | M7i-flex | Mac1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C4 | C5 | C5a | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7g | C7i | C7i-flex
- **Memory Optimized:** R4 | R5 | R5a | R5ad | R5b | R5d | R5n | R6g | R6gd | R6i | R6id | R7g | R7i | U-6tb1 | U-9tb1 | X1 | X2idn | X2iedn | z1d
- **Storage Optimized:** D2 | D3 | I3 | I3en | I4i | Im4gn | Is4gen
- **Accelerated Computing:** F1 | G3 | G4ad | G4dn | G5 | G6 | Gr6 | Inf1 | Inf2 | P3
- **Previous Generation:** C4 | G3 | M4 | R4

Europe (Milan) — eu-south-1

The following instance types are available in Europe (Milan).

- **General Purpose:** M5 | M5a | M5d | M6a | M6g | M6gd | M6i | T3 | T3a | T4g
- **Compute Optimized:** C5 | C5a | C5ad | C5d | C5n | C6g | C6gn | C6i | C6in | C7g
- **Memory Optimized:** R5 | R5a | R5b | R5d | R5dn | R5n | R6g | R6i | R7g | R7i | U-3tb1 | U-6tb1 | U-12tb1 | X2idn | X2iedn
- **Storage Optimized:** D2 | I3 | I3en | I4i
- **Accelerated Computing:** G4dn | Inf1

Europe (Paris) — `eu-west-3`

The following instance types are available in Europe (Paris).

- **General Purpose:** M5 | M5a | M5ad | M5d | M6g | M6gd | M6i | M7g | M7gd | M7i | M7i-flex | T2 | T3 | T3a | T4g
- **Compute Optimized:** C5 | C5a | C5d | C5n | C6g | C6gd | C6gn | C6i | C6in | C7i | C7i-flex
- **Memory Optimized:** R4 | R5 | R5a | R5ad | R5d | R5dn | R5n | R6g | R6gd | R6i | R7i | U-6tb1 | U-9tb1 | X1 | X2idn | X2iedn
- **Storage Optimized:** D2 | D3 | I3 | I3en | I4i | Im4gn | Is4gen
- **Accelerated Computing:** G4dn | Inf1 | Inf2
- **Previous Generation:** R4

Europe (Spain) — `eu-south-2`

The following instance types are available in Europe (Spain).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | T3 | T4g
- **Compute Optimized:** C5 | C5d | C6g | C6gd | C6in | C7a | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized:** R5 | R5d | R6g | R6gd | R7a | R7g | R7gd | R7i | U-6tb1 | X2idn | X2iedn
- **Storage Optimized:** I3 | I3en
- **Accelerated Computing:** G5g | G6 | Gr6

Europe (Stockholm) — `eu-north-1`

The following instance types are available in Europe (Stockholm).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex | Mac1 | T3 | T4g
- **Compute Optimized:** C5 | C5a | C5d | C5n | C6g | C6gd | C6gn | C6i | C6in | C7a | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized:** R5 | R5b | R5d | R5dn | R5n | R6g | R6gd | R6i | R6idn | R6in | R7a | R7g | R7gd | R7i | U-6tb1 | U-9tb1 | X2idn | X2iedn
- **Storage Optimized:** D2 | I3 | I3en | I4i
- **Accelerated Computing:** G4dn | G5 | G6 | Gr6 | Inf1 | Inf2 | P5
- **High Performance Computing:** Hpc6a | Hpc6id | Hpc7a

Europe (Zurich) — `eu-central-2`

The following instance types are available in Europe (Zurich).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | M6id | T3 | T4g
- **Compute Optimized:** C5 | C5d | C6g | C6gd | C6in
- **Memory Optimized:** R5 | R5d | R6g | R6gd | R6i | U-6tb1 | X2idn
- **Storage Optimized:** D3 | I3 | I3en | I4i
- **Accelerated Computing:** G6 | Gr6

Israel (Tel Aviv) — `il-central-1`

The following instance types are available in Israel (Tel Aviv).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | M6id | T3 | T3a | T4g
- **Compute Optimized:** C5 | C5d | C6g | C6gn | C6i | C6id | C6in
- **Memory Optimized:** R5 | R5d | R6g | R6i | R6id
- **Storage Optimized:** D3 | I3 | I3en | I4i
- **Accelerated Computing:** G5 | P4de

Middle East (Bahrain) — `me-south-1`

The following instance types are available in Middle East (Bahrain).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | M7g | T3 | T4g
- **Compute Optimized:** C5 | C5a | C5ad | C5d | C5n | C6g | C6gn | C6i | C6in
- **Memory Optimized:** R5 | R5d | R6g | R6i | X2idn
- **Storage Optimized:** D2 | I3 | I3en | I4i
- **Accelerated Computing:** G4dn | Inf1

Middle East (UAE) — `me-central-1`

The following instance types are available in Middle East (UAE).

- **General Purpose:** M5 | M5d | M6g | M6gd | M6i | T3 | T4g
- **Compute Optimized:** C5 | C5d | C6g | C6in
- **Memory Optimized:** R5 | R5d | R6g | R6i | X2idn
- **Storage Optimized:** I3 | I3en | I4i
- **Accelerated Computing:** G5

South America (São Paulo) — `sa-east-1`

The following instance types are available in South America (São Paulo).

- **General Purpose:** M1 | M2 | M3 | M4 | M5 | M5a | M5ad | M5d | M5zn | M6a | M6g | M6gd | M6i | M6id | M7g | M7gd | M7i | M7i-flex | T1 | T2 | T3 | T3a | T4g
- **Compute Optimized:** C1 | C3 | C4 | C5 | C5a | C5ad | C5d | C5n | C6a | C6g | C6gd | C6gn | C6i | C6id | C6in | C7g | C7i | C7i-flex
- **Memory Optimized:** R3 | R4 | R5 | R5a | R5ad | R5b | R5d | R5n | R6g | R6gd | R6i | R7g | R7i | U-3tb1 | U-6tb1 | U-12tb1 | X1 | X1e | X2idn | X2iedn
- **Storage Optimized:** I3 | I3en | I4i
- **Accelerated Computing:** G4dn | G5 | G6 | Gr6 | Inf1 | Inf2
- **Previous Generation:** C1 | C3 | C4 | M1 | M2 | M3 | M4 | R3 | R4 | T1

AWS GovCloud (US-East) — `us-gov-east-1`

The following instance types are available in AWS GovCloud (US-East).

- **General Purpose:** M5 | M5a | M5d | M5dn | M5n | M6g | M6gd | M6i | M7i | M7i-flex | T3 | T3a | T4g
- **Compute Optimized:** C5 | C5a | C5d | C5n | C6g | C6gd | C6gn | C6i | C6in | C7i
- **Memory Optimized:** R5 | R5a | R5d | R5dn | R5n | R6g | R6gd | R6i | R7i | U-6tb1 | U-9tb1 | U-24tb1 | X1 | X1e | X2idn | X2iedn
- **Storage Optimized:** I3 | I3en | I4i
- **Accelerated Computing:** G4dn | Inf1 | P3dn
- **High Performance Computing:** Hpc6a

AWS GovCloud (US-West) — `us-gov-west-1`

The following instance types are available in AWS GovCloud (US-West).

- **General Purpose:** M5 | M5a | M5ad | M5d | M5dn | M5n | M6g | M6gd | M6i | M6id | M6idn | M6in | M7i | M7i-flex | T2 | T3 | T3a | T4g
- **Compute Optimized:** C5 | C5a | C5d | C5n | C6g | C6gd | C6gn | C6i | C6id | C6in
- **Memory Optimized:** R5 | R5a | R5ad | R5d | R5dn | R5n | R6g | R6gd | R6i | R6id | R6idn | R6in | R7i | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-24tb1 | X1 | X1e | X2idn | X2iedn
- **Storage Optimized:** D3 | I3 | I3en | I4i
- **Accelerated Computing:** F1 | G4dn | Inf1 | P2 | P3 | P3dn | P4d
- **High Performance Computing:** Hpc6a | Hpc6id | Hpc7a | Hpc7g
- **Previous Generation:** C4 | G3 | M4 | R4

Instances built on the AWS Nitro System

The Nitro System is a collection of hardware and software components built by AWS that enable high performance, high availability, and high security.

The Nitro System provides bare metal capabilities that eliminate virtualization overhead and support workloads that require full access to host hardware. Bare metal instances are well suited for the following:

- Workloads that require access to low-level hardware features (for example, Intel VT) that are not available or fully supported in virtualized environments
- Applications that require a non-virtualized environment for licensing or support

Nitro components

The following components are part of the Nitro System:

- Nitro card
  - Local NVMe storage volumes
  - Networking hardware support
  - Management
  - Monitoring
  - Security
- Nitro security chip, integrated into the motherboard
- Nitro hypervisor - A lightweight hypervisor that manages memory and CPU allocation and delivers performance that is indistinguishable from bare metal for most workloads.

For more information, see AWS Nitro System.

Network feature support

The following content summarizes key networking capabilities for each version of the Nitro System. Versions are shown in descending version release order. If you know the instance type family that your instance belongs to, you can expand the Specifications section and select your

instance family. The **Platform summary** table for your instance family shows the Nitro version for your instance type in the **Hypervisor** column.

If you're not sure which instance family applies, see the Naming conventions section.

> **Note**
>
> Features are cumulative, meaning that newer versions of the Nitro system support the features that are listed in all prior versions, except where explicitly stated otherwise. See the Nitro instance requirements section for the minimum ENA driver and Linux kernel versions for optimal performance of Nitro v4 and later instance types.

Nitro v5

- Traffic Mirroring is not supported for this version.
- Up to 200 Gbps* per network card.

Nitro v4

- Traffic Mirroring is not supported for this version.
- GPU accelerated and Trainium based instance types support up to 100 Gbps* per network card for consistency. Other instance types support up to 170 Gbps* per network card.
- Remote direct memory access (RDMA) write is available with EFA for `p5.48xlarge` and `p5e.48xlarge` instances.
- Supports ENA Express. For more information about ENA Express, including what specific instance types support it see Improve network performance with ENA Express on your EC2 instances in the *Amazon EC2 User Guide*.

Nitro v3

- Up to 100 Gbps* per network card.
- Supports RDMA read with EFA for `p4d(e).24xlarge` instances.
- Encryption in transit.

Nitro v2

- Enhanced networking with Elastic Network Adapter (ENA).
- Traffic Mirroring.

[*] *Your instance type might support a lower maximum bandwidth. For more information, refer to the network specifications for your instance type in the instance family pages.*

Virtualized instances

The following virtualized instances are built on the Nitro System:

Nitro v5

- **General Purpose**: M8g
- **Compute Optimized**: C7gn | C8g
- **Memory Optimized**: R8g | X8g
- **High Performance Computing**: Hpc7g

Nitro v4

- **General Purpose**: M6a | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i | M7i-flex
- **Compute Optimized**: C6a | C6gn | C6i | C6id | C6in | C7a | C7g | C7gd | C7i | C7i-flex
- **Memory Optimized**: R6a | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | U7i-12tb | U7in-16tb | U7in-24tb | U7in-32tb | X2idn | X2iedn
- **Storage Optimized**: I4g | I4i | Im4gn | Is4gen
- **Accelerated Computing**: G6 | G6e | Gr6 | Inf2 | P5 | P5e | Trn1 | Trn1n
- **High Performance Computing**: Hpc6a | Hpc6id | Hpc7a

Nitro v3

- **General Purpose**: M5dn | M5n | M5zn
- **Compute Optimized**: C5n
- **Memory Optimized**: R5dn | R5n | U-3tb1 | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | U-24tb1 | X2iezn

- **Storage Optimized**: D3 | D3en | I3en
- **Accelerated Computing**: DL1 | DL2q | G4ad | G4dn | G5 | Inf1 | P3dn | P4d | P4de | VT1

Nitro v2

- **General Purpose**: M5 | M5a | M5ad | M5d | M6g | M6gd | T3 | T3a | T4g | A1
- **Compute Optimized**: C5 | C5a | C5ad | C5d | C6g | C6gd
- **Memory Optimized**: R5 | R5a | R5ad | R5b | R5d | R6g | R6gd | X2gd | z1d
- **Accelerated Computing**: G5g
- **Previous Generation**: A1

Bare metal instances

The following bare metal instances are built on the Nitro System:

Nitro v5

- **General Purpose**: M8g
- **Compute Optimized**: C7gn | C8g
- **Memory Optimized**: R8g | X8g

Nitro v4

- **General Purpose**: M6a | M6i | M6id | M6idn | M6in | M7a | M7g | M7gd | M7i
- **Compute Optimized**: C6a | C6i | C6id | C6in | C7a | C7g | C7gd | C7i
- **Memory Optimized**: R6a | R6i | R6idn | R6in | R6id | R7a | R7g | R7gd | R7i | R7iz | X2idn | X2iedn
- **Storage Optimized**: I4i

Nitro v3

- **General Purpose**: M5dn | M5n | M5zn
- **Compute Optimized**: C5n
- **Memory Optimized**: R5dn | R5n | U-6tb1 | U-9tb1 | U-12tb1 | U-18tb1 | U-24tb1 | X2iezn

- **Storage Optimized**: I3en
- **Accelerated Computing**: G4dn

Nitro v2

- **General Purpose**: M5 | M5d | M6g | M6gd | Mac1 | Mac2 | Mac2-m1ultra | Mac2-m2 | Mac2-m2pro | A1
- **Compute Optimized**: C5 | C5d | C6g | C6gd
- **Memory Optimized**: R5 | R5b | R5d | R6g | R6gd | X2gd | z1d
- **Storage Optimized**: I3
- **Accelerated Computing**: G5g
- **Previous Generation**: A1

In most cases, when you launch a bare metal instance, the underlying server goes through its boot process, during which it verifies all hardware and firmware components. This means that it can take up to 20 minutes or more from the time the instance enters the running state until it becomes available over the network.

Nitro instance requirements

Instances built on the AWS Nitro System use ENA for enhanced networking, and storage volumes exposed as NVMe block devices. For more information about NVMe drivers, see Install or upgrade the NVMe driver in the *Amazon EBS User Guide* for Linux instances, or AWS NVMe drivers for Windows instances in the *Amazon EC2 User Guide*. For more information about ENA drivers, see Requirements for enhanced networking with ENA in the *Amazon EC2 User Guide*.

The following tabs show details about which driver or kernel versions are recommended for your operating system.

Linux

The ENA Linux kernel driver version 2.2.9g or later, from the Amazon Drivers GitHub repository is recommended for Nitro v4 instance types and required for Nitro v5 instance types for Linux distributions that expose the version information. ENA drivers for Linux are available on GitHub. For more information, see Linux kernel driver for Elastic Network Adapter (ENA) family. For release notes, see ENA Linux Kernel Driver Release notes.

Linux distributions can also incorporate ENA driver features within the kernel. However, the timing may vary for implementation within the different distributions. The Amazon Linux 2023 and Bottlerocket Linux distributions support ENA features for Nitro v4 and newer instance types by default.

Some Linux distributions might require a minimum kernel version to prevent suboptimal performance of ENA driver features on Nitro v4 and newer instance types. If your Linux distribution appears in the following table, you can verify the kernel version for your instance with the **uname** command as follows:

```
uname -r
```

Linux distribution	Minimum kernel version
Linux upstream	Kernel version 5.9
Amazon Linux 2	Kernel 4.14.186
Red Hat Enterprise Linux (RHEL)	RHEL 8.3 kernel 4.18.0-240.1.1.el8_3.ARCH
SUSE Linux Enterprise Server (SLES)	• SLE 12 SP4 kernel 4.12.14-95.99.3 • SLE 12 SP5 kernel 4.12.14-122.116.1 • SLE 15 kernel 4.12.14-150000.150.92.2 • SLE 15 SP1 kernel 4.12.14-150100.197 .114.2 • SLE 15 SP2 kernel 5.3.18-24.15.1
Linux Ubuntu	20.04 kernel 5.4.0-1025-aws
DPDK	v20.11

Note

The following ENA Linux driver versions are not supported, and will result in elastic network interface attachment failures:

- ENA Linux
  - Nitro v5 – Earlier than 2.2.9
  - All Nitro versions prior to v5 – Earlier than v1.2.0
- ENA DPDK
  - Nitro v5 – Earlier than 20.11
  - All Nitro versions prior to v5 – Earlier than v1.1.1

Windows

ENA Windows driver version: 2.2.3 or later for Windows instances.

Note

The following ENA Windows drivers are not supported:

- ENA Windows: v2.2.0 or earlier

All of the current AWS Windows AMIs meet these requirements. For more information about AMI versions and release notes, see the AWS Windows AMI reference.

FreeBSD

ENA FreeBSD driver version: 2.3.1 or later for FreeBSD instances.

Note

ENA FreeBSD driver versions earlier than v2.3.1 are not supported, and will result in elastic network interface attachment failures.

Linux instances with AWS Graviton processors

Linux instances with AWS Graviton processors have the following additional requirements:

- An AMI with 64-bit ARM architecture.
- Support for UEFI boot with ACPI tables and ACPI hot-plug of PCI devices.

> **Note**
>
> AWS Graviton processors only support Linux operating systems.

Amazon EC2 instance type quotas

Your AWS account has quotas that affect the number of instances that you can run in each Region. These quotas are grouped by purchasing option.

Quotas

- On-Demand Instance quotas
- Spot Instance quotas
- Dedicated Host quotas

On-Demand Instance quotas

The following table shows the maximum number of vCPUs that you can provision for On-Demand Instances. Amazon EC2 automatically increases your On-Demand Instance quotas based on your usage. You can also request a quota increase. For more information, see On-Demand Instance quotas in the *Amazon EC2 User Guide*.

Name	Default	Adjustable
Running On-Demand DL instances	0	Yes
Running On-Demand F instances	0	Yes
Running On-Demand G and VT instances	0	Yes
Running On-Demand HPC instances	0	Yes
Running On-Demand High Memory instances	0	Yes
Running On-Demand Inf instances	0	Yes
Running On-Demand P instances	0	Yes
Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances	5	Yes
Running On-Demand Trn instances	0	Yes

Name	Default	Adjustable
Running On-Demand X instances	0	Yes

Spot Instance quotas

The following table shows the maximum number of vCPUs that you can provision for Spot Instances. Amazon EC2 automatically increases your Spot Instance quotas based on your usage. You can also request a quota increase. For more information, see Spot Instance quotas in the *Amazon EC2 User Guide*.

Name	Default	Adjustable
All DL Spot Instance Requests	0	Yes
All F Spot Instance Requests	0	Yes
All G and VT Spot Instance Requests	0	Yes
All Inf Spot Instance Requests	0	Yes
All P4, P3 and P2 Spot Instance Requests	0	Yes
All P5 Spot Instance Requests	0	Yes
All Standard (A, C, D, H, I, M, R, T, Z) Spot Instance Requests	5	Yes
All Trn Spot Instance Requests	0	Yes
All X Spot Instance Requests	0	Yes

Dedicated Host quotas

The following table shows the maximum number of running Dedicated Hosts that you can allocate.

Name	Default	Adjustable
Running Dedicated a1 Hosts	0	Yes
Running Dedicated c3 Hosts	0	Yes
Running Dedicated c4 Hosts	0	Yes
Running Dedicated c5 Hosts	0	Yes
Running Dedicated c5a Hosts	0	Yes
Running Dedicated c5d Hosts	0	Yes
Running Dedicated c5n Hosts	0	Yes
Running Dedicated c6a Hosts	0	Yes
Running Dedicated c6g Hosts	0	Yes
Running Dedicated c6gd Hosts	0	Yes
Running Dedicated c6gn Hosts	0	Yes
Running Dedicated c6i Hosts	0	Yes
Running Dedicated c6id Hosts	0	Yes
Running Dedicated c6in Hosts	0	Yes
Running Dedicated c7a Hosts	0	Yes
Running Dedicated c7g Hosts	0	Yes
Running Dedicated c7gd Hosts	0	Yes
Running Dedicated c7gn Hosts	0	Yes
Running Dedicated c7i Hosts	0	Yes
Running Dedicated c8g Hosts	0	Yes

Name	Default	Adjustable
Running Dedicated d2 Hosts	0	Yes
Running Dedicated dl1 Hosts	0	Yes
Running Dedicated f1 Hosts	0	Yes
Running Dedicated g3 Hosts	0	Yes
Running Dedicated g3s Hosts	0	Yes
Running Dedicated g4ad Hosts	0	Yes
Running Dedicated g4dn Hosts	0	Yes
Running Dedicated g5 Hosts	0	Yes
Running Dedicated g5g Hosts	0	Yes
Running Dedicated g6 Hosts	0	Yes
Running Dedicated g6e Hosts	0	Yes
Running Dedicated gr6 Hosts	0	Yes
Running Dedicated h1 Hosts	0	Yes
Running Dedicated i2 Hosts	0	Yes
Running Dedicated i3 Hosts	0	Yes
Running Dedicated i3en Hosts	0	Yes
Running Dedicated i4g Hosts	0	Yes
Running Dedicated i4i Hosts	0	Yes
Running Dedicated im4gn Hosts	0	Yes
Running Dedicated inf Hosts	0	Yes

Name	Default	Adjustable
Running Dedicated inf2 Hosts	0	Yes
Running Dedicated is4gen Hosts	0	Yes
Running Dedicated m3 Hosts	0	Yes
Running Dedicated m4 Hosts	0	Yes
Running Dedicated m5 Hosts	0	Yes
Running Dedicated m5a Hosts	0	Yes
Running Dedicated m5ad Hosts	0	Yes
Running Dedicated m5d Hosts	0	Yes
Running Dedicated m5dn Hosts	0	Yes
Running Dedicated m5n Hosts	0	Yes
Running Dedicated m5zn Hosts	0	Yes
Running Dedicated m6a Hosts	0	Yes
Running Dedicated m6g Hosts	0	Yes
Running Dedicated m6gd Hosts	0	Yes
Running Dedicated m6i Hosts	0	Yes
Running Dedicated m6id Hosts	0	Yes
Running Dedicated m6idn Hosts	0	Yes
Running Dedicated m6in Hosts	0	Yes
Running Dedicated m7a Hosts	0	Yes
Running Dedicated m7g Hosts	0	Yes

Name	Default	Adjustable
Running Dedicated m7gd Hosts	0	Yes
Running Dedicated m7i Hosts	0	Yes
Running Dedicated m8g Hosts	0	Yes
Running Dedicated mac1 Hosts	0	Yes
Running Dedicated mac2 Hosts	0	Yes
Running Dedicated mac2-m1ultra Hosts	0	Yes
Running Dedicated mac2-m2 Hosts	0	Yes
Running Dedicated mac2-m2pro Hosts	0	Yes
Running Dedicated p2 Hosts	0	Yes
Running Dedicated p3 Hosts	0	Yes
Running Dedicated p3dn Hosts	0	Yes
Running Dedicated p4d Hosts	0	Yes
Running Dedicated p5 Hosts	0	Yes
Running Dedicated r3 Hosts	0	Yes
Running Dedicated r4 Hosts	0	Yes
Running Dedicated r5 Hosts	0	Yes
Running Dedicated r5a Hosts	0	Yes
Running Dedicated r5ad Hosts	0	Yes
Running Dedicated r5b Hosts	0	Yes
Running Dedicated r5d Hosts	0	Yes

Name	Default	Adjustable
Running Dedicated r5dn Hosts	0	Yes
Running Dedicated r5n Hosts	0	Yes
Running Dedicated r6a Hosts	0	Yes
Running Dedicated r6g Hosts	0	Yes
Running Dedicated r6gd Hosts	0	Yes
Running Dedicated r6i Hosts	0	Yes
Running Dedicated r6id Hosts	0	Yes
Running Dedicated r6idn Hosts	0	Yes
Running Dedicated r6in Hosts	0	Yes
Running Dedicated r7a Hosts	0	Yes
Running Dedicated r7g Hosts	0	Yes
Running Dedicated r7gd Hosts	0	Yes
Running Dedicated r7i Hosts	0	Yes
Running Dedicated r7iz Hosts	0	Yes
Running Dedicated r8g Hosts	0	Yes
Running Dedicated t3 Hosts	0	Yes
Running Dedicated trn1 Hosts	0	Yes
Running Dedicated trn1n Hosts	0	Yes
Running Dedicated u-12tb1 Hosts	0	Yes
Running Dedicated u-18tb1 Hosts	0	Yes

Name	Default	Adjustable
Running Dedicated u-24tb1 Hosts	0	Yes
Running Dedicated u-3tb1 Hosts	0	Yes
Running Dedicated u-6tb1 Hosts	0	Yes
Running Dedicated u-9tb1 Hosts	0	Yes
Running Dedicated u7i-12tb Hosts	0	Yes
Running Dedicated u7in-16tb Hosts	0	Yes
Running Dedicated u7in-24tb Hosts	0	Yes
Running Dedicated u7in-32tb Hosts	0	Yes
Running Dedicated vt1 Hosts	0	Yes
Running Dedicated x1 Hosts	0	Yes
Running Dedicated x1e Hosts	0	Yes
Running Dedicated x2gd Hosts	0	Yes
Running Dedicated x2idn Hosts	0	Yes
Running Dedicated x2iedn Hosts	0	Yes
Running Dedicated x2iezn Hosts	0	Yes
Running Dedicated x8g Hosts	0	Yes
Running Dedicated z1d Hosts	0	Yes

Document history for the Amazon EC2 Instance Types Guide

The following table describes the instance type releases for Amazon EC2.

Change	Description	Date
M8g instances	New general purpose instances powered by AWS Graviton4 processors.	September 25, 2024
C8g instances	New compute optimized instances powered by AWS Graviton4 processors.	September 25, 2024
X8g instances	New memory optimized instances powered by AWS Graviton4 processors.	September 18, 2024
P5e instances	New accelerated computing instance type for the latest generation GPU instances featuring NVIDIA H200 GPUs for large scale ML Training/ inference and HPC.	September 9, 2024
G6e instances	New accelerated computing instances that feature up to 8 NVIDIA L40S GPUs, which offer 48 GB of GPU memory.	August 15, 2024
G6e instances	New accelerated computing instances that feature up to 8 NVIDIA L40S GPUs, which offer 48 GB of GPU memory.	August 15, 2024

Nitro version features	Updated Nitro page to include features and instance types by Nitro version. Added Nitro version to the Hyperviso r column in the Platform summary tables also.	July 22, 2024
R8g instances	New memory optimized instances powered by AWS Graviton4 processors and up to 1.5 TiB memory.	July 9, 2024
Mac2-m1ultra instances	New general purpose instance type that features Apple M1 Ultra processors.	June 17, 2024
U7i-12tb, U7in-16tb, U7in-24tb, and U7in-32tb instances	New high memory instance types that feature 4th generation Intel Xeon Scalable processors.	May 28, 2024
C7i-flex instances	New compute optimized instances featuring Intel Xeon Scalable processors (Sapphire Rapids). They deliver a baseline CPU performance of 40 percent with the ability to deliver up to 100 percent CPU performance for 95 percent of the time over a 24-hour period.	May 14, 2024
G6 and Gr6 instances	New high performance GPU-based instance types for deep learning inference and graphics-intensive applicati ons.	April 4, 2024

C7gn bare metal instances	New `c7gn.metal` bare metal instance type powered by the latest generation AWS Graviton3E processors and the new AWS Nitro cards.	March 26, 2024
C7gd, M7gd, and R7gd bare metal instances	New bare metal instances.	March 6, 2024
DL2q instances	New instances that use Qualcomm AI100 inference accelerators, which feature 7th generation Qualcomm Edge AI cores. These instances can be used to cost-efficiently deploy deep learning (DL) workloads in the cloud or validate performance and accuracy of DL workloads that will be deployed on Qualcomm edge devices.	November 15, 2023
Mac2-m2 instances	New general purpose instance type that features Apple M2 processors.	October 25, 2023
R7i instances	New memory optimized instance types that feature 4th generation Intel Xeon Scalable processors.	October 16, 2023
C7a instances	New compute optimized instances powered by 4th generation AMD EPYC processors.	October 4, 2023

Mac2-m2pro instances	New general purpose instance type that features Apple M2 Pro processors.	September 18, 2023
C7i instances	New compute optimized instance types that feature 4th generation Intel Xeon Scalable processors.	September 14, 2023
R7a instances	New memory optimized instance types featuring 4th generation AMD EPYC 9R14 processors and up to 1536 GiB of system memory.	September 11, 2023
R7iz instances	New high-frequency and high memory instances powered by 4th generation Intel Xeon processors.	September 7, 2023
Hpc7a instances	New compute optimized instance types that feature 4th generation AMD EPYC processors. These instances support up to 300 Gbps networking bandwidth, and up to 192 CPU cores with up to 768 GB of system memory.	August 17, 2023
M7a instances	New general purpose instances powered by 4th generation AMD EPYC processors.	August 15, 2023

M7i-flex instances	New general purpose instances that offer a balance of compute, memory, and network resources for a broad spectrum of general purpose applications. They deliver a baseline CPU performance of 40 percent with the ability to deliver up to 100 percent CPU performance for 95 percent of the time over a 24-hour period.	August 2, 2023
M7i instances	New general purpose instance types that feature 4th generation Intel Xeon Scalable processors.	August 2, 2023
R7gd instances	New memory optimized instances featuring the latest AWS Graviton3 processors.	July 28, 2023
M7gd instances	New general purpose instances featuring the latest AWS Graviton3 processors.	July 28, 2023
C7gd instances	New compute optimized instances featuring the latest AWS Graviton3 processors.	July 28, 2023
P5 instances	New accelerated computing instances that feature 8 NVIDIA H100 GPUs with 640 GB high-bandwidth GPU memory, 3rd generation AMD EPYC processors, and 2 TB system memory.	July 26, 2023

Hpc7g instances	New high-performance computing instances powered by AWS Graviton3E processors that provide up to 35 percent higher vector-instruction processing performance than Graviton3 processors.	June 20, 2023
C7gn instances	New compute optimized instances powered by the latest generation AWS Graviton3E processors and the new AWS Nitro cards. These instances offer up to 200 Gbps network bandwidth.	June 20, 2023
I4g instances	New storage optimized instances that features the AWS Graviton2 processor and AWS Nitro SSDs.	May 9, 2023
Trn1n instances	New accelerated computing instances optimized for machine learning training powered by AWS Trainium accelerators.	April 13, 2023
Inf2 instances	New instances featuring AWS Inferentia2 accelerators, the latest machine learning chip designed by AWS.	April 13, 2023
Hpc6id instance	New memory optimized instance featuring 3rd generation Intel Xeon Scalable processors (Ice Lake).	November 29, 2022

R6in and R6idn instances	New memory optimized instances for network-intensive workloads.	November 28, 2022
M6in and M6idn instances	New general computing instances types.	November 28, 2022
C6in instances	New compute optimized instances ideal for running high performance computing.	November 28, 2022
Trn1 instances	New accelerated computing instances optimized for deep learning powered by AWS Trainium chips.	October 10, 2022
R6a instances	New memory optimized instances featuring 3rd generation AMD EPYC processors.	July 19, 2022
R6id instances	New memory optimized instances featuring 3rd generation Intel Xeon Scalable processors (Ice Lake).	June 9, 2022
M6id instances	New general purpose instances featuring 3rd generation Intel Xeon Scalable processors (Ice Lake).	May 26, 2022
C6id instances	New compute optimized instances featuring 3rd generation Intel Xeon Scalable processors (Ice Lake).	May 26, 2022

C7g instances	New compute optimized instances featuring AWS Graviton3 processors.	May 23, 2022
I4i instances	New storage optimized instances featuring 3rd generation Intel Xeon Scalable processors (Ice Lake).	April 27, 2022
X2idn and X2iedn instances	New memory optimized instances featuring Intel Xeon Scalable processors (Ice Lake).	March 10, 2022
C6a instances	New compute optimized instances featuring 3rd generation AMD EPYC processors (Milan).	February 14, 2022
X2iezn instances	New memory optimized instances featuring Intel Xeon Platinum processors (Cascade Lake).	January 26, 2022
Hpc6a instances	New compute optimized instances featuring AMD EPYC processors.	January 10, 2022
Im4gn and Is4gen instances	New storage optimized instances.	November 30, 2021
M6a instances	New general purpose instances powered by AMD 3rd Generation EPYC processors.	November 29, 2021

G5g instances	New accelerated computing instances featuring AWS Graviton2 processors based on 64-bit Arm architecture.	November 29, 2021
R6i instances	New memory optimized instances.	November 22, 2021
G5 instances	New accelerated computing instances featuring up to 8 NVIDIA A10G GPUs and second generation AMD EPY processors.	November 11, 2021
C6i instances	New compute optimized instances featuring Intel Xeon Scalable processors (Ice Lake).	October 28, 2021
DL1 instances	New accelerated computing instances featuring Habana Gaudi accelerators and Intel Xeon Platinum processors (Cascade Lake).	October 26, 2021
VT1 instances	New accelerated computing instances that use Xilinx Alveo U30 media accelerators and are designed for live video transcoding workloads.	September 13, 2021
M6i instances	New general purpose instances featuring third generation Intel Xeon Scalable processors (Ice Lake).	August 16, 2021

High memory virtualized instances	Virtualized high memory instances purpose-built to run large in-memory databases. The new types are u-6tb1.56xlarge, u-6tb1.112xlarge, u-9tb1.112xlarge, and u-12tb1.112xlarge.	May 11, 2021
X2gd instances	New memory optimized instances featuring an AWS Graviton2 processor based on 64-bit Arm architecture.	March 16, 2021
C6gn instances	New computed optimized instances featuring an AWS Graviton2 processor based on 64-bit Arm architecture. These instances can utilize up to 100 Gbps of network bandwidth.	December 18, 2020
G4ad instances	New instances powered by AMD Radeon Pro V520 GPUs and AMD 2nd Generation EPYC processors.	December 9, 2020
D3, D3en, M5zn, and R5b instances	New instance types built on the Nitro System.	December 1, 2020
Mac1 instances	New instances built on Apple Mac mini computers that support running macOS workloads on Amazon EC2.	November 30, 2020

P4d instances	New accelerated computing instances that provide a high-performance platform for machine learning and HPC workloads.	November 2, 2020
T4g instances	New general purpose instances powered by AWS Graviton2 processors, which are based on 64-bit Arm Neoverse cores and custom silicon designed by AWS for optimized performance and cost.	September 14, 2020
C5ad instances	New compute optimized instances featuring second-generation AMD EPYC processors.	August 13, 2020
C6gd, M6gd, and R6gd instances	New general purpose instances powered by AWS Graviton2 processors, which are based on 64-bit Arm Neoverse cores and custom silicon designed by AWS for optimized performance and cost.	July 27, 2020
C6g and R6g instances	New general purpose instances powered by AWS Graviton2 processors, which are based on 64-bit Arm Neoverse cores and custom silicon designed by AWS for optimized performance and cost.	June 10, 2020

C5a instances	New compute optimized instances featuring second-generation AMD EPYC processors.	June 4, 2020
M6g instances	New general purpose instances powered by AWS Graviton2 processors, which are based on 64-bit Arm Neoverse cores and custom silicon designed by AWS for optimized performance and cost.	May 11, 2020
Inf1 instances	New instances featuring AWS Inferentia, a machine learning inference chip designed to deliver high performance at a low cost.	December 3, 2019
G4dn instances	New instances featuring NVIDIA Tesla GPUs.	September 19, 2019
I3en instances	New I3en instances can utilize up to 100 Gbps of network bandwidth.	May 8, 2019
T3a instances	New instances featuring AMD EPYC processors.	April 24, 2019
M5ad and R5ad instances	New instances featuring AMD EPYC processors.	March 27, 2019
p3dn.24xlarge instances	New instances that provide 100 Gbps of network bandwidth.	December 7, 2018

C5n instances	New instances that provide up to 100 Gbps of network bandwidth.	November 26, 2018
A1 instances	New instances featuring Arm-based processors.	November 26, 2018
R5a instances	New instances featuring AMD EPYC processors.	November 6, 2018
M5a instances	New instances featuring AMD EPYC processors.	November 6, 2018
T3 instances	New instances featuring AMD EPYC processors.	August 21, 2018
z1d instances	New memory optimized instances.	July 25, 2018
R5 and R5d instances	New memory optimized instances.	July 25, 2018
X1e instances	New memory optimized instances.	November 28, 2017
M5 instances	New general purpose instances.	November 28, 2017
H1 instances	New storage optimized instances.	November 28, 2017
C5 instances	New compute optimized instances.	November 6, 2017
P3 instances	New accelerated computing instances.	October 25, 2017
G3 instances	New accelerated computing instances.	July 13, 2017

F1 instances	New accelerated computing instances.	April 19, 2017
I3 instances	New storage optimized instances.	February 23, 2017
R4 instances	New memory optimized instances.	November 30, 2016
P2 instances	New accelerated computing instances.	September 29, 2016
X1 instances	New memory optimized instances.	May 18, 2016
M4 instances	New general purpose instances.	June 11, 2015
D2 instances	New storage optimized instances.	March 24, 2015
C4 instances	New compute optimized instances.	January 11, 2015
T2 instances	New general purpose instances.	June 30, 2014