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CLOUD TECHNOLOGY –
Understanding EC2 Instances Types

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EC2 Instances Types

There are many available resources which an user needs for an application and these may consists of various combinations. These combinations are known as Instance Types. Many Instances types are there which are merely a combination of resources.

Ex.: Combination of CPU, Storage, Memory.

So the resources that are suitable for a particular application can be used.

Understanding EC2 Instances Types

1. General Purpose

Most common EC2 Instances Types among beginners.

To maintain a balanced behavior between the resources is the important feature of these instances.

Compute, Process, network capabilities, storage capacity, Memory.

To prove suitable for a wide range of general purpose applications is the work of these instances.

Scaling can be easily done in these instances according to need.

Understanding EC2 Instances Types

1. General Purpose

It conists of three different series.

1. ***A series*** : Only one instance is present i.e. A1.

The size starts with Medium, Large, X Large, 2xLarge, 4xLarge
As per the size the compute available then considering the Virtual CPU are for medium upto 1, for large 2, for X Large 4, For 2xLarge 8, for 4x Large 16 and considering the Memory (GiB) is for medium upto 2, for large 4, for X Large 8, for 2xLarge 16, for 4xLarge 32.

Understanding EC2 Instances Types

1. General Purpose

2. T series : Various instance are present like T2, T3, T3a, T3g.

T2	Nano	Micro	Small	Medium	Large	X Large	2xLarge
VCPU	1	1	1	2	2	4	8
Memory (Gibibytes)	0.5	1	2	4	8	16	32

In T3, T3a and T3g the Memory is same as T2

T3	Nano	Micro	Small	Medium	Large	X Large	2xLarge
VCPU	2	2	2	2	2	4	8

In T3a and T3g the count of VCPU and the Memory is same as T3

Understanding EC2 Instances Types

1. General Purpose

3. M series : In these series the size of Nano, Micro, Small, Medium is not present.

M4	Large	X Large	2xLarge	4XLarge	10XLarge	16xLarge
VCPU	2	4	8	16	40	64
Memory (Gibibytes)	8	16	32	64	160	256

In M5 all is same as M4 plus an additional 24 Large is added where VCPU count is 96 and Memory is 384.
The Network speed here is 256GBPS.
The variant of M5 is M5n is same as M5.
Again a variant of M5 is M5dn is same as M5 and M5n but distinguishes in the network speed is 100GBPS

M5Zn	Large	X Large	2xLarge	3XLarge	6XLarge	12xLarge
VCPU	2	4	8	12	24	48
Memory (Gibibytes)	8	16	48	96	160	192

Network Speed is upto 100 Gbps

In M6a the instance size is increased in M4 i.e. 32xlarge & 48xlarge. The network speed in M6a is upto 60 Gbps.

Understanding EC2 Instances Types

2. Compute Optimized

Main focus is on Computation field i.e. Processing.
The user requirement is fulfilled according to the Computation.
This computation should be carried out in optimized manner.
In less time more work should be possible.
Maximum result with an efficient accuracy.

Understanding EC2 Instances Types

2. Compute Optimized

Applications:

1. Batch Processing work Load: The traffic, workload, demand that should be processed in terms of batches.
2. High performance web servers: To handle the traffic.
3. HPC (High Performance Computing)
5. Scientific Modelling : It’s a computational Intensive task.
6. Dedicated Gaming Servers: In real time players are using many system at once.

COMPUTE INTENSIVE APPLICATIONS

Understanding EC2 Instances Types

2. Compute Optimized

2. s : Only one series.

	VCPU	Memory (GiB)	N/w	Description
C4	2-36	3.75-60	Upto 4000 Mbps	Dedicated EBS bandwidth
C5	2-96	4-192		
C5a	2-			

Understanding EC2 Instances Types

References

1. https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-types.html
2. https://aws.amazon.com/ec2/instance-types/

THANK YOU