**Platforms and Closest VM Configurations**

**REQUIREMENT: i7-13700 processor, 16GB memory + 256GB SSD, RTX3050 discrete graphics card, 8GB VRAM**

***1. Microsoft Azure***

>>Closest VM Series: NCasT4\_v3 Series

- AMD EPYC 7V13 (Milan) processors, offering up to 96 vCPUs. While not an i7-13700, these processors provide comparable or superior performance depending on the vCPU

- offers 28GB RAM, which exceeds your 16GB requirement.

- Supports premium SSDs with configurable sizes starting at 128GB

- NVIDIA Tesla T4 (16GB VRAM), which is more powerful than the RTX 3050

* This series is optimized for GPU-accelerated workloads like AI, ML, and graphics rendering. The T4 GPU is a close match for RTX 3050 in terms of performance, with higher VRAM. You can customize storage to 256GB SSD or higher

>>NVadsA10\_v5 Series

* AMD EPYC 74F3V (Milan) processors, configurable vCPUs (up to 96). A 16-vCPU configuration approximates i7-13700 performance
* Starts at 55GB, exceeding 16GB requirement
* Configurable premium SSDs, starting at 128GB
* NVIDIA A10 (24GB VRAM), significantly more powerful than RTX 3050
* Better suited for high-end graphics workloads, but overkill for RTX 3050 equivalence. Storage and memory are easily configurable to match

2. ***Amazon Web Services (AWS)***

>>G4dn Instances

* Intel Xeon Scalable (Cascade Lake) processors, configurable vCPUs. A 16-vCPU instance approximates i7-13700 performance
* Starts at 16GB
* Configurable NVMe SSDs, starting at 125GB
* NVIDIA T4 (16GB VRAM), comparable to RTX 3050 in performance
* G4dn is cost-effective for GPU workloads like ML inference and graphics rendering, making it a close match for your needs.

***3. Google Cloud Platform (GCP)***

>>N1 Series with NVIDIA T4 GPU

* Intel Xeon Scalable processors (configurable vCPUs). A custom machine type with 16 vCPUs approximates i7-13700 performance
* Configurable, starting at 16GB
* Persistent SSD disks, configurable from 10GB to 257TB
* NVIDIA T4 (16GB VRAM), comparable to RTX 3050
* GCP’s N1 series with T4 GPUs is optimized for ML inference, graphics rendering, and virtual desktops, making it a close match. Custom machine types allow precise configuration of vCPUs and memory to align with i7-13700 and 16GB RAM.

***4. Paperspace***

>>Quadro RTX 4000

* Intel Xeon, configurable to 4-8 vCPUs (approximates i7-13700 with 8 vCPUs)
* Configurable to 16GB
* Configurable SSD, 256GB+
* Quadro RTX 4000, slightly below RTX 3050 but closest VRAM match

***5. Oracle Cloud Infrastructure (OCI)***

>> Compute with T4 GPU

* Intel Xeon or AMD EPYC, configurable to 4-8 vCPUs (8 vCPUs approximates i7-13700)
* Configurable to 16GB
* Block storage SSD, 256GB+
* NVIDIA T4, close to RTX 3050

***6. SaladCloud***

* Consumer-grade CPUs (e.g., Ryzen 5/7 or Intel Core i5/i7, configurable to 4-8 cores, potentially close to i7-13700)
* Configurable to 16GB
* SSD, configurable to 256GB
* RTX 3060 (12GB VRAM, ~12.7 TFLOPS) or RTX 3070 (8GB VRAM, ~20.3 TFLOPS), both exceeding RTX 3050 performance.

***7. Vast.ai***

* Consumer-grade (e.g., Ryzen 7 or i7, 8-16 cores, close to i7-13700)
* Configurable to 16GB
* SSD, 256GB+
* RTX 3060 (12GB VRAM, ~12.7 TFLOPS) or RTX 3050 (8GB VRAM, ~9.1 TFLOPS, exact match for GPU)

Some conclusions:

| **Provider** | **Closest Configuration** | **Estimated Hourly Price (Linux, On-Demand)** | **Suitability** |
| --- | --- | --- | --- |
| **Azure (NCasT4\_v3)** | 4 vCPUs (AMD EPYC), 28GB RAM, 256GB SSD, T4 | ~$0.526 | Close GPU match (T4), slightly weak CPU, higher memory. |
| **AWS (G4dn)** | 4 vCPUs (Xeon), 16GB RAM, 256GB SSD, T4 | ~$0.526 | Close GPU match, exact RAM, slightly weak CPU. |
| **GCP (N1 + T4)** | 8 vCPUs (Xeon), 16GB RAM, 256GB SSD, T4 | ~$0.65-$0.75 | Close GPU match, good CPU/RAM match, flexible configs. |
| **Paperspace** | 8 vCPUs (Xeon), 16GB RAM, 256GB SSD, RTX 4000 | ~$0.51 | Close GPU (slightly weaker), good CPU/RAM match. |
| **OCI** | 8 vCPUs (Xeon/EPYC), 16GB RAM, 256GB SSD, T4 | ~$0.55-$0.80 | Close GPU match, good CPU/RAM match, competitive pricing. |
| **SaladCloud** | 8 cores (i7/Ryzen), 16GB RAM, 256GB SSD, RTX 3060 | ~$0.40-$0.60 | Strong match, slightly overpowered GPU, close CPU. |
| **Vast.ai** | 8-16 cores (i7/Ryzen), 16GB RAM, 256GB SSD, RTX 3050 | ~$0.20-$0.40 | Best match (exact GPU, close CPU/RAM). |

**Recommendations from above context**

* **Best Match**: **Vast.ai** offers the closest configuration, with RTX 3050 GPUs and consumer-grade CPUs (e.g., i7 or Ryzen 7) that closely match i7-13700 performance, at a low cost (~$0.20-$0.40/hour). Its marketplace model ensures flexibility but requires checking node availability.
* **Best Mainstream Option**: **AWS G4dn** or **Paperspace (RTX 4000)** for cost-effective, reliable options with T4 or RTX 4000 GPUs, closely matching RTX 3050 performance (~$0.51-$0.526/hour).
* **Budget-Friendly**: **SaladCloud** or **Vast.ai** for decentralized, lower-cost GPU rentals with near-matching specs.

Also attaching links for which I searched on pricing  
<https://cloudprice.net/aws/ec2?filter=g4dn>

<https://azure.microsoft.com/en-us/pricing/calculator/>

<https://cloud.google.com/products/calculator?hl=en&dl=CjhDaVF5WW1WaE5UTmpNeTAwTkRabExUUm1NV0V0T0RoallTMWlaVEEzWkdNNE1tRm1ZMklRQVE9PRAIGiRDRjFFNzg4Ri1BNjAzLTQ1RjQtOEU4NC0xNEU3MTg1QTc0MTg>

<https://www.paperspace.com/pricing>

<https://vast.ai/pricing>