To accurately estimate the cost for a 4-core, 8GB RAM, 200GB storage Windows Server with SQL Server running on AWS, we will consider the instance type, region, and backup strategy as the primary factors influencing the cost. Here is a structured approach to calculate the estimated cost:

**Instance Type and Region:**

* **Instance Type**: The type of Amazon Elastic Compute Cloud (EC2) instance you choose will significantly affect the cost. Different instance types offer varying levels of CPU, memory, storage, and network capabilities [1](https://docs.aws.amazon.com/prescriptive-guidance/latest/optimize-costs-microsoft-workloads/sql-server-backup.html). For a 4-core processor, you would typically choose an instance type that supports four vCPUs.
* **Region**: The geographical location of your AWS resources can impact the cost due to differences in infrastructure costs and potential data transfer fees [1](https://docs.aws.amazon.com/prescriptive-guidance/latest/optimize-costs-microsoft-workloads/sql-server-backup.html). It's important to choose a region that minimizes latency and data transfer costs for your specific use case.

**Backup Strategy:**

* **VSS-Enabled Snapshots**: If you use Volume Shadow Copy (VSS) to create application-consistent snapshots of your EBS volumes, the cost will include the storage and I/O overheads associated with the snapshots [2](https://docs.aws.amazon.com/pricing-calculator/latest/userguide/estimate-workload-tutorial.html).
* **AWS Backup**: Alternatively, you could use AWS Backup for a centralized and automated data protection solution. This approach can simplify management and help achieve cost efficiency at scale [2](https://docs.aws.amazon.com/pricing-calculator/latest/userguide/estimate-workload-tutorial.html).

**Estimated Cost Calculation:**

1. Determine the instance type and region combinations that match your requirements.
2. For VSS-enabled snapshots, calculate the additional storage and I/O costs incurred by the snapshots.
3. For AWS Backup, estimate the costs based on the backup retention period and frequency.

Using the AWS Pricing Calculator, you can generate an estimate for your specific configuration [1](https://docs.aws.amazon.com/prescriptive-guidance/latest/optimize-costs-microsoft-workloads/sql-server-backup.html)[3](https://www.brentozar.com/archive/2018/11/how-much-memory-is-normal-for-sql-servers/)[5](https://www.coursehero.com/tutors-problems/Computer-Science/54002054--A-screenshot-of-the-quotcalculations-pagequot-of-the/). Here is a simplified example of how you might use the AWS Pricing Calculator to estimate the cost:

| **Component** | **Quantity** | **Unit Cost** | **Total Cost** |
| --- | --- | --- | --- |
| Instance Type | 1 | $240/month | $240/month |
| Storage (per month) | 200GB | $0.10/GB/month | $20/month |
| Database Engine | 1 | $1676.88/year | $1676.88/year |
| Backup Solution | 1 | $0.023/GB/month | $4.75/month |
| Region | 1 | Variable | Variable |
| Additional Storage (for snapshots) | Variable | Variable | Variable |
| Bandwidth (for snapshots) | Variable | Variable | Variable |

Note that the actual total cost will vary widely depending on the specific instance type, region, and backup strategy chosen. The above table is illustrative rather than definitive.

For a detailed and accurate cost estimation tailored to your specific needs, you should use the AWS Pricing Calculator with the latest prices and configurations.

To calculate the estimation of a 4-core, 8GB RAM, 200GB storage Windows Server with SQL Server using the AWS Pricing Calculator, you will need to follow these steps:

1. **Access the AWS Pricing Calculator**:
   * Visit the AWS Pricing Calculator page at [][6](https://docs.amazonaws.cn/en_us/pricing-calculator/latest/userguide/aws-pc.pdf).
2. **Create a New Estimate**:
   * Click on 'Create estimate' within the AWS Pricing Calculator console[6](https://docs.amazonaws.cn/en_us/pricing-calculator/latest/userguide/aws-pc.pdf).
3. **Select Licensing Options**:
   * Choose from the available licensing options which suit your needs. For a 4-core server, you might consider the 'Server 4' option, which offers 4 vCPUs and 32 GB of RAM[1](https://calculator.aws/).
4. **Configure the Machine Specification**:
   * Within the 'Server 4' option, you can configure the machine specification to match your requirements. Here's how you might fill out the details for a 4-core, 8GB RAM, 200GB storage server:
     + vCPUs: 4
     + Ram: 8 GB
     + Storage: 200 GB (Note: This field may not be applicable for all storage options)
     + IOPS: Not specified, so we'll use the default value for this tier
     + Software: Select the appropriate software edition for SQL Server (if needed)
     + Optimize vCPUs: This depends on your specific workload. If you expect high CPU usage, you might want to adjust this setting accordingly[1](https://calculator.aws/).
5. **Quantity and Passive Node Count**:
   * Set the quantity to 1 if you are estimating for a single instance. If you require multiple instances, adjust the quantity accordingly.
   * The passive node count should typically be set to 0 for most scenarios unless you have a specific requirement for failover capacity[1](https://calculator.aws/).
6. **Review Your Estimation**:
   * Once you have configured all the settings, review your estimate to ensure it meets your current needs. The estimate will include the total cost per hour and per month for each selected resource[7](https://docs.aws.amazon.com/pricing-calculator/latest/userguide/windows-workload-estimates.html).

Here is a structured representation of the configuration settings for a 4-core, 8GB RAM, 200GB storage Windows Server with SQL Server on AWS Pricing Calculator:

| **Setting** | **Value** | **Description** |
| --- | --- | --- |
| vCPUs | 4 | Required for processing power |
| Ram | 8 GB | Required for memory intensive tasks |
| Storage | 200 GB | Required for storing database files |
| IOPS | Default | Depends on the storage performance tier |
| Software | SQL Standard Edition | Database software requirements |
| Optimize vCPUs | Auto-scaling | Adjust based on expected CPU usage |
| Quantity | 1 or more | Number of instances required |
| Passive node count | 0 or more | Redundancy capacity required |

Remember, this estimation does not account for factors like network traffic, data transfer rates, or other potential costs associated with running Windows Server and SQL Server on AWS. For more accurate cost predictions, you may need to consult the official AWS documentation or contact their support team.

Azure:

The query asks for an Azure Windows instance that supports specifications of 4 cores, 8GB RAM, and 200GB disk size. While the exact instance that meets all three criteria is not explicitly listed in the provided sources, we can infer from the information given that such a configuration would require a custom or specialized virtual machine (VM) series.

From the sources, we can identify several VM series that come close to the requested specifications:

1. The **A-series** VMs are described as entry-level VMs suitable for development and testing, with options ranging from 1 to 4 vCPUs and RAM starting at 7.5 GB [1](https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-memory). However, none of the A-series VMs match the exact requirement of 4 cores and 8GB RAM.
2. The **Dv2 and DSv2-series** VMs are noted for their improved performance over the original D-series, with options including 11 to 15 vCPUs and varying amounts of RAM and data disks [2](https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-hpc). Some configurations may approach the 8GB RAM mark, but none offer a precise match for 8GB and 200GB.
3. The **Eav4 and Easv4-series** VMs utilize AMD's EPYC processor and are designed for memory-optimized workloads, with options including up to 256MB L3 cache and varying numbers of vCPUs and data disks [2](https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-hpc). These VMs do not reach the 8GB RAM threshold.
4. The **Ev3 and Esv3-series** VMs are aligned with general-purpose VMs and feature Intel Xeon processors in a hyper-threaded configuration, with options ranging from 2 to 8 vCPUs and varying amounts of RAM and storage [2](https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-hpc). These VMs do not meet the 8GB RAM requirement.
5. The **Ev4 and Esv4-series** VMs are ideal for memory-intensive enterprise applications and feature up to 504GB of RAM, which is beyond the 8GB threshold [2](https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-hpc). These VMs do not include a local temp disk, which might be a consideration if the requirement includes frequent I/O operations.
6. The **Edv4 and Edsv4-series** VMs are designed for large databases or applications requiring high vCPU counts and large amounts of memory, featuring up to 672GB of RAM and fast, larger local SSD storage [2](https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-hpc). These VMs are among the few that come closest to the 8GB RAM and 200GB disk size requirement, although they exceed both slightly.

Based on the information provided, there is no direct reference to an Azure Windows instance that exactly matches the 4 cores, 8GB RAM, and 200GB disk size criteria. To obtain a detailed understanding of the specifications required for such an instance, one would need to consult the latest documentation or contact Microsoft directly. It is important to note that the specifications mentioned in the query may not be commercially available or may represent a future product iteration.