Global Infrastructure

Regions

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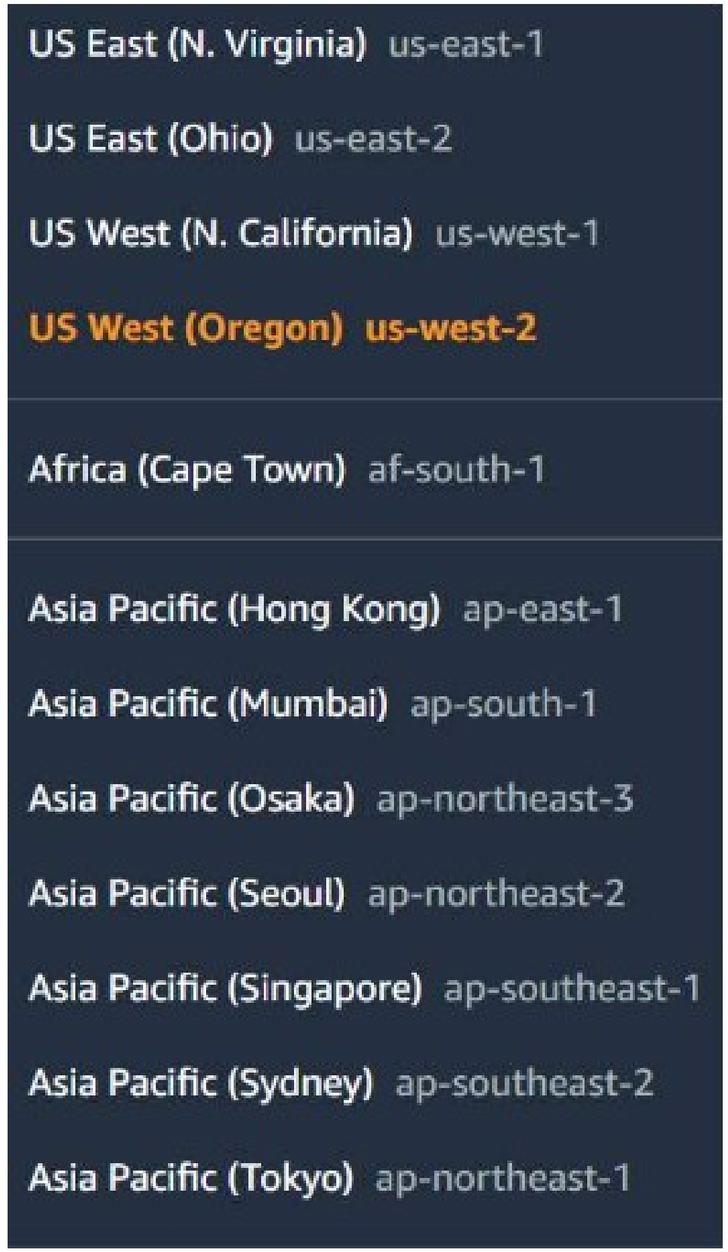
AWS Regions

- AWS Regions are **physical locations** worldwide where AWS data centers are situated.
- Each region contains **multiple Availability Zones**, ensuring high availability and fault tolerance.
- Not all services are available in every region, and regions may differ in compliance and legal requirements.


Regions
Coming soon



Here are examples of Region codes:

- us-east-1 is the first Region created in the eastern US area. The geographical name for this Region is N. Virginia.

- ap-northeast-1 is the first Region created in the northeast Asia Pacific area. The geographical name for this Region is Tokyo.

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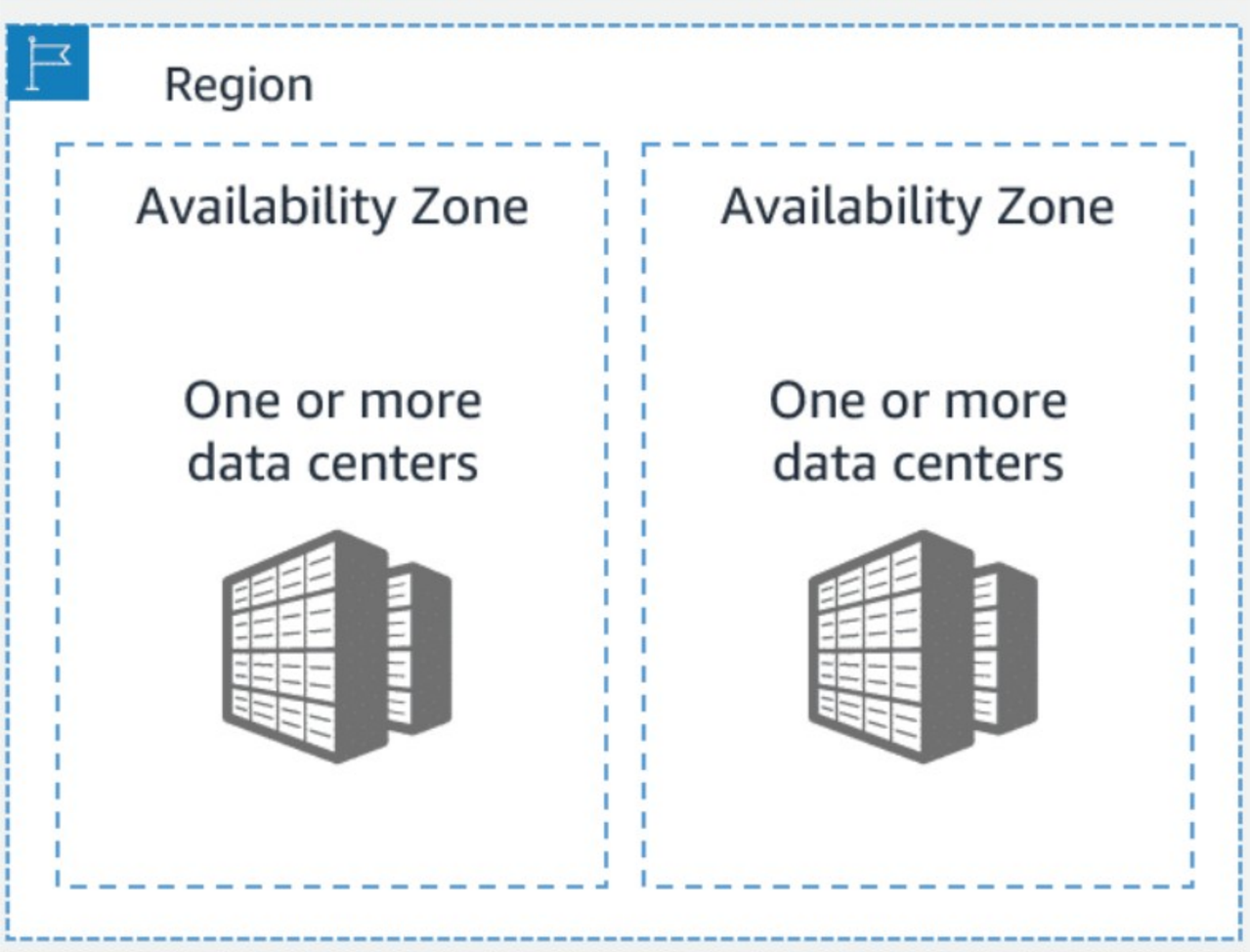
Choosing the Right AWS Region

1. **Latency:** Pick a region close to your users for better performance.
2. **Pricing:** Compare costs as they vary by region.
3. **Service Availability:** Ensure your required services are supported.
4. **Data Compliance:** Select regions meeting legal and regulatory needs.

Availability Zones

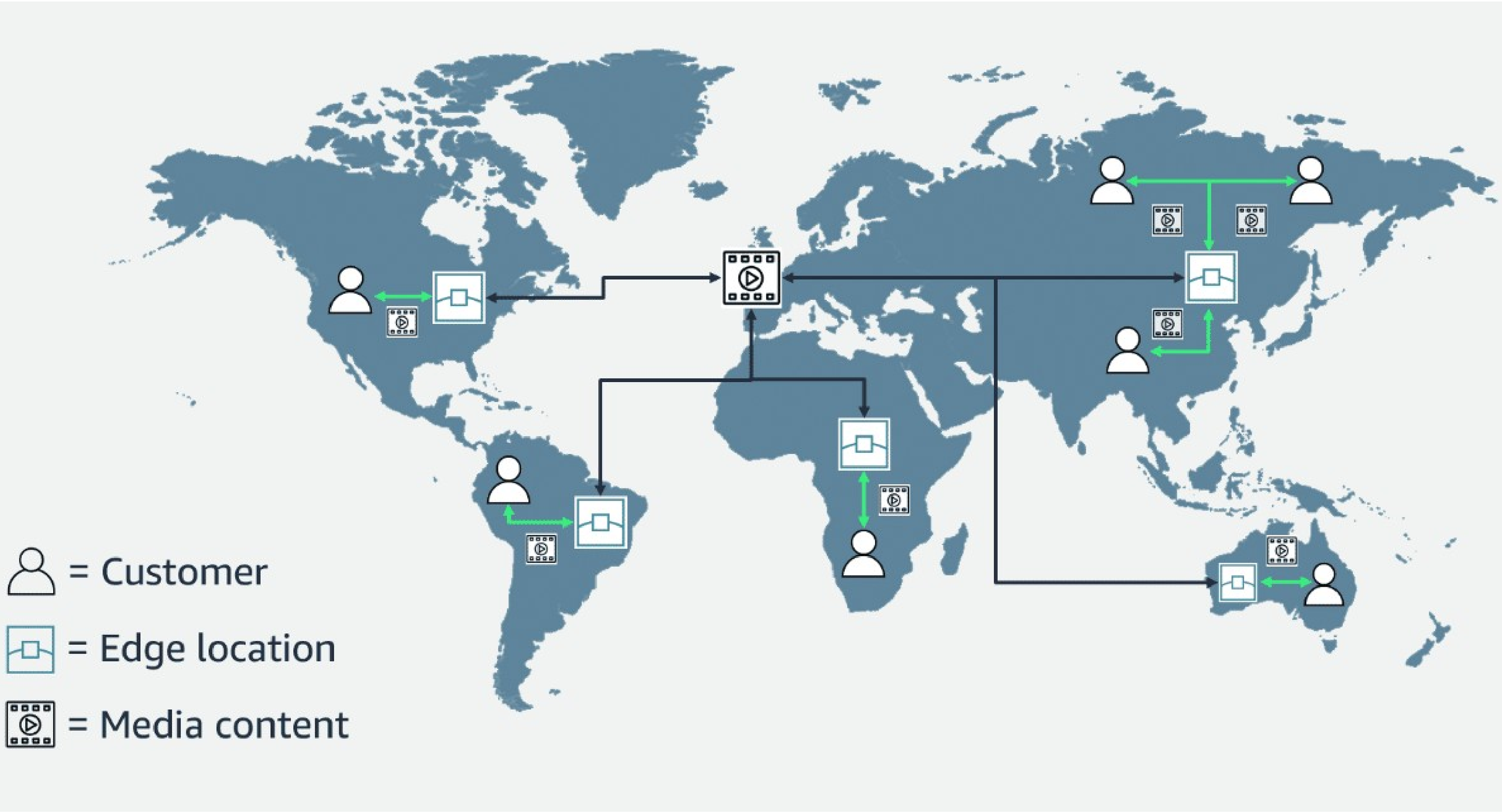


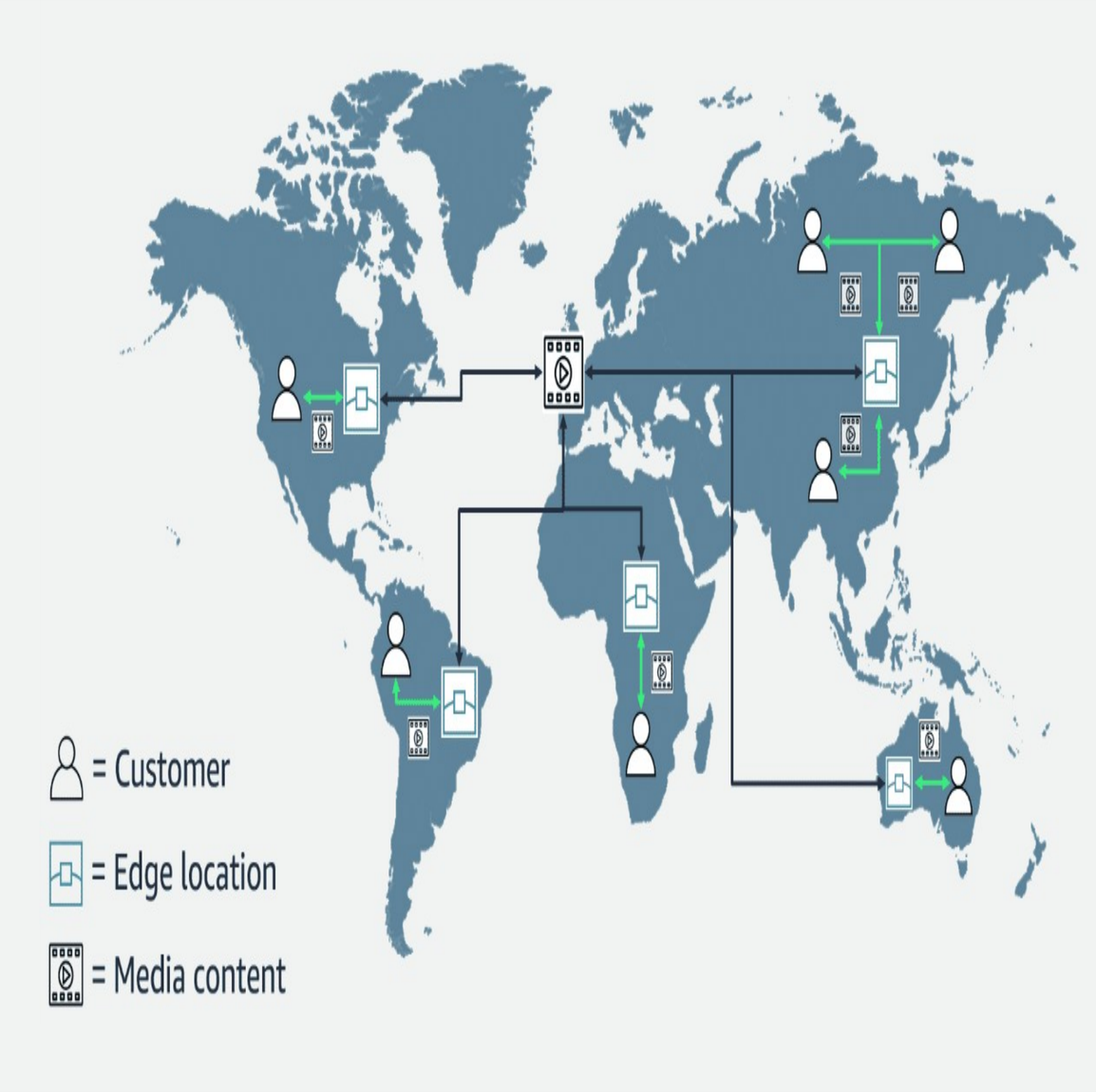
Availability Zones (AZs):

1. Physically separate data centers within a region.
2. Provide high availability and fault tolerance.
3. **Example:** Multiple AZs in an AWS region like us-east-1.
4. Availability Zones also have code names

- us-east-1a is an Availability Zone in us-east-1 (N. Virginia Region).
- sa-east-1b is an Availability Zone in sa-east-1 (São Paulo Region).

Edge Locations


= Customer
= Edge location
= Media content



Edge Locations

- Places where AWS stores copies of your content for faster delivery.
- Help users access data quickly, no matter where they are.
- Example: AWS has these locations in major cities worldwide.

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"Explore AWS's global infrastructure and regions here..!"

Cloud Front

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CloudFront

1. CloudFront is a **Content Delivery Network (CDN)** that speeds up content delivery.
2. It reduces **latency** by delivering content from the nearest **edge location**.
3. **Caches content** at edge locations for faster access.
4. If the content is already cached, CloudFront **delivers it instantly.**
5. It has edge locations worldwide for **global content delivery.**
6. CloudFront improves **user experience** by reducing **loading times.**