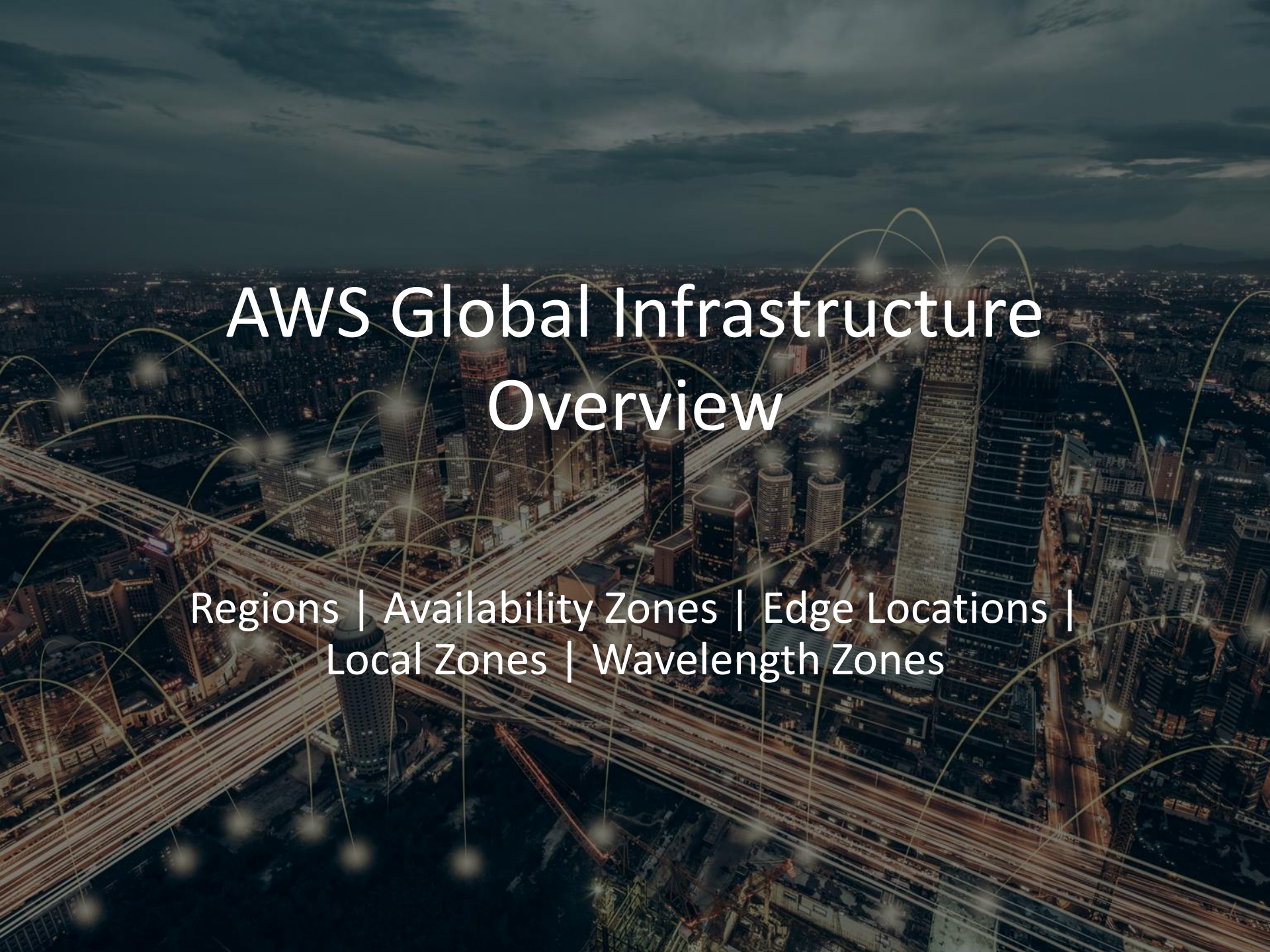


AWS Global Infrastructure Overview

Regions | Availability Zones | Edge Locations | Local Zones | Wavelength Zones

AWS Global Infrastructure - Map Overview

The map shows AWS's global footprint:

- Regions: Large geographic areas like US-East (N. Virginia), Asia Pacific (Mumbai)

- Availability Zones (AZs): Independent data centers in each Region

- Edge Locations & Local Zones: Services close to users for low-latency

AWS Global Infrastructure | Infrastructure Solutions | AWS Digital Sovereignty | Sustainability & Community | Regional Services | More

AWS Coverage Regions

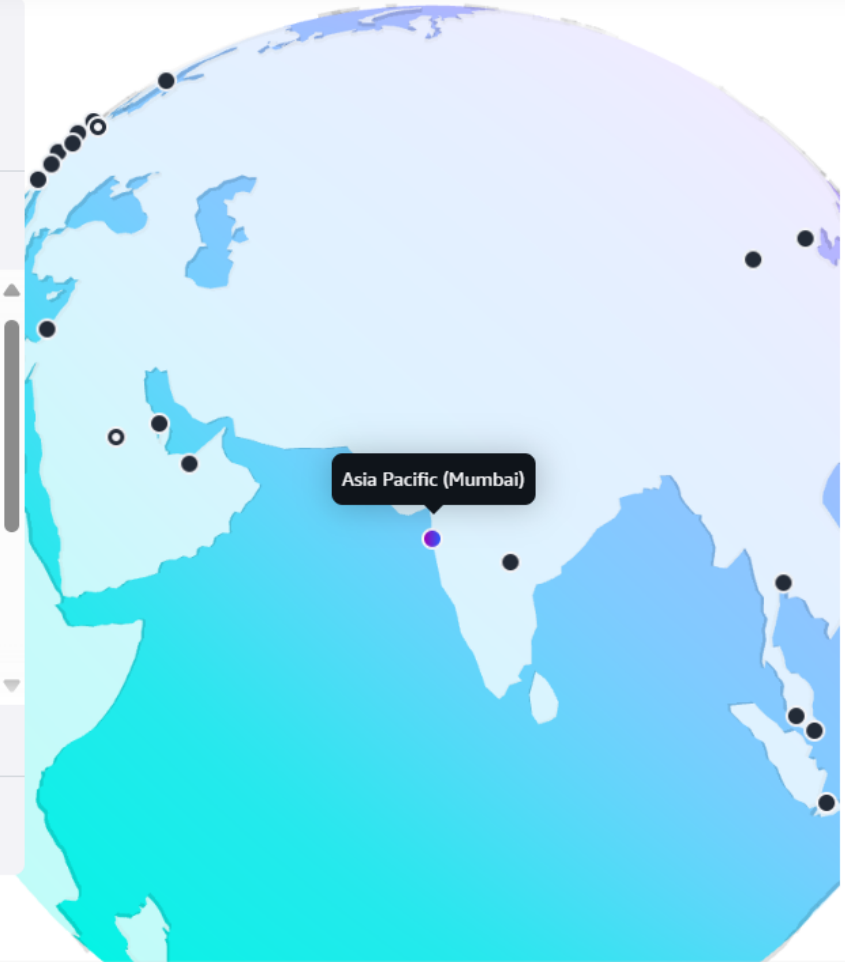
Asia Pacific

Geographic Regions 13

- Mainland China (Beijing)
- Asia Pacific (Hong Kong)
- Asia Pacific (Hyderabad)
- Asia Pacific (Jakarta)
- Asia Pacific (Malaysia)
- **Asia Pacific (Mumbai)**
  Availability Zones: 3 Launched: 2016
- Mainland China (Ningxia)
- Asia Pacific (Osaka)

Available Coming soon

Edge Locations 23



Understanding the Hierarchy & Zones

- Region: Geographically defined area with multiple AZs
- Availability Zone: Independent DCs with own power/network
- Local Zones: Extension of Regions close to cities
- Edge Locations: CDN caching sites
- Wavelength Zones: 5G-based edge compute for ultra-low latency

Why Each Component Matters

Regions & AZs:

- Fault tolerance and high availability

- Reduced latency for nearby users

Local Zones:

- Critical for real-time apps (e.g. video editing, gaming)

Edge & Regional Edge Locations:

- Improves web/media performance

Wavelength Zones:

- Ultra-responsive services for AR/VR and IoT

Key Infrastructure Stats

- 37+ Regions globally

- 117+ Availability Zones

- 43 Local Zones

- 31 Wavelength Zones

- 700+ CloudFront Points of Presence

Purpose of CloudFront Points

- **Amazon CloudFront** is a **Content Delivery Network (CDN)** service from AWS.
- The term **"700+ Points of Presence (PoPs)"** refers to the **network of servers** that Amazon CloudFront uses to **deliver content to users globally with low latency and high transfer speeds**.

🌎 Types of Points of Presence

1. **Edge Locations**
   - Primary data centers where CloudFront caches content (like web pages, videos, or APIs).
   - These are the **main locations** that handle user requests nearest to their physical location.
   - If cached content is already available here, it is served instantly (low latency).
2. **Regional Edge Caches**
   - Larger cache nodes that sit between AWS's core infrastructure and the edge locations.
   - Help with **scaling** and **improving cache hit ratio** by storing more popular content.

✅ Real-World Use Cases

Use Case	Example
Video Streaming	Netflix, Disney+ (using CloudFront for fast buffering)
Static Website Hosting	Blogs, portfolios, product sites
E-commerce	Amazon, Flipkart—fast image and product delivery
API Acceleration	Mobile apps calling backend APIs