Integrating a CDN (Content Delivery Network) with your WordPress project hosted on AWS can significantly improve the performance and reliability of your website. Below are the steps to integrate a CDN with your WordPress project:

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1. Configure Your WordPress Site

- Ensure your WordPress installation is functional and accessible via the domain.
- Install and activate the **Elementor** plugin (if applicable for your project).

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2. Set Up Your CDN on AWS

AWS provides CloudFront as a CDN service. Here's how to set it up:

Create a CloudFront Distribution

1. **Log in to AWS Console** and navigate to the **CloudFront** service.
2. **Create a new distribution**:
    - Choose **Web** as the distribution type.
    - Set the **Origin Domain Name** to your WordPress domain or S3 bucket (if using S3 for static assets).
    - For **Viewer Protocol Policy**, select `Redirect HTTP to HTTPS` to enforce secure connections.
    - Enable caching by customizing the **Cache Behavior Settings**.
3. Configure **Price Class** based on the region requirements (e.g., "Use All Edge Locations" for global reach).
4. Add any custom **CNAMEs** to match your domain name.
5. Click **Create Distribution** and wait for the status to change to "Deployed."

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3. Update DNS Records

1. Navigate to your **Route 53** service or your domain registrar's DNS management console.
2. Add a CNAME record pointing your subdomain (e.g., `cdn.yourdomain.com`) to the CloudFront domain name (e.g., `xyz123.cloudfront.net`).

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4. Integrate CDN in WordPress

Using a Plugin

1. Install a CDN integration plugin like **W3 Total Cache**, **WP Rocket**, or **CDN Enabler**.
2. Configure the plugin:
    - Add your CloudFront domain (e.g., `cdn.yourdomain.com`) to the **CDN URL** settings.
    - Specify file types to offload (CSS, JS, images, etc.).
    - Purge the cache and verify the integration.

Manually Update URLs

1. Update WordPress URLs for assets like CSS, JS, and images to use the CloudFront domain.
   Example: Change `https://yourdomain.com/wp-content/uploads/image.jpg`
   To: `https://cdn.yourdomain.com/wp-content/uploads/image.jpg`.
2. Use a search and replace plugin for batch updates.

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5. Configure Cache and Invalidation

1. Set appropriate **TTL (Time to Live)** values for caching static assets.
2. For dynamic content, configure invalidation rules to refresh the cache when updates are made.

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6. Monitor and Optimize

1. Use **AWS CloudWatch** to monitor CloudFront performance and logs.
2. Review caching effectiveness and bandwidth savings from the CloudFront console.
3. Periodically test your website using tools like **GTmetrix** or **PageSpeed Insights** to ensure the CDN is improving performance.

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7. Additional Optimization

- **Enable Compression**: Use Gzip or Brotli to compress assets served via CloudFront.
- **Leverage AWS S3 for Media Storage**: Offload WordPress media uploads to an S3 bucket and serve them via CloudFront.

Let me know if you need further help with AWS configurations or WordPress setup!