

Dynamic Text Solution - Executive Summary

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Challenge

Build a web application displaying dynamic text with two constraints:

1. Content updates without code redeployment
2. Consistent URL regardless of content

Solutions Implemented

Static S3 + CloudFront

- **Cost:** \$0.50/month
- **Update Speed:** 1-5 minutes
- **Method:** File upload to S3
- **Best For:** Cost-sensitive, infrequent updates

Server-Side Rendering (ECS)

- **Cost:** \$35/month
- **Update Speed:** <100ms
- **Method:** Real-time admin interface
- **Best For:** Immediate updates, interactive features

Key Insights

Cost vs Performance Trade-off: 70x price difference between solutions meeting identical requirements.

Technology Agnostic: Any framework with server interaction capability can solve this challenge (Angular, React, Vue, Spring Boot, Django, etc.).

Evolution Path: Start simple, scale complexity as needed - Static → Serverless → Container-based.

Live Demonstrations

- **SSR Solution:** <https://d1jk0h2l40omp5.cloudfront.net>
- **Static Solution:** <https://simplest-alternative-944473419677-us-west-2.s3.us-west-2.amazonaws.com/index.html>

Recommendation

Choose approach based on:

- **Static:** Minimal cost, acceptable update delays
- **Serverless:** Balanced cost/performance for moderate traffic

- **SSR:** Real-time requirements justify operational complexity

The project demonstrates that identical functional requirements can be satisfied with dramatically different architectural approaches depending on quality attribute priorities.