AWS Cloud9: Cloud-Based IDE

This presentation covers our cloud-based IDE project.

It enhances coding, execution, and real-time collaboration.

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Project Overview

The Need

A cloud-based web compiler addresses accessibility.

It improves resource management.

Key Technologies

- React with Vite (Frontend)
- Node.js and Express (Backend)
- AWS Cloud9 (IDE)

Seamless Collaboration

Enables coding, execution, and real-time collaboration.

Development Methodology

1

Interactive UI

React and Monaco Editor provide an interactive UI.

2

Backend

Authentication with JWT, real-time via WebSockets.

3

Database

MongoDB or PostgreSQL for database management.

4

Resource Optimization

AWS Lambda optimizes resource use efficiently.

AWS Cloud9 Setup

Environment Creation

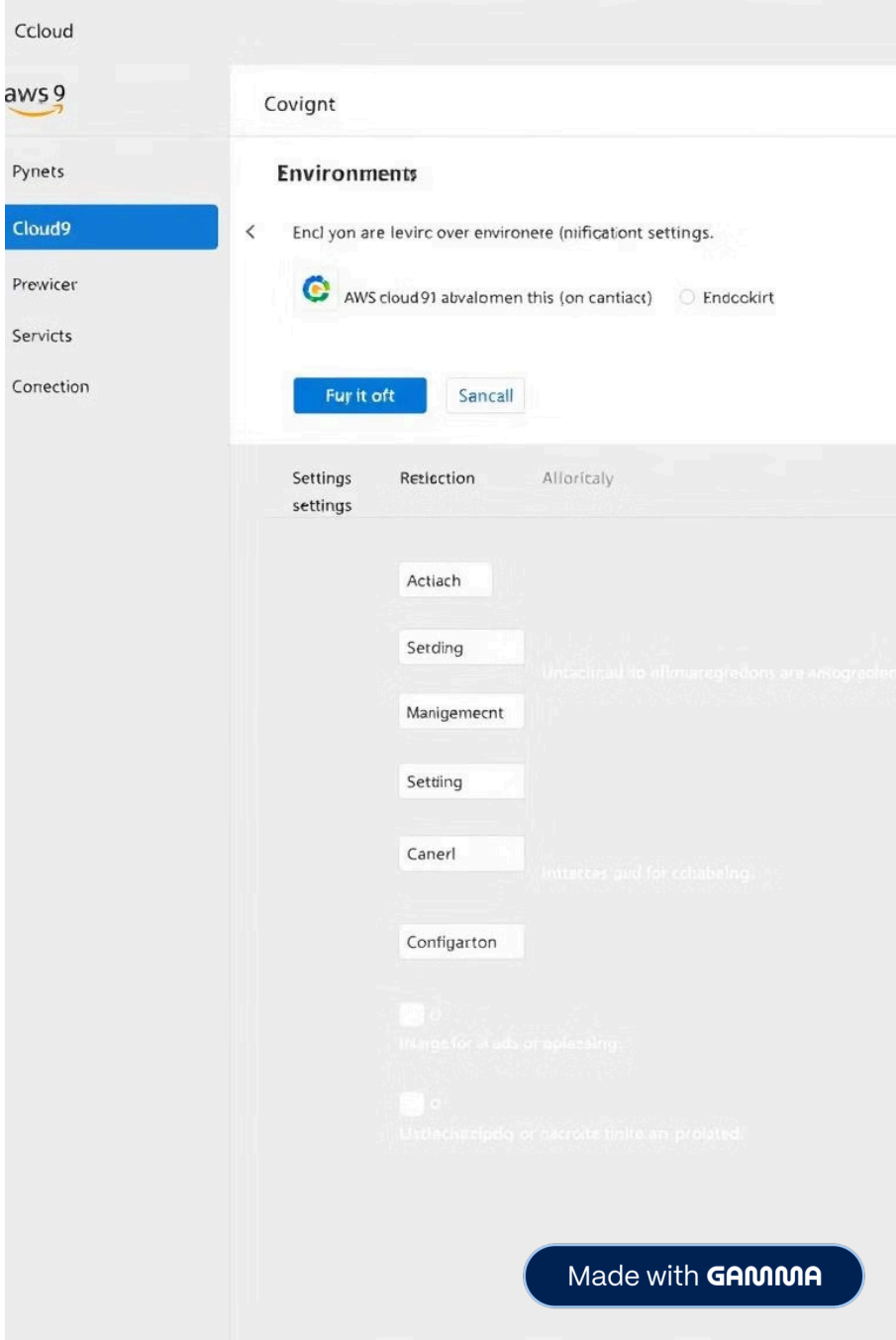
Step-by-step process to create Cloud9 environment.

Dependency Configuration

Detailed configuration of project dependencies.

IAM Role Management

Securing environment with proper IAM roles.



Security Measures

IAM Roles

Managing roles for secure access.

CloudTrail Logging

Logging all activities for auditing.

Multi-Factor Authentication

Adding MFA for enhanced security.

Testing and Validation

1 Functionality Testing

Ensuring smooth functionality.

2 Secure Access

Validating secure access measures.

3 Collaboration Testing

Verifying real-time collaboration.

Key Benefits

90%

Code

Faster Coding

50%

Cost

Reduced Costs

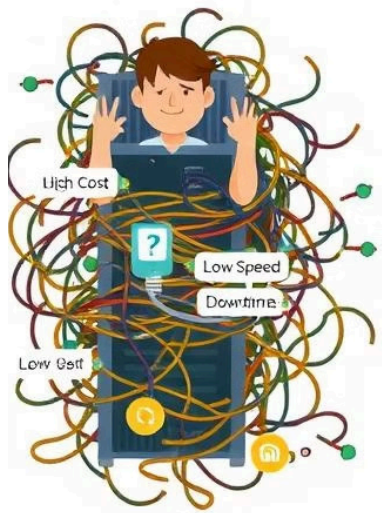
99%

Uptime

Increased Uptime

On-Premiset Server CLoud Derplopment

On-Premise Server



On-Premis Server

Cloud Deployment

Near-Zero Downtime

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Next Steps

1

Deployment

Deploy to production.

2

Monitoring

Monitor performance.

3

Optimization

Optimize resources.