

TechComms

One platform. Every update. Zero noise.

PROBLEM STATEMENT

Developers lose hours daily context-switching between the communications delivered by tools and platforms they require for their work. They sift through noisy channels packed with updates that have nothing to do with them. Critical information gets buried when it could have been summarized in 1-2 sentences, and time that could be spent innovating gets lost as a result.

SOLUTION

TechComms lets teams at Vanguard upload notifications of various sizes and formats, where it uses AI-powered summarization to transform scattered communications into an organized brief tailored to the user. Users subscribe only to content that matters to them, delivered on-platform and to their inbox on their own schedule.

ABSTRACT

TechComms is a fully deployed, multi-team notification platform built on AWS that eliminates developer context-switching. AI-powered summarization, tag-based subscriptions, and scheduled email digests deliver the right information to the right people, without the noise.

DEVELOPMENT TEAM

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SYSTEM ARCHITECTURE

React



Builds the TechComms interface as a responsive single-page application. Delivers the dashboard where users manage notifications, preferences, and subscriptions.

AWS API Gateway



Serves as the secure HTTP entry point for all client requests. Routes each call to the appropriate Lambda handler and enforces Cognito authentication.

AWS Lambda



Runs the backend as serverless Node.js functions. Each feature area has a dedicated, independently deployable handler deployed via GitHub Actions CI/CD.

AWS Bedrock



Powers AI summarization using Amazon Nova Pro. Processes uploaded content and returns concise plain-English summaries using admin-curated prompt templates.

PostgreSQL · AWS RDS



Stores all platform data including users, teams, notifications, summaries, and preferences. Hosted on AWS Aurora for high availability and scalability.

AWS Cognito



Manages user authentication and JWT token issuance. Every API request is verified and authorized by Cognito before reaching any backend handler.

AWS SES



Sends scheduled email digests to subscribed team members. Delivers personalized, AI-summarized notification briefs based on each user's preferred delivery time and frequency.

KEY FEATURES

AI-Powered Summarization

Upload any notification, GitHub PR, Jira ticket, or email, and AWS Bedrock generates an instant plain-English summary using admin-curated prompt templates.

Personalized Subscriptions

Subscribe to GitHub but not Confluence. Users define exactly which platforms and content types they care about. Everything else stays out of their feed.

Scheduled Email Digests

Receive a tailored digest at your chosen time and frequency: hourly, daily, or weekly. Your communications, organized and waiting in your inbox.

Role-Based Access Control

Four-tier permission model: End User, Team Member, Team Leader, Administrator. Granular control over who creates, approves, and manages content.

