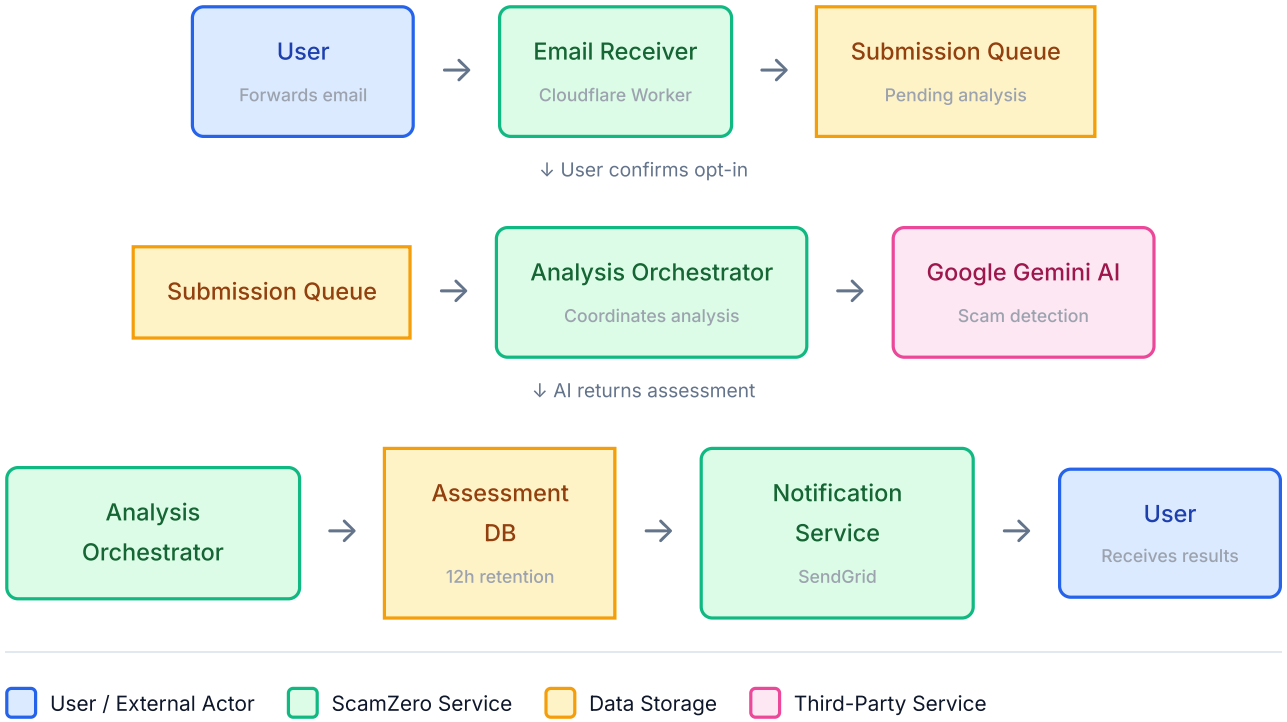
scamzero

Data Flow Diagram

Visual Documentation of Data Processing

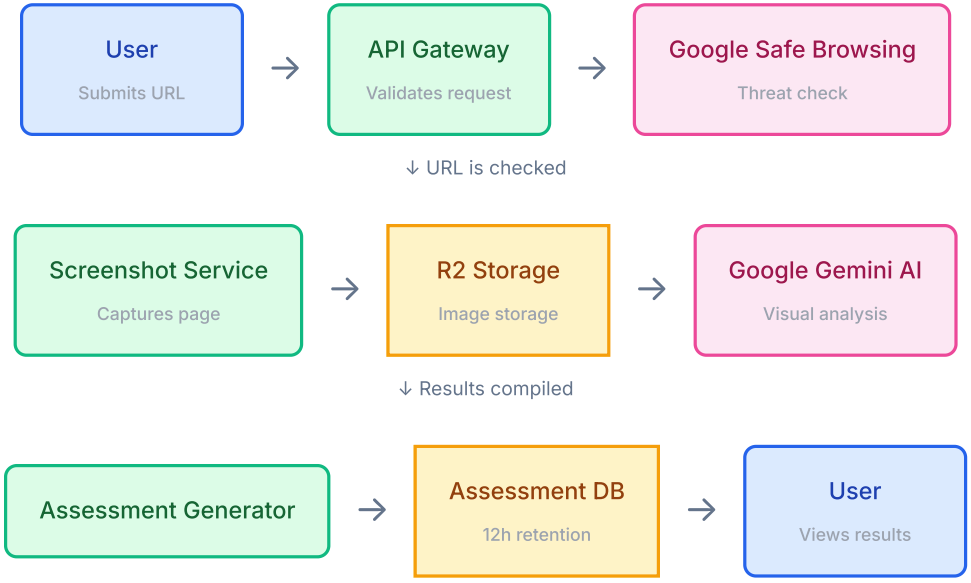
1. Email Submission Flow

This diagram shows how email data flows through ScamZero when a user forwards a suspicious email for analysis.


User
Forwards email
Email Receiver
Cloudflare Worker
Submission Queue
Pending analysis
↓ User confirms opt-in
Submission Queue
Analysis Orchestrator
Coordinates analysis
Google Gemini AI
Scam detection
↓ AI returns assessment
Analysis Orchestrator
Assessment DB
12h retention
Notification Service
SendGrid
User
Receives results
User / External Actor
ScamZero Service
Data Storage
Third-Party Service

2. URL/Screenshot Analysis Flow

This diagram shows how URL submissions are processed through the screenshot capture and AI analysis pipeline.



3. Data Storage Locations

Data Type	Storage Location	Encryption	Retention	Access
Email content (pending)	Cloudflare D1 (EMAIL_USERS_DB)	AES-256	7 days max	System only
Email content (confirmed)	Cloudflare D1 (EMAIL_USERS_DB)	AES-256	12 hours	System only
Assessment results	Cloudflare D1 (ASSESSMENT_DB)	AES-256	12 hours	User, share link
Screenshot images	Cloudflare R2 (SCREENSHOT_BUCKET)	AES-256	12 hours	Assessment owner
User accounts	Cloudflare D1 (EMAIL_USERS_DB)	AES-256	Until deletion	User, admin
Organization data	Cloudflare D1 (EMAIL_USERS_DB)	AES-256	Until deletion	Org members

4. Third-Party Data Sharing

Third Party	Data Shared	Purpose	Retention by Third Party
Google Gemini AI	Email content, screenshots	AI scam analysis	Not retained (API call only)
Google Safe Browsing	URL hashes	Threat intelligence	Not retained
SendGrid	Email addresses, notification content	Email delivery	Per SendGrid policy
Zapier	AI chat conversations	Chatbot service	30 days
Cloudflare	All service data (hosting provider)	Infrastructure	Per Cloudflare DPA

5. Data Deletion Flow

This diagram shows how data is automatically and manually deleted from ScamZero systems.


Cleanup Worker
Runs hourly
Assessment DB
Delete > 12h old
Cleanup Worker
R2 Storage
Delete orphaned images
Cleanup Worker
Email Submissions
Delete > 12h old
User-Initiated Deletion
User
Requests deletion
API Gateway
Sends confirm email
User
Confirms deletion
↓ All user data deleted

~~User Account~~ ~~Email Submissions~~ ~~Assessments~~

6. Security Controls

6.1 Data in Transit

- All connections encrypted with TLS 1.3
- HTTPS enforced on all endpoints
- API requests authenticated with JWT tokens
- Service-to-service authentication for internal calls

6.2 Data at Rest

- Cloudflare D1 databases encrypted with AES-256
- Cloudflare R2 storage encrypted with AES-256
- No unencrypted data storage

6.3 Access Controls

- Role-based access control for organization portals
- JWT token-based authentication with expiration
- Rate limiting on all public endpoints
- CORS restrictions to approved origins

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For questions, contact: support@scamzero.com

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