User Guide: Email Delivery Optimizer (Web UI)

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Purpose

This guide walks users through using the Email Delivery Optimizer Web App to:

- Diagnose SPF, DKIM, and DMARC for any domain
- Compose and send emails using Gmail (App Passwords)
- Analyze inbound email headers for deliverability and authentication

1 Getting Started

1.1 1. Setup Your Info

Navigate to `/setup` or click **Change Setup** on the homepage. Enter:

- Your domain (e.g., `example.com`)
- DKIM selector (e.g., `default`, `20230601`)
- Gmail address (e.g., `you@gmail.com`)
- Gmail App Password (16-digit token from Google App Passwords)

1.2 2. Diagnose Domain

On the homepage (`/`), enter:

- Your domain
- DKIM selector

Click **Run Checks**. Results display:

- **SPF Record**: pass/fail status and record value
- **DKIM Record**: public key TXT value if found
- **DMARC Record**: policy and reporting address

2 Web UI Walkthrough

This section describes each page of the web app, what to enter, and the expected output.

2.1 Home (/)

- **Inputs**: Domain and DKIM selector fields
- **Change Setup**: Button linking to `/setup`
- **Outputs**: Color-coded status blocks for SPF, DKIM, DMARC
- **Why**: Quickly see authentication health and remediation suggestions

2.2 Setup Page (`/setup`)

- **Inputs**: Domain, DKIM selector, Gmail address, App Password
- **Storage**: Values saved in browser session
- **Why**: One-time configuration to plug in your own credentials

2.3 Compose Email (`/email`)

- **Inputs**: Sender Gmail, App Password, recipient email, subject, customer name, itinerary, price
- **Outputs**: Preview of HTML email and send confirmation
- **Why**: Send authenticated, styled emails without leaving the app

2.4 Analyze Email (`/analyze`)

- **Inputs**: Gmail address, App Password, optional subject filter
- **Outputs**: Parsed Authentication-Results header data and raw headers with copy button
- **Why**: Verify real-world delivery and debug authentication failures

2.5 Persistent Navigation

Each page features a footer navigation:

- `Home | Setup | Send Email | Analyze Email`

3 What the Results Mean

- **SPF**: Verifies the sending IP is authorized for your domain.
- **DKIM**: Checks the email signature for integrity and authenticity.
- **DMARC**: Specifies handling rules for SPF/DKIM failures.
- **App Password**: Provides secure SMTP/IMAP access without storing main credentials.

4 Security Notes

- Credentials are never stored server-side.
- Session data is cleared when the browser session ends.
- Password fields are masked by default with a show/hide toggle.
- Deploy over HTTPS to protect credentials in transit.

Credits

Developed by Harsh. GitHub: `https://github.com/harsh-91/e-mail_optimizer.git`