

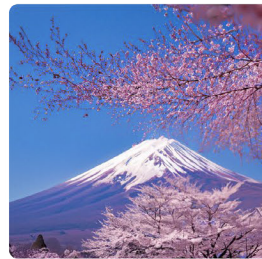
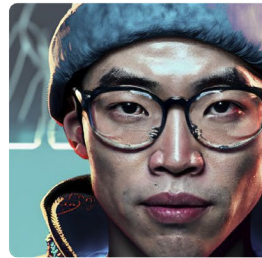


SECURITY FACT SHEET

# Adobe Firefly for enterprise

Core and Web

March 2024



# About Adobe Firefly

Adobe Firefly is a family of Adobe hosted generative AI models powering features that can turn ordinary inputs (e.g., text) into new content (e.g., images). Using machine learning, Adobe trains these generative AI models on large amounts of data that enable the models to “learn” how to generate a multitude of outputs. The prompts that users provide to the generative AI model (e.g., “cat wearing a hat”) are commonly called “inputs” and the content generated by the model (e.g., a picture of a cat wearing a hat) are commonly called “outputs.”

This fact sheet covers the security posture and capabilities of the Adobe Firefly service and access to that service via [firefly.adobe.com](https://firefly.adobe.com). You can also find the latest information on Adobe applications that have integrated Firefly at [adobe.com/products/firefly.html](https://adobe.com/products/firefly.html)

## Adobe Firefly Security Architecture and Data Flow

When a user accesses the Firefly Service from the Firefly web application, [firefly.adobe.com](https://firefly.adobe.com), the data flows as shown in Figure 1:

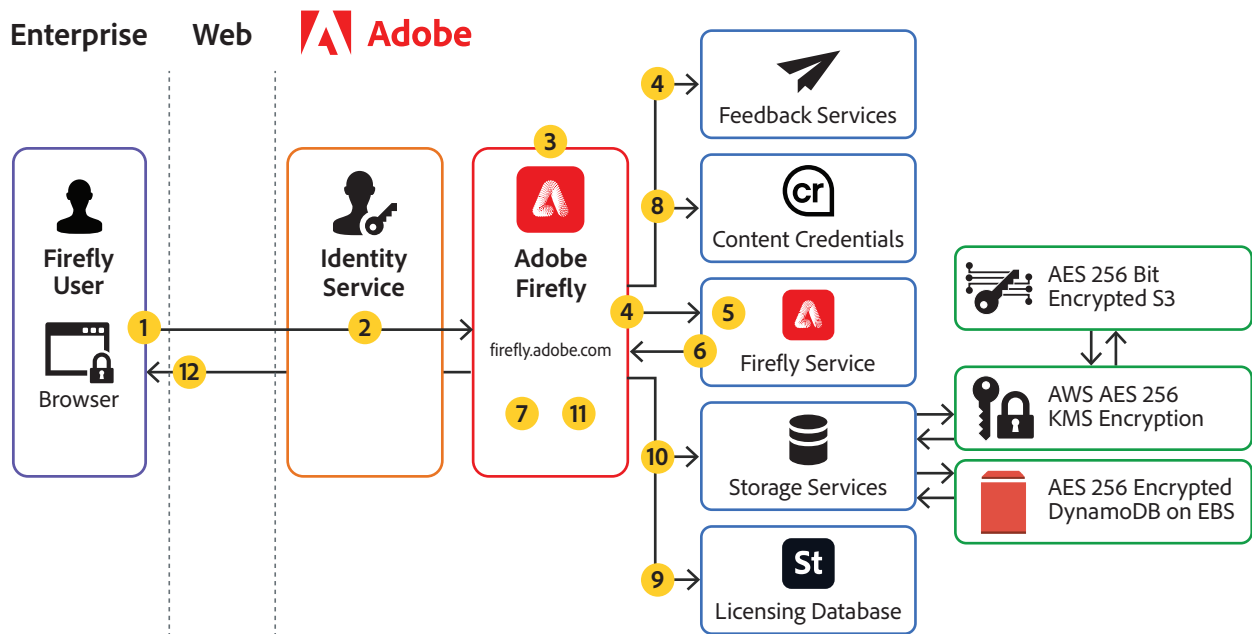


Figure 1: Adobe Firefly security architecture and data flow

# Data Flow Narrative

**Step 1:** User initiates a Firefly action on the firefly.adobe.com website. All data is encrypted in transit over HTTPS using TLS 1.2 and a minimum of AES 128-bit GCM encryption.

**Step 2:** Adobe Identity Management Services (IMS) validates the user and their entitlements.

**Step 3:** The user's prompt text; any reference content, such as masked or expanded images, Generative Match reference content (if selected), or other reference content are uploaded to firefly.adobe.com. All data is encrypted in transit over HTTPS using TLS 1.2 and a minimum of AES 128-bit GCM encryption.

**Step 4:** If the user uploads Generative Match reference content, it is held in an application-managed cache for 24 hours maximum. When a user uploads a reference file, such as a style reference file, a thumbnail of that reference image, along with the user identity, prompt text, and output image hash are also stored in the Feedback and Ingest Services repository.

**Step 5:** The Firefly Service generates content based on the input text and the uploaded reference content.

**Step 6:** The Firefly Service temporarily stores generated content in an application-managed cache storage and returns a pre-signed url for the cached content to firefly.adobe.com.

**Step 7:** If the user performs an action on the generated output such as "Download," "Save to library," "Copy Link," or "Edit in Adobe Express." The firefly.adobe.com application loads the generated output from the pre-signed url.

**Step 8:** Firefly.adobe.com attaches a Content Credentials manifest to the downloaded, saved, copied, or edited content and saves this manifest to the Content Credentials repository. *For more information on Content Credentials, please see the "Content Credentials" section below.*

**Step 9:** If the purchased enterprise offer includes Firefly output indemnification, then for certain text to image workflows, firefly.adobe.com sends a full resolution copy of the generated image with embedded Content Credentials to the Licensing Database.

**Step 10:** If the user is saving to a library or editing in Adobe Express, firefly.adobe.com will send the content and the attached Content Credentials to the respective application which will store the content in user-managed storage through the Storage Services.

**Step 11:** If the user selects “Copy Link,” then provided that the enterprise organization has enabled their [Sharing Restrictions](#) to allow Public Link Access, then the firefly.adobe.com application will convert that signed url into a [shareable link](#). This will allow anyone with access to the link to view the generated image, the prompt, the configuration settings and any reference content. Viewers cannot copy, download, nor modify the generated content, but may use that as the basis for their own generations if they are entitled to Firefly.

**Step 12:** If the user has performed a “Download” action Firefly sends the generated content and the attached Content Credentials to the user. All data is encrypted in transit over HTTPS using TLS 1.2 and a minimum of AES 128-bit GCM encryption.

## Input and Output Content Storage and Processing

Adobe stores input and output information in connection with the services it provides.

### Input

By default, Adobe Firefly stores the following inputs:

- User prompt text input
- User-selected configuration settings while using Firefly
- Reference image, if the user selects a specific Generative Match option such as “Style Match”

Masked or selected content (e.g., in Generative Fill) and certain Generative Match options (e.g., Structure Match) are uploaded, processed and potentially cached for 24 hours or less, but not stored in the cloud by Adobe.

*Note: Adobe does not include enterprise user content (including Firefly inputs and outputs) in datasets used to train Firefly foundation models. This does not apply to (1) the use of Firefly as part of any feedback or improvement programs in which the customer/user can control the use of their content for training through an opt-in/opt-out menu or (2) the customer’s use of any Adobe product or feature that utilizes AI training in order to provide the customer with a service.*

### Output

By default, Adobe does not permanently store Firefly outputs; they are temporarily cached in application-managed cache storage for 24 hours or less and are accessed by a pre-signed url.

Firefly only stores content when the user specifically takes one of the following five (5) actions:

- 1. Saves the generated image** for later viewing or consumption as described in the Data Flow Narrative above.
- 2. Adds the generated image to Favorites.** A thumbnail of the image, prompt text, and configuration settings are stored in the user's browser cache. If the user selects the cached image from the Favorites tab, Firefly will initiate a request for a new generated image using the stored settings and prompt.
- 3. Selects certain "Generative Match" options.** Firefly stores the uploaded image in the Feedback and Ingest Services repository along with the user's identity information. The user is notified of this fact before they can upload an image.
- 4. Engages in a feedback action** (e.g., rating or reporting an image). Firefly stores the image in the Feedback and Ingest Services repository along with the user's identity information, which is used to assess and address the points raised in the feedback action (subject to the terms of the customer agreement).
- 5. Downloads or exports an image when the IP indemnification option** is in the enterprise contract. The image is stored in the Licensing Database (Please see the "Indemnification Data" section below for more information).

*Note: If the user takes any action to save or edit the content in any other Creative Cloud application or service, then the [firefly.adobe.com](https://firefly.adobe.com) application will transfer the content from the pre-signed url to the selected application. For example, if the user selects any of the "Edit in Adobe Express" options, the generated content is passed to Adobe Express, which will control further storage and processing.*

## Content Credentials

Adobe automatically generates [Content Credentials](#) for certain Firefly-generated assets to help provide transparency that the asset was created using Generative AI. Content Credentials typically contain the following metadata:

- In certain cases, a thumbnail of the generated image.
- The tool/tools used to generate the asset.
- Whether the asset was completely generated by Firefly or combined with other content;
- Summaries of the type of actions taken in Firefly (such as use of a reference file, edit activity, etc.); and

- A cryptographic hash of the image and its metadata in a verifiable, tamper-evident signature that provides proof that the image and metadata have not been altered. The cryptographic hash is irreversible.

Content Credentials are attached to the exported asset file and stored in the Content Credentials cloud repository, which allows recovery of the Content Credentials in the event it is stripped from the exported asset.

*Note: Text prompts are never included in any automatically generated Content Credentials.*

## Indemnification Data

If the purchased enterprise offer includes the IP Indemnification option in their contract, and the user performs certain Firefly text to image workflows, Adobe stores the following content in the Licensing Database when a user downloads or exports the Firefly image:

- A full resolution copy of the generated image, including the embedded Content Credentials
- User data identifying the user who has generated the image
- Timestamp indicating the exact date and time the image was generated

Customers can review the license history information at any time at [stock.adobe.com/Dashboard/LicenseHistory](https://stock.adobe.com/Dashboard/LicenseHistory) while logged in with their Adobe credentials.

## User Identity Information

Adobe uses named user licensing to uniquely identify users of any Adobe product, including Adobe Firefly. Adobe Firefly only stores the GUID (globally unique identifier) as part of the Firefly service, which is a 128-bit text string that represents an identifier, without any other personal information. More information on named user licensing can be found in the [Adobe Identity Management Services Security Overview](#).

# Data Storage Locations



Adobe currently processes, caches and potentially stores Firefly input content in Amazon Web Services (AWS) data centers in the US-East and US-West, regardless of the user's location. Adobe will offload some processing to Amazon Web Services (AWS) data centers in the EMEA West (Ireland) region.

Adobe currently stores Content Credentials in AWS data centers in the US-East region, regardless of the user's location.

If applicable, Adobe currently stores indemnification data in a licensing repository hosted in AWS data centers in the EMEA West region, regardless of customer location.

## Data Types and Retention

Adobe retains customer data in accordance with the customer's Enterprise Term License Agreement (ETLA) contract and Adobe's product-specific licensing terms.

The following types of data are potentially stored by Firefly, depending on the user actions as described above:

- The prompt text
- Configuration settings (such as aspect ratio, content type, styles, tone, etc.)
- A timestamp (based on multiple NTP Stratum 1 satellite-connected and atomic reference clocks)
- A cryptographic hash of the image for Content Credentials

- Binary data from the Firefly-generated content (if the user initiates specific actions as noted above)
- User identity data in the form of a pseudonymous ID (e.g., GUID i001ad83a-d41f-4afb-9f5c-7b72c88ae873a)
- Data required for IP Indemnification as noted above (if purchased)
- The reference content if uploaded as a Generative Match function such as a Style Match reference image.

## Conclusion

If you have any additional questions about the security posture and capabilities of Adobe Firefly, please contact your Adobe account manager. For all other questions about Adobe's security programs and processes and compliance certifications, please see the [Adobe Trust Center](#).

