

# Setup a custom domain (Optional)

By default, Sandbox Studio is deployed behind an AWS CloudFront distribution. Users can access it using the **CloudFront distribution URL** that is output from the `SandboxStudio-API` stack.

However, in most organisations you will want to provide a more user-friendly, branded domain name (e.g. `sandbox.example.com`). This requires setting up a **custom domain** in CloudFront and updating your **DNS provider** to route traffic to Sandbox Studio.

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## 1. Retrieve CloudFront distribution details

- Go to the AWS Console in the **Hub account**.
  - Navigate to **CloudFront**.
  - Find the distribution created by the `SandboxStudio-API` stack.
  - From the stack outputs, note:
    - **CloudFrontDistributionUrl** (e.g. `d12345abcdef.cloudfront.net`)
    - **CloudFrontDistributionId** (used if you need to update settings later)
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## 2. Choose your custom domain

Decide on the domain name that will be used for Sandbox Studio. Examples:

- `sandbox.yourcompany.com`
- `studiosandbox.example.org`

Make sure this domain is one you control in your DNS provider (such as **Route 53**, Cloudflare, or another registrar).

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## 3. Update CloudFront distribution with Alternate Domain Name (CNAME)

- In the **CloudFront distribution settings**, add your chosen domain under **Alternate Domain Names (CNAMEs)**.
  - If you're using the AWS Console:
    1. Open your distribution → **Settings** → **General** → **Alternate Domain Names**.
    2. Click **Edit** and add your custom domain name.
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CloudFront requires an **SSL/TLS certificate** for custom domains.

## 4. Provision an SSL/TLS certificate in ACM

- Go to the **AWS Certificate Manager (ACM)** in the **us-east-1 region** (required for CloudFront).
- Request a certificate for your custom domain (e.g. `sandbox.example.com`).
- Validate the certificate using DNS (preferred) or email validation.
- Once validated, return to your CloudFront distribution and attach this ACM certificate under **Custom SSL Certificate**.

## 5. Update your DNS provider

- In your DNS provider (e.g. Route 53), create a **CNAME record**:
  - **Name**: your custom domain (e.g. `sandbox.example.com`)
  - **Value**: the CloudFront distribution URL (e.g. `d12345abcdef.cloudfront.net`)
- Save the record.

It may take up to 30 minutes (or more depending on TTL settings) for DNS changes to propagate.

## 6. Update the ACS URL in Identity Center

Since the login flow depends on the correct **Assertion Consumer Service (ACS) URL**, you must update the Identity Center SAML application configuration:

- Open **IAM Identity Center** in the management account.
- Find the Sandbox Studio custom application.
- Update the ACS URL to:

```
https://<your-custom-domain>/api/auth/login/callback
```

### Example:

```
https://sandbox.example.com/api/auth/login/callback
```

This ensures SAML assertions are posted to the correct URL.

## 7. Update the Web App URL in Sandbox Studio

In your **Sandbox Studio** environment:

- Go to "**Settings**" > "**Advanced Settings**" and scroll to "**Authentication Settings**"
- Update the "**Web App URL**" value to your new domain (With no trailing slash)

### Example:

`https://sandbox.example.com`

- You should now be able to access (and login) to your Sandbox Studio using the new domain.

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## Why This Matters

- Using a custom domain makes Sandbox Studio easier for users to remember and access.
- It allows branding (e.g., using your company's domain).
- Ensures smoother authentication flows by aligning the SAML ACS URL with the URL that users actually log in through.

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