



# Overview

Casdoor is a UI-first [Identity Access Management \(IAM\)](#) / [Single-Sign-On \(SSO\)](#) platform with web UI supporting OAuth 2.0, OIDC, SAML, CAS, LDAP, SCIM, WebAuthn, TOTP, MFA, RADIUS, Google Workspace, Active Directory and Kerberos.

You need to enable JavaScript to run this app.



Casdoor serves both the web UI and the login requests from application users.

# Casdoor features

1. Casdoor follows a front-end and back-end separate architecture, developed by Golang. It supports high concurrency, provides a web-based UI for management, and supports localization in 10+ languages.
2. Casdoor supports third-party application login, such as GitHub, Google, QQ, and WeChat, and it supports extending third-party login with plugins.
3. Casdoor supports authorization management based on [Casbin](#). It supports ACL, RBAC, ABAC, and RESTful access control models.
4. Casdoor provides phone verification code, email verification code, and password retrieval functions.
5. Casdoor supports auditing and recording of accessing logs.
6. Casdoor integrates with Alibaba Cloud, Tencent Cloud, and Qiniu Cloud image CDN cloud storage.
7. Casdoor allows customization of registration, login, and password retrieval pages.
8. Casdoor supports integration with existing systems by database synchronization, enabling smooth transition to Casdoor.
9. Casdoor supports mainstream databases such as MySQL, PostgreSQL, and SQL Server, and it supports the extension of new databases with plugins.

# How it works



## Step 0 (Pre-knowledge)

1. Casdoor follows the authorization process built upon the OAuth 2.0 protocol. It is highly recommended to have a brief understanding of how OAuth 2.0 works. You can refer to this [introduction](#) to OAuth 2.0.

## Abstract Protocol Flow



## Step 1 (Authorization Request)

Your Application (which could be a website or any other application) should compose a URL in the following format: `endpoint/login/oauth/authorize?client_id=xxx&response_type=code&redirect_uri=xxx&scope=read&state=xxx`. Replace `endpoint` with your Casdoor's host URL and `xxx` with your own information.

### ⓘ HINTS

How to fill out the `xxx` parts?

- For `client_id`: you can find this under each individual Application
- For `redirect_uri`: you should set this to your own Application's callback URL. Casdoor will use this information to send the response back after authorization.
- For `state`: you should fill this out with your Application name.

The Application will prompt the user: *"Hey, I need some resources and I need your permission to access these resources. Can you go to this URL and enter your username and password for me?"*

With the correctly composed URL, your Application will make the user launch a request to this URL, and the `Authorization Request` is completed.

## Step 2 (Authorization Grant)

This step is straightforward: the user is redirected to the URL composed in Step 1, and the user will see the login page from Casdoor. By entering the correct username and credentials into the login page, Casdoor now knows the identity of the user and is about to send two pieces of information back to the callback URL set in Step 1: `code` and `state`.

The user opens the URL and provides the credentials to Casdoor. Casdoor will say: "Looking good ~ this is the user (who is authorizing the Application to get the `code` and `state`) I know in my database, and I will send the `code` and `state` back to the Application using the callback URL (`redirect_uri`)".

With these two pieces of information sent back to your Application, the authorization is granted to the app, and the `Authorization Grant` is completed.



Casdoor also provides third-party logins. In this case, instead of seeing the credential entry page, you will see a list of third-party providers. You can log in to your app using these providers, with Casdoor acting as a middle layer (middleware).

## Step 3 (Authorization Grant)

In this step, your Application already has the code from Step 2, and it will speak to Casdoor: "*Hey, the user agreed to give me the `code`. Can you verify this `code` and give me the `access_token`?*"

## Step 4 (Access Token)

Casdoor responds to your Application: "*You know what, this `code` seems legit. You must be the right Application. Here's the `access_token` for you.*" With this `code`, Casdoor confirms that it is an authorized Application (authorized by the correct user in Step 2) trying to obtain the `access_token` (which will be used later to access more resources).

## Step 5 (Access Token)

In this step, your Application says: "Nice! I just got the fresh-and-tasty `access_token`. Now I can use it to access something more valuable from the `Resource Server`!"

Your Application then turns to the `Resource Server` and says: "Hey buddy, can you check out this `access_token`? I received it from Casdoor. Do you want to verify if this is the correct token you issued to Casdoor?"

## Step 6 (Protected Resource)

The `Resource Server` responds to your Application: "Not bad. It seems just like the one I issued to Casdoor, and Casdoor says whoever holds this `access_token` can access these `Protected Resources`. So go ahead and take it!"

And that's basically how Casdoor works with your Application.

### HINT

Casdoor can act as both an `Authorization Server` and a `Resource Server`. In other words, Casdoor authorizes your Application to access resources, usually the currently logged-in user's information, from Casdoor's database.

## Online demo

### Casdoor

Here is an online demo deployed by Casbin.

- [Casdoor official demo](#)

Global admin login:

- Username: `admin`
- Password: `123`

## Casbin-OA

Casbin-OA is one of the Casbin web apps. It uses Casdoor for authentication.

- [Casbin-OA](#)
- Source code: <https://github.com/casbin/casbin-oa>

## Casnnode

Casnnode is the official forum developed by the Casbin community.

It uses Casdoor as the authentication platform and manages members.

- [Casnnode](#)
- Source code: <https://github.com/casbin/casnnode>

## Architecture

Casdoor consists of two parts:

Name	Description	Language	Source code
Frontend	Web frontend UI for Casdoor	JavaScript + React	<a href="https://github.com/casdoor/casdoor/tree/master/web">https://github.com/casdoor/casdoor/tree/master/web</a>
Backend	RESTful API backend for Casdoor	Golang + Beego + SQL	<a href="https://github.com/casdoor/casdoor">https://github.com/casdoor/casdoor</a>

# Core Concepts

As a Casdoor administrator, you should be familiar with at least four core concepts: `Organization`, `User`, `Application`, and `Provider`.



TIP

In the following parts, we will use the demo site <https://door.casdoor.com> as an example.

## Organization

In Casdoor, an organization is a container for users and applications. For example, all the employees of a company or all the customers of a business can be abstracted as one organization. The `Organization` class definition is shown below:

```
type Organization struct {
    Owner      string `xorm:"varchar(100) notnull pk" json:"owner"`
    Name       string `xorm:"varchar(100) notnull pk" json:"name"`
    CreatedTime string `xorm:"varchar(100)" json:"createdTime"`

    DisplayName     string `xorm:"varchar(100)" json:"displayName"`
    WebsiteUrl    string `xorm:"varchar(100)" json:"websiteUrl"`
    Favicon        string `xorm:"varchar(100)" json:"favicon"`
    PasswordType   string `xorm:"varchar(100)" json:"passwordType"`
    PasswordSalt   string `xorm:"varchar(100)" json:"passwordSalt"`
    PhonePrefix    string `xorm:"varchar(10)" json:"phonePrefix"`
    DefaultAvatar  string `xorm:"varchar(100)" json:"defaultAvatar"`
    Tags          []string `xorm:"mediumtext" json:"tags"`
    MasterPassword string `xorm:"varchar(100)" json:"masterPassword"`
    EnableSoftDeletion bool `json:"enableSoftDeletion"`
    IsProfilePublic bool `json:"isProfilePublic"`

    AccountItems []*AccountItem `xorm:"varchar(2000)" json:"accountItems"`
}
```

## User

In Casdoor, a user can log into an application. Each user can belong to only one organization but can log into multiple applications owned by the organization. Currently, there are two types of users in Casdoor:

- `built-in` organization users, such as `built-in/admin`: global administrators who have full administrative power on the Casdoor platform.
- Other organizations' users, such as `my-company/alice`: normal users who can sign up, sign in, sign out, change their own profile, etc.

In the Casdoor API, a user is typically identified as `<organization_name>/<username>`. For example, the default administrator of Casdoor is denoted as `built-in/admin`. Additionally, the `User` class definition includes an `id` property, which is a UUID like `d835a48f-2e88-4c1f-b907-60ac6b6c1b40` and can be chosen as a user's ID by an application.



TIP

For applications that are only for one organization, it's possible to use `<username>` instead of `<organization_name>/<username>` as the user ID across the application for simplicity.

Here's the `User` class definition:

```
type User struct {
    Owner      string `xorm:"varchar(100) notnull pk" json:"owner"`
    Name       string `xorm:"varchar(100) notnull pk" json:"name"
```

### TIP

The `Properties` field is a flexible key-value map for storing custom user attributes. See the [User Properties documentation](#) for detailed usage examples and best practices.

## Application

An application represents a web service that needs to be protected by Casdoor, such as a forum site, an OA system, or a CRM system.

```
type Application struct {
    Owner          string      `xorm:"varchar(100) notnull pk" json:"owner"`
    Name           string      `xorm:"varchar(100) notnull pk" json:"name"`
    CreatedTime   string      `xorm:"varchar(100)" json:"createdTime"`
    DisplayName   string      `xorm:"varchar(100)" json:"displayName"`
    Logo           string      `xorm:"varchar(100)" json:"logo"`
    HomepageUrl  string      `xorm:"varchar(100)" json:"homepageUrl"`
    Description   string      `xorm:"varchar(100)" json:"description"`
    Organization  string      `xorm:"varchar(100)" json:"organization"`
    Cert          string      `xorm:"varchar(100)" json:"cert"`
    EnablePassword bool       `json:"enablePassword"`
    EnableSignUp   bool       `json:"enableSignUp"`
    EnableSigninSession bool     `json:"enableSigninSession"`
    EnableCodeSignin  bool     `json:"enableCodeSignin"`
    Providers     []*ProviderItem `xorm:"mediumtext" json:"providers"`
    SignupItems   []*SignupItem  `xorm:"varchar(1000)" json:"signupItems"`
    OrganizationObj *Organization `xorm:"-"`
    ClientId      string      `xorm:"varchar(100)" json:"clientId"`
    ClientSecret   string      `xorm:"varchar(100)" json:"clientSecret"`
    RedirectUris  []string     `xorm:"varchar(1000)" json:"redirectUris"`
    TokenFormat    string      `xorm:"varchar(100)" json:"tokenFormat"`
    ExpireInHours int         `json:"expireInHours"`
    RefreshExpireInHours int     `json:"refreshExpireInHours"`
    SignupUrl     string      `xorm:"varchar(200)" json:"signupUrl"`
    SigninUrl     string      `xorm:"varchar(200)" json:"signinUrl"`
    ForgetUrl     string      `xorm:"varchar(200)" json:"forgetUrl"`
    AffiliationUrl string      `xorm:"varchar(100)" json:"affiliationUrl"`
    TermsOfUse     string      `xorm:"varchar(100)" json:"termsOfUse"`
    SignupHtml    string      `xorm:"mediumtext" json:"signupHtml"`
    SigninHtml    string      `xorm:"mediumtext" json:"signinHtml"`
}
```

Each application can have its own customized sign-up page, sign-in page, and more. The root login page `/login` (e.g., <https://door.casdoor.com/login>) is the sign-in page only for Casdoor's built-in application: `app-built-in`.

An application is a "portal" or "interface" for a user to log into Casdoor. A user must go through one application's sign-in page to log into Casdoor.

Application	Sign-up page URL	Sign-in page URL
app-built-in	<a href="https://door.casdoor.com/signup">https://door.casdoor.com/signup</a>	<a href="https://door.casdoor.com/login">https://door.casdoor.com/login</a>
app-casnode	<a href="https://door.casdoor.com/signup/app-casnode">https://door.casdoor.com/signup/app-casnode</a>	<a href="https://door.casdoor.com/login/oauth/authorize?client_id=014ae4bd048734ca2dea&amp;response_type=code&amp;redirect_uri=http://localhost:9000/callback&amp;scope=read&amp;state=casdoor">https://door.casdoor.com/login/oauth/authorize?client_id=014ae4bd048734ca2dea&amp;response_type=code&amp;redirect_uri=http://localhost:9000/callback&amp;scope=read&amp;state=casdoor</a>
app-casbin-oa	<a href="https://door.casdoor.com/signup/app-casbin-oa">https://door.casdoor.com/signup/app-casbin-oa</a>	<a href="https://door.casdoor.com/login/oauth/authorize?client_id=0ba528121ea87b3eb54d&amp;response_type=code&amp;redirect_uri=http://localhost:9000/callback&amp;scope=read&amp;state=casdoor">https://door.casdoor.com/login/oauth/authorize?client_id=0ba528121ea87b3eb54d&amp;response_type=code&amp;redirect_uri=http://localhost:9000/callback&amp;scope=read&amp;state=casdoor</a>

## Login URLs

It's very easy to log into Casdoor via Casdoor's built-in application; simply visit Casdoor server homepage (e.g., <https://door.casdoor.com> for demo site) and it will automatically redirect you to `/login`. But how do you get the URLs for other applications in frontend and backend code? You can either concatenate strings manually or call some utility functions provided by Casdoor SDKs to get the URLs:

### 1. Manually concatenating strings

- Sign-up page URL
  - Signup for the specified application: `<your-casdoor-hostname>/signup/<your-application-name>`
  - Signup by OAuth: `<your-casdoor-hostname>/signup/oauth/authorize?client_id=<client-id-for-your-application>&response_type=code&redirect_uri=<redirect-uri-for-your-application>&&scope=read&state=casdoor`
  - Signup automatically: `<your-casdoor-hostname>/auto-signup/oauth/authorize?client_id=<client-id-for-your-application>&response_type=code&redirect_uri=<redirect-uri-for-your-application>&&scope=read&state=casdoor`
- Sign-in page URL
  - Sign-in for the specified organization: `<your-casdoor-hostname>/login/<your-organization-name>`
  - Sign-in by OAuth: `<your-casdoor-hostname>/login/oauth/authorize?client_id=<client-id-for-your-application>&response_type=code&redirect_uri=<redirect-uri-for-your-application>&&scope=read&state=casdoor`

### 2. Using frontend SDK (for frontend JavaScript code using React, Vue, or Angular)

`getSignupUrl()` and `getSigninUrl()`: [casdoor-js-sdk](#)

### 3. Using backend SDK (for backend code using Go, Java, etc.)

`GetSignupUrl()` and `GetSigninUrl()`: [casdoor-go-sdk](#)

## Provider

Casdoor is a federated single sign-on system that supports multiple identity providers via OIDC, OAuth, and SAML. Casdoor can also send verification codes or other notifications to users via email or SMS. Casdoor uses the concept of `Provider` to manage all these third-party connectors.

A list of all providers supported by Casdoor can be found at [provider/overview](#).

```
type Provider struct {
    Owner      string `xorm:"varchar(100) notnull pk" json:"owner"`
    Name       string `xorm:"varchar(100) notnull pk" json:"name"`
    CreatedTime string `xorm:"varchar(100)" json:"createdTime"`

    DisplayName  string `xorm:"varchar(100)" json:"displayName"`
    Category    string `xorm:"varchar(100)" json:"category"`
    Type        string `xorm:"varchar(100)" json:"type"`
    Method      string `xorm:"varchar(100)" json:"method"`
    ClientId   string `xorm:"varchar(100)" json:"clientId"`
    ClientSecret string `xorm:"varchar(100)" json:"clientSecret"`
    ClientId2  string `xorm:"varchar(100)" json:"clientId2"`
    ClientSecret2 string `xorm:"varchar(100)" json:"clientSecret2"`

    Host     string `xorm:"varchar(100)" json:"host"`
    Port     int     `json:"port"`
    Title    string `xorm:"varchar(100)" json:"title"`
    Content  string `xorm:"varchar(1000)" json:"content"`

    RegionId   string `xorm:"varchar(100)" json:"regionId"`
    SignName   string `xorm:"varchar(100)" json:"signName"`
    TemplateCode string `xorm:"varchar(100)" json:"templateCode"`
    AppId      string `xorm:"varchar(100)" json:"appId"
```

## How does Casdoor manage itself?

Upon running Casdoor for the first time, some built-in objects are created to facilitate its management:

- A built-in organization named `built-in`.
- A user named `admin` in the `built-in` organization.
- A built-in application named `app-built-in`, administered by the `built-in` organization, representing Casdoor itself.

All users under the `built-in` organization, including `admin`, will have full administrator privileges on the Casdoor platform. Therefore, if there are multiple administrators, it is advisable to create new accounts under the `built-in` organization. Alternatively, the sign-up channel for the `app-built-in` application should be closed to prevent unwanted access.

 CAUTION

It is not possible to rename or delete the built-in objects via both the web UI or the RESTful API. Casdoor has hardcoded these reserved names in many places; attempting to rename or delete them by modifying the DB may cause the entire system to crash.



# Server Installation

## Requirements

### Operating System

All major operating systems, including Windows, Linux, and macOS, are supported.

### Environment

- Go 1.21+
- Node.js LTS (20)
- Yarn 1.x

 INFO

We strongly suggest using [Yarn 1.x](#) to run and build Casdoor frontend. Using NPM might cause UI styling issues. For more details, see: [casdoor#294](#).

 CAUTION

If your network fails to directly sync the Go dependency packages successfully, you need to use a Go proxy by configuring the GOPROXY environment variable. We strongly recommend using:  
<https://goproxy.cn/>

### Database

Casdoor uses [XORM](#) to communicate with the database. Based on [Xorm Drivers Support](#), Casdoor currently provides support for the following databases:

- [MySQL](#)
- [MariaDB](#)
- [PostgreSQL](#)
- [CockroachDB](#)
- [SQL Server](#)
- [Oracle](#)
- [SQLite 3](#)
- [TiDB](#)

# Download

The source code of Casdoor is hosted on GitHub: <https://github.com/casdoor/casdoor>. Both the Go backend code and React frontend code are contained in a single repository.

Name	Description	Language	Source code
Frontend	Web frontend UI for Casdoor	JavaScript + React	<a href="https://github.com/casdoor/casdoor/tree/master/web">https://github.com/casdoor/casdoor/tree/master/web</a>
Backend	RESTful API backend for Casdoor	Golang + Beego + XORM	<a href="https://github.com/casdoor/casdoor">https://github.com/casdoor/casdoor</a>

Casdoor supports [Go Modules](#). To download the code, simply clone the code using git:

```
cd path/to/folder  
git clone https://github.com/casdoor/casdoor
```

# Configuration

## Configure Database

Casdoor supports MySQL, MSSQL, SQLite3, and PostgreSQL. By default, Casdoor uses MySQL.

### MySQL

Casdoor stores user, node, and topic information in a MySQL database named `casdoor`. If the database does not exist, it must be created manually. The DB connection string can be specified at:

<https://github.com/casdoor/casdoor/blob/master/conf/app.conf>

```
driverName = mysql  
dataSourceName = root:123456@tcp(localhost:3306)/  
dbName = casdoor
```

### PostgreSQL

Before running Casdoor, you need to manually prepare a database for PostgreSQL, as Casdoor requires selecting a database when opening Postgres with xorm.

Assuming you have already prepared a database called `casdoor`, you should specify `app.conf` like this:

```
driverName = postgres
dataSourceName = user=postgres password=postgres host=localhost port=5432
sslmode=disable dbname=casdoor
dbName = casdoor
```

**!** INFO

For PostgreSQL, ensure that `dataSourceName` has a non-empty `dbName` and also duplicate the database name for the `dbname` field as shown in the example above.

## CockroachDB

CockroachDB can also be used with the PostgreSQL driver and has the same configuration as PostgreSQL.

```
driverName = postgres
dataSourceName = user=postgres password=postgres host=localhost port=5432
sslmode=disable dbname=casdoor serial_normalization=virtual_sequence
dbName = casdoor
```

**!** INFO

For CockroachDB, remember to add `serial_normalization=virtual_sequence` to the `dataSourceName` as shown in the example above. Otherwise, you will get an error regarding an existing database whenever the service starts or restarts. Note that this must be added before the database is created.

## SQLite3

To configure SQLite3, you should specify `app.conf` like this:

```
driverName = sqlite
dataSourceName = file:casdoor.db?cache=shared
dbName = casdoor
```

## Via Ini file

Casdoor can be configured via a single file: [conf/app.conf](#). As a beginner, you only need to modify `driverName` and `dataSourceName` based on your database (see [Configure Database](#)). Below is a complete reference of all configuration options:

Parameter	Default Value	Description
<code>appname</code>	<code>casdoor</code>	Application name (currently has no practical use)
<code>httpport</code>	<code>8000</code>	Port that the backend application listens on
<code>runmode</code>	<code>dev</code>	Running mode: <code>dev</code> or <code>prod</code>
<code>copyrequestbody</code>	<code>true</code>	Whether to copy request body for later use
<code>driverName</code>	<code>mysql</code>	Database driver (e.g., <code>mysql</code> , <code>postgres</code> , <code>sqlite</code> ). See <a href="#">Configure Database</a>
<code>dataSourceName</code>	<code>root:123456@tcp(localhost:3306)/</code>	Database connection string. See <a href="#">Configure Database</a>
<code>dbName</code>	<code>casdoor</code>	Database name used by Casdoor
<code>tableNamePrefix</code>	(empty)	Prefix for table names when using an adapter
<code>showSql</code>	<code>false</code>	Show SQL statements in logger when log level is greater than INFO
<code>redisEndpoint</code>	(empty)	Redis endpoint for session storage (e.g., <code>localhost:6379</code> ). If empty, sessions are stored locally in <code>./tmp</code> . For password: <code>host:port,db,password</code>
<code>defaultStorageProvider</code>	(empty)	Default storage provider name for file uploads (e.g., <code>avatars</code> ). See <a href="#">storage</a>

Parameter	Default Value	Description
<code>isCloudIntranet</code>	<code>false</code>	Whether provider endpoints use intranet addresses
<code>authState</code>	<code>"casdoor"</code>	Authorization application name checked during login
<code>socks5Proxy</code>	<code>"127.0.0.1:10808"</code>	SOCKS5 proxy address for OAuth providers (Google, GitHub, etc.) that may be blocked
<code>verificationCodeTimeout</code>	<code>10</code>	Verification code expiration time in minutes
<code>initScore</code>	<code>0</code>	Initial score assigned to new users (used by Casnode, not Casdoor)
<code>logPostOnly</code>	<code>true</code>	Whether to log only POST requests
<code>isUsernameLowered</code>	<code>false</code>	Whether to convert usernames to lowercase
<code>origin</code>	(empty)	Backend origin URL (e.g., <a href="https://door.casdoor.com">https://door.casdoor.com</a> )
<code>originFrontend</code>	(empty)	Frontend origin URL if different from backend
<code>staticBaseUrl</code>	<code>"https://cdn.casbin.org"</code>	CDN URL for static assets used during database initialization
<code>isDemoMode</code>	<code>false</code>	Enable demo mode restrictions
<code>batchSize</code>	<code>100</code>	Batch size for bulk

Parameter	Default Value	Description
		operations
<code>enableErrorMask</code>	<code>false</code>	Whether to mask detailed error messages
<code>enableGzip</code>	<code>true</code>	Accept and respond with gzip encoding when client supports it
<code>inactiveTimeoutMinutes</code>	(empty)	Auto-logout timeout in minutes. Empty or $\leq 0$ means no timeout
<code>ldapServerPort</code>	<code>389</code>	Port for LDAP server
<code>ldapsCertId</code>	<code>" "</code>	Certificate ID for LDAPS connections
<code>ldapsServerPort</code>	<code>636</code>	Port for LDAPS (LDAP over SSL) server
<code>radiusServerPort</code>	<code>1812</code>	Port for RADIUS server
<code>radiusDefaultOrganization</code>	<code>"built-in"</code>	Default organization for RADIUS authentication
<code>radiusSecret</code>	<code>"secret"</code>	Shared secret for RADIUS authentication
<code>quota</code>	<code>{"organization": -1, "user": -1, "application": -1, "provider": -1}</code>	Resource quotas (-1 means unlimited)
<code>logConfig</code>	<code>{"adapter": "file", "filename": "logs/casdoor.log", "maxdays": 99999, "perm": "0770"}</code>	Logging configuration (adapter, file path, rotation, permissions)
<code>initDataNewOnly</code>	<code>false</code>	Whether to initialize data

Parameter	Default Value	Description
		only for new installations
<code>initDataFile</code>	<code>"./init_data.json"</code>	Path to data initialization file. See <a href="#">Data Initialization</a>
<code>frontendBaseDir</code>	<code>"../cc_0"</code>	Base directory for frontend files (only for development)

## Via Environment Variables

All configuration items defined by Casdoor in the ini file mentioned above can be configured via environment variables, as well as some of the beego configurations items (httpport, appname).

For example, when you try to start Casdoor, you can use something like this to pass the configuration via environment variables:

```
appname=casbin go run main.go
```

In addition, `export` derivatives are also a possible method. The names of environmental variables should exactly match the names you want to use in the ini file.

Note: configurations in environmental variables can override the configurations in the ini file.

## Run

There are currently two methods to start, and you can choose one according to your situation.

### Development Mode

#### Backend

Casdoor's Go backend runs on port 8000 by default. You can start the Go backend with the following command:

```
go run main.go
```

After the server is successfully running, you can start the frontend part.

## Frontend

Casdoor's frontend is a very classic [Create-React-App \(CRA\)](#) project. It runs on port `7001` by default. Use the following commands to run the frontend:

```
cd web  
yarn install  
yarn start
```

Visit <http://localhost:7001> in your browser. Log into the Casdoor dashboard with the default global admin account: `built-in/admin`.

```
admin  
123
```

## Production Mode

### Backend

Build the Casdoor Go backend code into an executable and start it.

For Linux:

```
go build  
./casdoor
```

For Windows:

```
go build  
casdoor.exe
```

### Frontend

Build the Casdoor frontend code into static resources (.html, .js, .css files):

```
cd web  
yarn install  
yarn build
```

Visit <http://localhost:8000> in your browser. Log into the Casdoor dashboard with the default global admin

account: `built-in/admin`.

```
admin  
123
```



To use another port, please edit `conf/app.conf` and modify `httpport`, then restart the Go backend.

#### ❗ CASDOOR PORT DETAILS

In the `dev` environment, the frontend is run by `yarn run` on port 7001, so if you want to go to the Casdoor login page, you need to set the Casdoor link as <http://localhost:7001>.

In the `prod` environment, the frontend files are first built by `yarn build` and served on port 8000, so if you want to go to the Casdoor login page, you need to set the Casdoor link as <https://your-casdoor-url.com:8000> (if you are using a reverse proxy, you need to set the link as your domain).

Take Our Official Forum Casnode as an Example

Casnode uses Casdoor to handle authentication.

When we are testing Casnode in the `dev` environment, we set the `serverUrl` as <http://localhost:7001>, so when we test the signin and signup functionality using Casdoor, it will go to localhost 7001, which is the Casdoor port.

And when we put Casnode into the `prod` environment, we set the `serverUrl` as <https://door.casdoor.com>, so users can sign in or sign up using Casdoor.

```
4 import * as ConfBackend from "./backend/ConfBackend.js"  
5  
6 export const authConfig = {  
7   // serverUrl: "https://door.casbin.com",  
8   serverUrl: "http://localhost:7001",  
9   clientId: "014ae4bd048734ca2dea",  
  ...
```

# (Optional) Try with Docker

## Requirements

### Hardware

If you want to build the Docker image yourself, please ensure that your machine has at least 2GB of memory. Casdoor's frontend is an NPM project of React. Building the frontend requires at least 2GB of memory. Having less than 2GB of memory may result in a frontend build failure.

If you only need to run the pre-built image, please ensure that your machine has at least 100MB of memory.

### OS

All operating systems (Linux, Windows, and macOS) are supported.

### Docker

You can use Docker (docker-engine version  $\geq$  17.05) in Linux or Docker Desktop in Windows and macOS.

- [Docker](#)

Regardless of the operating system, users must ensure that they have docker-engine version  $\geq$  17.05. This is because we utilize the multi-stage build feature in the docker-compose.yml, which is supported in versions 17.05 and above. For more information, see <https://docs.docker.com/develop/develop-images/multistage-build/>.

If you are also using docker-compose, please ensure that you have **docker-compose version >= 2.2**. For Linux users, you also need to make sure that docker-compose is installed, as it is separate from docker-engine.

## Get the image

We have provided two DockerHub images:

Name	Description	Suggestion
<code>casdoor-all-in-one</code>	Both Casdoor and a MySQL database are included in the image	This image already includes a toy database and is only for testing purposes
<code>casdoor</code>	Only Casdoor is included in the image	This image can be connected to your own database and used in production

1. `casbin/casdoor-all-in-one`: This image includes the casdoor binary, a MySQL database, and all the necessary configurations. It is designed for new users who want to try Casdoor quickly. With this image, you can start Casdoor immediately with just one or two commands, without any complex configuration. However, please note that we **do not recommend** using this image in a production environment.

### Option-1: Use the toy database

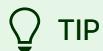
Run the container with port `8000` exposed to the host. The image will be automatically pulled if it doesn't exist on the local host.

```
docker run -p 8000:8000 casbin/casdoor-all-in-one
```

Visit <http://localhost:8000> in your browser. Log into the Casdoor dashboard with the default global admin account: `built-in/admin`

```
admin  
123
```

## Option-2: Try directly with the standard image



If it is not convenient to mount the configuration file to a container, using environment variables is also a possible solution.

### example

```
docker run \  
-e driverName=mysql \  
-e dataSourceName='user:password@tcp(x.x.x.x:3306)/*' \  
-p 8000:8000 \  
casbin/casdoor:latest
```

Create `conf/app.conf`. You can copy it from `conf/app.conf` in Casdoor. For more details about `app.conf`, you can see [Via Ini file](#).

Then run

```
docker run -p 8000:8000 -v /folder/of/app.conf:/conf casbin/casdoor:latest
```

 NOTE

The default user of Casdoor has a uid and gid of 1000. When using volume mapping with SQLite (or any storage requiring file permissions), ensure that the path (e.g., `/folder/of/app.conf` in the example above) is accessible to uid 1000. This avoids permission errors like `permission denied` when Casdoor writes to mapped volumes.

Anyway, just mount the `app.conf` to `/conf/app.conf` and start the container.

Visit <http://localhost:8000> in your browser. Log into the Casdoor dashboard with the default global admin account: `built-in/admin`

admin  
123

## Option-3: Try with docker-compose

Create a `conf/app.conf` directory in the same directory level as the `docker-compose.yml` file. Then, copy `app.conf` from Casdoor. For more details about `app.conf`, you can see [Via Ini file](#).

Create a separate database using docker-compose:

```
docker-compose up
```

That's it! ✨

Visit <http://localhost:8000> in your browser. Log into the Casdoor dashboard with the default global admin account: `built-in/admin`

admin

123

 NOTE

If you dig deeper into the docker-compose.yml file, you may be puzzled by the environment variable we created called "RUNNING\_IN\_DOCKER". When the database 'db' is created via docker-compose, it is available on your PC's localhost but not the localhost of the Casdoor container. To prevent you from running into troubles caused by modifying app.conf, which can be quite difficult for a new user, we provided this environment variable and pre-assigned it in the docker-compose.yml. When this environment variable is set to true, localhost will be replaced with host.docker.internal so that Casdoor can access the database.

# (Optional) Try with K8s Helm

## Introduction

Now we show how to deploy Casdoor on Kubernetes using Helm for easy and scalable management.

## Prerequisites

- A running Kubernetes cluster
- Helm v3 installed

## Installation Steps

### Step 1: Install the Casdoor Chart

Install the Casdoor [chart](#):

```
helm install casdoor oci://registry-1.docker.io/casbin/casdoor-helm-charts --version v1.702.0
```

### Step 2: Accessing Casdoor

Once installed, Casdoor can be accessed at the provided service URL by your Kubernetes cluster.

## Customization and Configuration

Customize your Casdoor installation by modifying the Helm chart values. For detailed options, refer to the [values.yaml](#) file in the chart. The following parameters can be configured.

Parameter	Description	Default Value
<code>replicaCount</code>	Number of replicas of the Casdoor application to run.	<code>1</code>
<code>image.repository</code>	Repository for the Casdoor Docker	<code>casbin</code>

Parameter	Description	Default Value
	image.	
<code>image.name</code>	Name of the Casdoor Docker image.	<code>casdoor</code>
<code>image.pullPolicy</code>	Pull policy for the Casdoor Docker image.	<code>IfNotPresent</code>
<code>image.tag</code>	Tag for the Casdoor Docker image.	
<code>config</code>	Configuration settings for the Casdoor application.	See <a href="#">config</a> field
<code>database.driver</code>	Database driver to use (supports mysql, postgres, cockroachdb, sqlite3).	<code>sqlite3</code>
<code>database.user</code>	Database username.	
<code>database.password</code>	Database password.	
<code>database.host</code>	Database host.	
<code>database.port</code>	Database port.	

Parameter	Description	Default Value
<code>database.databaseName</code>	Name of the database used by Casdoor.	<code>casdoor</code>
<code>database.sslMode</code>	SSL mode for the database connection.	<code>disable</code>
<code>service.type</code>	Type of Kubernetes service to create for Casdoor (ClusterIP, NodePort, LoadBalancer, etc.).	<code>ClusterIP</code>
<code>service.port</code>	Port number for the Casdoor service.	<code>8000</code>
<code>ingress.enabled</code>	Whether to enable Ingress for Casdoor.	<code>false</code>
<code>ingress.annotations</code>	Annotations for the Ingress resource.	<code>{}</code>
<code>ingress.hosts</code>	Hostnames for the Ingress resource.	<code>[]</code>
<code>resources</code>	Resource requests and	<code>{}</code>

Parameter	Description	Default Value
	limits for the Casdoor container.	
<code>autoscaling.enabled</code>	Whether to enable Horizontal Pod Autoscaler for Casdoor.	<code>false</code>
<code>autoscaling.minReplicas</code>	Minimum number of replicas for Horizontal Pod Autoscaler.	<code>1</code>
<code>autoscaling.maxReplicas</code>	Maximum number of replicas for Horizontal Pod Autoscaler.	<code>100</code>
<code>autoscaling.targetCPUUtilizationPercentage</code>	Target CPU utilization percentage for Horizontal Pod Autoscaler.	<code>80</code>
<code>nodeSelector</code>	Node labels for pod assignment.	<code>{}</code>
<code>tolerations</code>	Toleration labels for pod assignment.	<code>[]</code>
<code>affinity</code>	Affinity	<code>{}</code>

Parameter	Description	Default Value
	settings for pod assignment.	
<code>extraContainersEnabled</code>	Whether to enable additional sidecar containers.	<code>false</code>
<code>extraContainers</code>	Additional sidecar containers.	<code>[]</code>
<code>extraVolumeMounts</code>	Additional volume mounts for the Casdoor container.	<code>[]</code>
<code>extraVolumes</code>	Additional volumes for the Casdoor container.	<code>[]</code>
<code>envFromSecret</code>	Provide Environment variable from secret.	<code>[{name:"", secretName:"", key:""}]</code>
<code>envFromConfigmap</code>	Provide Environment variable from configmap.	<code>[{name:"", configmapName:"", key:""}]</code>
<code>envFrom</code>	Provide Environment variable from entire secret or configmap.	<code>[{name:"", type:"configmap \\\\ secret"}]</code>

## Managing the Deployment

To upgrade your Casdoor deployment:

```
helm upgrade casdoor casdoor/casdoor-helm-charts
```

To uninstall Casdoor:

```
helm delete casdoor
```

For further management and customization, refer to the Helm and Kubernetes documentation.

## Conclusion

Using Helm to deploy Casdoor on Kubernetes simplifies the management and scalability of your authentication services within your Kubernetes environment.

# Casdoor Public API

Casdoor frontend web UI is a [SPA \(Single-Page Application\)](#) developed in React. The React frontend consumes the Casdoor RESTful API exposed by the Go backend code. This RESTful API is referred to as the [Casdoor Public API](#). In Another word, with HTTP calls, you can do everything just like how Casdoor web UI itself does. There's no other limitations. The API can be utilized by the following:

- Casdoor's frontend
- Casdoor client SDKs (e.g., casdoor-go-sdk)
- Any other customized code from the application side

The full reference for the [Casdoor Public API](#) can be found on Swagger: <https://door.casdoor.com/swagger>. These Swagger docs are automatically generated using Beego's Bee tool. If you want to generate the Swagger docs by yourself, see: [How to generate the swagger file](#)

## API Response Language

Casdoor APIs support internationalized responses. The default response language is English. To receive error messages and other text content in your preferred language, include the [Accept-Language](#) header in your API requests:

```
# Example: Get error messages in French
curl -X GET https://door.casdoor.com/api/get-account \
-H "Authorization: Bearer YOUR_ACCESS_TOKEN" \
-H "Accept-Language: fr"
```

Supported language codes include `en`, `zh`, `es`, `fr`, `de`, `ja`, `ko`, and more. For a complete list and more details, see the [Internationalization](#) documentation.

## Machine-to-Machine (M2M) Authentication

Machine-to-machine (M2M) authentication is designed for scenarios where services, applications, or backend systems need to authenticate and communicate with APIs **without user interaction**. This is particularly useful for:

- Backend services calling Casdoor APIs programmatically
- CLI tools that need to interact with your APIs using access tokens
- B2B enterprise scenarios where organizations need to generate tokens for API access (e.g., admin tokens for management operations, read tokens for data access)
- Automated processes such as scheduled jobs, data synchronization, or system integrations
- Microservices that need to authenticate with each other

Casdoor supports M2M authentication through the following methods:

1. **Client Credentials Grant (OAuth 2.0):** The recommended approach for M2M scenarios. This uses the [Client Credentials Grant flow](#) where applications authenticate using their `Client ID` and `Client Secret` to obtain access tokens. See the [OAuth Client Credentials Grant](#) documentation for details on obtaining tokens via this flow.
2. **Direct API Authentication with Client ID and Secret:** Use the application's credentials directly in API calls (see method #2 below).

## Use Cases for M2M Authentication

- **Organization-level API access:** In B2B scenarios, you can create a Casdoor application for each organization. The application's client credentials provide admin-level permissions for that organization, enabling them to manage their users, generate tokens, and access organizational resources independently.
- **Token generation for downstream services:** Generate access tokens programmatically (using Client Credentials Grant) that can be distributed to CLI tools, read-only services, or other applications that need scoped access to your APIs.
- **Service-to-service authentication:** Backend services can authenticate as an "application" rather than as a user, with permissions equivalent to the organization admin.

## How to authenticate with [Casdoor Public API](#)

### 1. By [Access token](#)

We can use the access token granted for an authenticated user to call [Casdoor Public API](#) as the user itself.

#### How to get the access token?

The application can get the access token for the Casdoor user at the end of OAuth login process (aka get the token by code and state). The permissions for the API calls will be the same as the user.

The below examples shows how to call `GetAuthToken()` function in Go via casdoor-go-sdk.

```
func (c *ApiController) Signin() {
    code := c.Input().Get("code")
    state := c.Input().Get("state")

    token, err := casdoorsdk.GetAuthToken(code, state)
    if err != nil {
        c.ResponseError(err.Error())
        return
    }
}
```

All granted access tokens can also be accessed via the web UI by an admin user in the Tokens page. For example, visit: <https://door.casdoor.com/tokens> for the demo site.

#### How to authenticate?

1. HTTP `GET` parameter, the URL format is:

```
/page?access_token=<The access token>
```

Demo site example: [https://door.casdoor.com/api/get-global-providers?access\\_token=eyJhbGciOiJSUzI1NiIs](https://door.casdoor.com/api/get-global-providers?access_token=eyJhbGciOiJSUzI1NiIs)

2. HTTP Bearer token, the HTTP header format is:

```
Authorization: Bearer <The access token>
```

## 2. By `client ID` and `client secret` (Machine-to-Machine)

This method is the primary approach for **machine-to-machine (M2M) authentication**. It allows applications, services, or backend systems to authenticate with Casdoor APIs without any user interaction.

#### How to get the client ID and secret?

The application edit page (e.g., <https://door.casdoor.com/applications/casbin/app-vue-python-example>) will show the client ID and secret for an application. This authentication method is useful when you want to call the API as a "machine", "application", or a "service" instead of a user. The permissions for the API calls will be the same as the application (equivalent to the admin of the organization).

#### Use cases

- **Service authentication:** Backend services calling Casdoor APIs programmatically
- **Organization management:** In B2B scenarios, create an application per organization to enable them to manage users and generate tokens independently
- **Token generation:** Obtain access tokens via the [OAuth Client Credentials Grant](#) flow for distribution to CLI tools or other services

#### How to authenticate?

1. HTTP `GET` parameter, the URL format is:

```
/page?clientId=<The client ID>&clientSecret=<the client secret>
```

Demo site example: <https://door.casdoor.com/api/get-global-providers?clientId=1&clientSecret=1234567890>

```
providers?clientId=294b09fbc17f95daf2fe&clientSecret=dd8982f7046ccba1bbd7851d5c1ece4e52bf039d
```

2. [HTTP Basic Authentication](#), the HTTP header format is:

```
Authorization: Basic <The Base64 encoding of client ID and client secret joined by a single colon ":">
```

If you are not familiar with the Base64 encoding, you can use a library to do that because [HTTP Basic Authentication](#) is a popular standard supported by many places.

### Obtaining access tokens with Client Credentials

For machine-to-machine scenarios where you need to obtain an access token (rather than using client credentials directly), use the [OAuth 2.0 Client Credentials Grant](#) flow:

1. Make a POST request to [https://<CASDOOR\\_HOST>/api/login/oauth/access\\_token](https://<CASDOOR_HOST>/api/login/oauth/access_token) with:

```
{  
  "grant_type": "client_credentials",  
  "client_id": "YOUR_CLIENT_ID",  
  "client_secret": "YOUR_CLIENT_SECRET"  
}
```

2. You will receive an access token response:

```
{  
  "access_token": "eyJhb... ",  
  "token_type": "Bearer",  
  "expires_in": 10080,  
  "scope": "openid"  
}
```

3. Use the `access_token` to call Casdoor APIs (see method #1 above).

For more details, see the [Client Credentials Grant](#) documentation.



#### INFO

**For B2B Enterprises:** You can create separate Casdoor applications for each of your customer organizations. Each application has its own `client_id` and `client_secret`, which your customers can use to:

- Authenticate as their organization (with admin privileges)
- Generate access tokens for their users or services

- Manage their organization's users and permissions independently
- Integrate your APIs into their systems without UI-based login flows

This approach allows you to delegate organization management to your customers while maintaining security and isolation between different organizations.

### 3. By **Access key** and **Access secret**

We can use the access key and access secret for a Casdoor user to call `Casdoor Public API` as the user itself. The access key and access secret can be configured in the user setting page by an admin or the user himself. the `update-user` API can also be called to update these fields. The permissions for the API calls will be the same as the user.

**How to authenticate?**

1. Create a pair of `accessKey` and `accessSecret` in account setting page.
2. HTTP `GET` parameter, the URL format is:

```
/page?accessKey=<The user's access key>&accessSecret=<the user's access secret>"
```

Demo site example: `https://door.casdoor.com/api/get-global-providers?accessKey=b86db9dc-6bd7-4997-935c-af480dd2c796/admin&accessSecret=79911517-fc36-4093-b115-65a9741f6b14`

**API key** ②:

Access key ②: `b86db9dc-6bd7-4997-935c-af480dd2c796`

Access secret ②: `79911517-fc36-4093-b115-65a9741f6b14`  
:

`update`

```
curl --location 'http://door.casdoor.com/api/user?accessKey=b86db9dc-6bd7-4997-935c-af480dd2c796&accessSecret=79911517-fc36-4093-b115-65a9741f6b14'
```

### 4. By **username** and **password**

**⚠ CAUTION**

This authentication method is not safe and kept here only for compatibility or demo purposes. We recommend using the previous three authentication methods instead.

#### What will happen?

The user credential will be exposed as `GET` parameters in the request URL. Moreover, the user credential will be sniffed in plain text by the network if you are using HTTP instead of HTTPS.

We can use the username and password for a Casdoor user to call `Casdoor Public API` as the user itself. The username takes the format of `<The user's organization name>/<The user name>`. The permissions for the API calls will be the same as the user.

#### How to authenticate?

1. HTTP `GET` parameter, the URL format is:

```
/page?username=<The user's organization name>/<The user name>&password=<the user's password>"
```

Demo site example: `https://door.casdoor.com/api/get-global-providers?username=built-in/admin&password=123`

## SSO Logout

The SSO logout endpoint `/api/sso-logout` allows you to log out a user from all applications in an organization simultaneously. When called, this endpoint will:

- Delete all active sessions for the user across all applications
- Expire all access tokens issued to the user
- Clear the current session and token

This is particularly useful when you need to ensure a user is completely logged out from all services, such as during security incidents or when implementing organization-wide logout policies.

## Endpoint

```
GET or POST /api/sso-logout
```

## Authentication

This endpoint requires the user to be authenticated. You can use any of the authentication methods described in the [How to authenticate](#) section above.

## Example Request

```
# Using access token
curl -X POST https://door.casdoor.com/api/logout \
-H "Authorization: Bearer YOUR_ACCESS_TOKEN"

# Using session cookie
curl -X POST https://door.casdoor.com/api/logout \
--cookie "casdoor_session_id=abc123def456"
```

## Response

```
{
  "status": "ok",
  "msg": "",
  "data": ""
}
```

# CORS (Cross-Origin Resource Sharing)

Casdoor implements flexible CORS handling to allow secure cross-origin API requests. The server validates the `Origin` header and returns appropriate `Access-Control-Allow-Origin` headers based on the following rules:

### Allowed origins:

- Origins matching your application's `redirect URIs` (configured in the application settings)
- Origins matching the Casdoor server's own hostname
- The configured origin in Casdoor's settings
- Special endpoint exceptions: requests to `/api/login/oauth/access_token` and `/api/userinfo` endpoints, and requests with origin `appleid.apple.com`

### How it works:

When you make a cross-origin API request, Casdoor validates the origin through multiple checks: localhost/intranet addresses, matching redirect URIs in any application, matching the server's hostname, or configured origins. If any validation passes, the server includes CORS headers in the response allowing the request. For preflight `OPTIONS` requests, Casdoor returns appropriate headers including allowed methods (`POST`, `GET`, `OPTIONS`, `DELETE`) and credentials support.

### Configuration:

To enable CORS for your application, add your frontend's origin to the application's `Redirect URIs` in the Casdoor admin panel. This allows your application to make authenticated API calls from the browser.



# Tutorials

## Product Documentation

Product	Technologies	Docs
Dashboard of PingCAP TiDB	React + TypeScript + Go + Gin	Use Casdoor for TiDB Dashboard SSO sign-in (other languages: <a href="#">Chinese</a> )
GitLab	Vue + Ruby + Rails	OpenID Connect OmniAuth provider
Apache Shenyu	Java	<a href="#">Casdoor Plugin</a> (other languages: <a href="#">Chinese</a> )
Alist	TypeScript + SolidJS + Go + Gin	<a href="#">Casdoor SSO</a> (other languages: <a href="#">Chinese</a> )
BookStack	jQuery + Bootstrap + Go + Beego	Casdoor integrates registration and login

# Articles

Technologies	Language	Title
ASP.NET Core 6	English	ASP.NET Core .NET 6 Demo Authentication Project using local Casdoor Docker Container on Windows Subsystem for Linux
OAuth2 Proxy (Go)	Chinese	Use Casdoor + OAuth-Proxy to protect web applications on public networks
Casnnode (JavaScript + React + Go + Beego)	Chinese	Use Lighthouse to set up a forum like V2ex
Cloudreve (Go)	Chinese	Modify Cloudreve to support Casdoor
KodExplorer (PHP)	Chinese	Modify KodExplorer to support Casdoor

# Deployment

## Deploying to Docker

Deploying Casdoor with Docker

## Deploying to NGINX

Use Nginx to reverse proxy your backend Go program and quickly start the Casdoor service.

## Deploying to Kubernetes

Learn how to deploy Casdoor in a Kubernetes cluster

## Data Initialization

How to initialize Casdoor data from files



## Hosting Static Files in a CDN

Hosting frontend static files in a CDN



## Hosting Static Files in an Intranet

How to deploy Casdoor static resources



## DB Migration

Handling DB Migration in Casdoor

# Deploying to Docker

In this chapter, you will learn how to deploy Casdoor using Docker and Docker Compose with various reverse proxy configurations.

## Prerequisites

Before starting, ensure you have:

- Docker installed on your system
- Docker Compose installed (for compose method)
- A domain name pointing to your server (for reverse proxy configurations)

## Docker Deployment Methods

Choose your preferred deployment method:

[Docker Compose](#)    [Docker Run](#)

---

### Using Docker Compose

Create a `docker-compose.yml` file:

```
services:  
  casdoor:  
    image: casbin/casdoor:latest  
    container_name: casdoor  
    restart: unless-stopped  
    ports:  
      - "8000:8000"
```

Start the service:

```
docker-compose up -d
```

## Using Docker Run

Run Casdoor directly with Docker:

```
docker run -d \
--name casdoor \
--restart unless-stopped \
-p 8000:8000 \
-v $(pwd)/conf:/conf \
-v $(pwd)/logs:/logs \
-e GIN_MODE=release \
casbin/casdoor:latest
```

# Reverse Proxy Configuration

For production deployments, it's recommended to use a reverse proxy with TLS certificates. Choose your preferred reverse proxy:

[Traefik \(Labels\)](#)    [Traefik \(Dynamic\)](#)    [Nginx](#)    [Caddy](#)

## Traefik with Docker Labels

Create a `docker-compose.yml` with Traefik labels:

```
services:
  traefik:
    image: traefik:v2.10
    container_name: traefik
```

Create the acme.json file:

```
touch traefik/acme.json
chmod 600 traefik/acme.json
```

## Traefik with Dynamic Configuration

Create a `docker-compose.yml` with dynamic configuration:

```
services:
  traefik:
    image: traefik:v2.10
    container_name: traefik
    restart: unless-stopped
    ports:
      - "80:80"
      - "443:443"
    volumes:
      - /var/run/docker.sock:/var/run/docker.sock:ro
      - ./traefik/acme.json:/acme.json
      - ./traefik/traefik.yml:/etc/traefik/traefik.yml
      - ./traefik/dynamic.yml:/etc/traefik/dynamic.yml
    command:
      - --configfile=/etc/traefik/traefik.yml
  networks:
    - casdoor-network

  casdoor:
    image: casbin/casdoor:latest
    container_name: casdoor
    restart: unless-stopped
    environment:
      - GIN_MODE=release
    volumes:
      - ./conf:/conf
      - ./logs:/logs
    networks:
```

Create `traefik/traefik.yml`:

```
api:
  dashboard: true

entryPoints:
  web:
    address: ":80"
    http:
      redirections:
        entrypoint:
          to: websecure
          scheme: https
  websecure:
    address: ":443"

providers:
  docker:
    endpoint: "unix:///var/run/docker.sock"
    exposedByDefault: false
  file:
    directory: /etc/traefik
    watch: true

certificatesResolvers:
  letsencrypt:
    acme:
      email: your-email@example.com
      storage: /acme.json
      httpChallenge:
        entryPoint: web
```

Create `traefik/dynamic.yml`:

```
http:
  routers:
```

## Nginx with Let's Encrypt

Create a `docker-compose.yml` with Nginx:

```
services:  
  nginx:  
    image: nginx:alpine  
    container_name: nginx  
    restart: unless-stopped  
    ports:  
      - "80:80"  
      - "443:443"  
    volumes:  
      - ./nginx/nginx.conf:/etc/nginx/nginx.conf  
      - ./nginx/conf.d:/etc/nginx/conf.d  
      - ./certbot/conf:/etc/letsencrypt  
      - ./certbot/www:/var/www/certbot  
    depends_on:  
      - casdoor  
  networks:  
    - casdoor-network  
  
  certbot:  
    image: certbot/certbot  
    container_name: certbot  
    volumes:  
      - ./certbot/conf:/etc/letsencrypt  
      - ./certbot/www:/var/www/certbot  
    command: certonly --webroot --webroot-path=/var/www/certbot  
    --email your-email@example.com --agree-tos --no-eff-email -d  
    your-domain.com  
  
  casdoor:  
    image: casbin/casdoor:latest  
    container_name: casdoor  
    restart: unless-stopped  
    environment:  
      - GIN_MODE=release
```

Create `nginx/conf.d/default.conf`:

```
server {
    listen 80;
    server_name your-domain.com;

    location /.well-known/acme-challenge/ {
        root /var/www/certbot;
    }

    location / {
        return 301 https://$host$request_uri;
    }
}

server {
    listen 443 ssl;
    server_name your-domain.com;

    ssl_certificate /etc/letsencrypt/live/your-domain.com/
fullchain.pem;
    ssl_certificate_key /etc/letsencrypt/live/your-domain.com/
privkey.pem;

    location / {
        proxy_pass http://casdoor:8000;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
    }
}
```

Initialize SSL certificates:

```
# Create directories
```

## Caddy with Automatic HTTPS

Create a `docker-compose.yml` with Caddy:

```
services:
  caddy:
    image: caddy:2-alpine
    container_name: caddy
    restart: unless-stopped
    ports:
      - "80:80"
      - "443:443"
    volumes:
      - ./caddy/Caddyfile:/etc/caddy/Caddyfile
      - caddy_data:/data
      - caddy_config:/config
    depends_on:
      - casdoor
  networks:
    - casdoor-network

  casdoor:
    image: casbin/casdoor:latest
    container_name: casdoor
    restart: unless-stopped
    environment:
      - GIN_MODE=release
    volumes:
      - ./conf:/conf
      - ./logs:/logs
    networks:
      - casdoor-network

  volumes:
    caddy_data:
    caddy_config:

  networks:
```

Create `caddy/Caddyfile`:

```
your-domain.com {
    reverse_proxy casdoor:8000 {
        header_up Host {host}
        header_up X-Real-IP {remote}
        header_up X-Forwarded-For {remote}
        header_up X-Forwarded-Proto {scheme}
    }
}
```

# Configuration

Create the necessary configuration directories

```
mkdir -p conf logs
```

Download the Casdoor configuration files

```
wget https://raw.githubusercontent.com/casdoor/casdoor/master/conf/
app.conf -O conf/app.conf
wget https://raw.githubusercontent.com/casdoor/casdoor/master/
init_data.json.template -O conf/init_data.json
```

Edit `conf/app.conf` to match your environment settings

 NOTE

The default user of Casdoor has a uid and gid of 1000. When using volume

mapping with SQLite (or any storage requiring file permissions), ensure that the path (e.g., `/folder/of/app.conf` in the example above) is accessible to uid 1000. This avoids permission errors like `permission denied` when Casdoor writes to mapped volumes.

## Testing

After deployment, visit your domain in your browser:

- Docker Run/Compose only: `http://your-server-ip:8000`
- With Reverse Proxy: `https://your-domain.com`

## Troubleshooting

### Check container logs

```
# For docker-compose
docker-compose logs casdoor

# For docker run
docker logs casdoor
```

### Verify reverse proxy configuration

```
# Check if containers are running
docker ps

# Test connectivity
curl -I http://localhost:8000
```

## SSL Certificate Issues

- Ensure your domain points to the correct server IP
- Check that ports 80 and 443 are open in your firewall
- Verify DNS propagation with `nslookup your-domain.com`



# Deploying to NGINX

Though Casdoor follows a front-end back-end separation architecture, in a production environment, the back-end program still provides static file services for front-end files. Hence, you can employ reverse proxy software like [Nginx](#) to proxy all traffic for the Casdoor domain and redirect it to the port monitored by the backend Go program.

In this chapter, you will learn how to use Nginx to reverse proxy your backend Go program and quickly start the Casdoor service.

## 1. Build front end static files

Assuming you have downloaded Casdoor and completed the necessary configuration (if not, refer to the [Get started](#) section), you only need to build the static files as follows:

[Yarn](#)    [npm](#)

---

```
yarn install && yarn run build
```

```
npm install && npm run build
```

## 2. Run the back-end program

```
go run main.go
```

Or, build it first:

```
go build && ./main
```

## 3. Configure and run Nginx

```
vim /path/to/nginx/nginx.conf
```

Then, add a server:

```
server {
    listen 80;
    server_name YOUR_DOMAIN_NAME;
    location / {
        proxy_set_header Host $http_host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For
$proxy_add_x_forwarded_for;
        proxy_redirect off;
        proxy_pass http://127.0.0.1:8000;
    }
}
```

Next, restart your Nginx process. Run:

```
nginx -s reload
```

## 4. Test

Visit [http://YOUR\\_DOMAIN\\_NAME](http://YOUR_DOMAIN_NAME) in your favorite browser.



# Deploying to Kubernetes

## Deploy Casdoor in Kubernetes (k8s)

We provide a basic example of deploying Casdoor in a Kubernetes cluster. In the root folder of Casdoor, you will find a file named "k8s.yaml". This file contains an example configuration for deploying Casdoor in Kubernetes, including a deployment and a service.

Before starting the deployment, ensure that you have modified the `conf/app.conf` file so that Casdoor can connect to the database successfully and that the database itself is running. Also, make sure that Kubernetes is able to pull the necessary images.

To deploy Casdoor, run the following command:

```
kubectl apply -f k8s.yaml
```

You can check the deployment status by running the command `kubectl get pods`.

Here is the content of `k8s.yaml`:

```
# this is only an EXAMPLE of deploying casdoor in kubernetes
# please modify this file according to your requirements
apiVersion: v1
kind: Service
metadata:
  #EDIT IT: if you don't want to run casdoor in default namespace,
  #please modify this field
  #namespace: casdoor
```

Please note that this file is only an example. You can make various modifications as per your requirements, such as using a different namespace, service type, or a ConfigMap to mount the configuration file. Using a ConfigMap is a recommended approach in Kubernetes for mounting configuration files in a production environment.



# Data Initialization

If you are deploying Casdoor with other services as a complete application, you may want to provide an out-of-the-box feature for users. This means that users can directly use the application without any configuration.

In such a situation, you can use data initialization to register your service in Casdoor through a configuration file. This file can be pre-defined or dynamically generated by your own service.

Here we give a tutorial for importing or exporting config data.

## Import Config Data

By default, if there is a configuration file named `init_data.json` at the root directory of Casdoor, it will be used to initialize data in Casdoor. You can also specify a custom path for the initialization file by setting the `initDataFile` parameter in `conf/app.conf`:

```
initDataFile = /path/to/your/init_data.json
```

If no custom path is specified, Casdoor will look for `init_data.json` in the root directory where Casdoor runs.

If you are using the official Docker image of Casdoor, here are some scripts that can help you to mount `init_data.json` into the container.

A template for `init_data.json` is provided at: [init\\_data.json.template](#). Rename it to `init_data.json` before using it.

## For Docker

If you deploy Casdoor with Docker, you can use the `volume` command to mount `init_data.json` into the container.

```
docker run ... -v /path/to/init_data.json:/init_data.json
```

## For Kubernetes

If you deploy Casdoor with Kubernetes, you can use the `configmap` to store `init_data.json`.

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: casdoor-init-data
data:
  init_data.json:
```

You can mount the data into Casdoor `pods` by mounting the `configmap`. You can modify your `deployment` as follows:

```
apiVersion: apps/v1
kind: Deployment
...
spec:
  template:
    ...
    spec:
      containers:
        ...

```

# Export Config Data

You can export all Casdoor configuration data to a file for backup or migration purposes. There are two methods available:

## Using the Binary (Recommended)

If you're running Casdoor from a binary, use the `-export` flag to dump the database to a JSON file:

```
# Export to default location (init_data_dump.json)
./casdoor -export

# Export to a custom path
./casdoor -export -exportPath /path/to/backup.json
```

The export runs after database initialization but before the server starts, then exits automatically. This method works with any deployment method (binary, Docker, Kubernetes) and doesn't require Go toolchain or source code access.

## Using Go Test

If you have access to the source code, you can use the test method:

```
go test ./object -v -run TestDumpToFile
```

This will generate `init_data_dump.json` in the same directory.

# Migrating Data

After exporting, rename `init_data_dump.json` to `init_data.json` and place it in the root directory of your target Casdoor installation. On startup, Casdoor will automatically import the data.

# References

All Casdoor objects supported by the data initialization are as follows:

Object	Go Struct	Documentation
organizations	<a href="#">struct</a>	<a href="#">doc</a>
applications	<a href="#">struct</a>	<a href="#">doc</a>
users	<a href="#">struct</a>	<a href="#">doc</a>
certs	<a href="#">struct</a>	<a href="#">doc</a>
providers	<a href="#">struct</a>	<a href="#">doc</a>
ldaps	<a href="#">struct</a>	<a href="#">doc</a>
models	<a href="#">struct</a>	
permissions	<a href="#">struct</a>	<a href="#">doc</a>
payments	<a href="#">struct</a>	<a href="#">doc</a>

Object	Go Struct	Documentation
products	<a href="#">struct</a>	<a href="#">doc</a>
resources	<a href="#">struct</a>	<a href="#">doc</a>
roles	<a href="#">struct</a>	<a href="#">doc</a>
syncers	<a href="#">struct</a>	<a href="#">doc</a>
tokens	<a href="#">struct</a>	<a href="#">doc</a>
webhooks	<a href="#">struct</a>	<a href="#">doc</a>
groups	<a href="#">struct</a>	<a href="#">doc</a>
adapters	<a href="#">struct</a>	<a href="#">doc</a>
enforcers	<a href="#">struct</a>	
plans	<a href="#">struct</a>	<a href="#">doc</a>
pricings	<a href="#">struct</a>	<a href="#">doc</a>
invitations	<a href="#">struct</a>	<a href="#">doc</a>
records	<a href="#">struct</a>	
sessions	<a href="#">struct</a>	
subscriptions	<a href="#">struct</a>	<a href="#">doc</a>

Object	Go Struct	Documentation
transactions	<a href="#">struct</a>	

If you still feel confused about filling out this template, you can call the RESTful API or use the debug mode of your browser to see the response of [GetXXX](#) to these objects. The responses are in the same format as [init\\_data.json](#).

# Hosting Static Files in a CDN

Frontend static resources, such as .js and .css files, are located in `web/build/static/`. If you wish to deploy these files in a public cloud's CDN service, Casdoor provides a script that simplifies the deployment process. Please follow the steps below.

 NOTE

We assume that you have already built the frontend code of Casdoor. If you have not, please refer to the [documentation](#).

## Preparation

First, you need to create a valid [Storage Provider](#) in the Casdoor UI. You can refer to the [example](#).

 CAUTION

When filling in the `Domain` field, be sure to end it with a '/'.

Domain  :

<https://cdn.casbin.com/casdoor/>

# Usage

The script can be found at [deployment/deploy\\_test.go](#).

In [deploy\\_test.go](#), you need to modify the `id` parameter in `GetProvider()`. The format of the provider `id` is `<owner>/<name>`.

```
func TestDeployStaticFiles(t *testing.T) {
    provider := object.GetProvider("admin/
provider_storage_aliyun_oss")
    deployStaticFiles(provider)
}
```

After making the necessary modification, use the following commands to run the script:

```
cd deployment
go test
```

If the execution is successful, you will see:

```
PASS
ok      github.com/casdoor/casdoor/deployment  2.951s
```

# How it works

The script will:

- Upload all the files in the `css/` and `js/` folders to the CDN service specified

by the storage provider.

- Replace all the URLs of the `.css` and `.js` files in `web/build/index.html` with the URLs hosted in the CDN.

You still need to keep the `index.html` file. After the static files are uploaded to the CDN, `index.html` will still be requested by users through Casdoor's Go backend, and the static files in the CDN will be requested through the URLs provided in `index.html`.

# Hosting Static Files in an Intranet

If you are deploying Casdoor on an [intranet](#), you may not be able to access the static resources directly over the internet. You need to deploy the static resources where you can access them, and then modify the configuration in Casdoor in three places.

## Deploy static resources

All static resources in Casdoor, including images, logos, CSS, etc., are stored in the [casbin/static repository](#).

Clone the repository and deploy it on a web server. Make sure you can access the resources.

## Modify in Casdoor

You can simply modify the configuration file to set the static resource address to where you deployed it. Go to [conf/app.conf](#) and set `staticBaseUrl` to your deployed address.

```
staticBaseUrl = "https://cdn.casbin.org"
```

# DB Migration

When upgrading the database, there is a risk of data loss, such as when deleting an old field. Luckily, Casdoor utilizes [xorm](#), which assists with many database migration problems. However, some schema and data migrations must still be handled manually, such as when a field name is changed.

 NOTE

Refer to the [xorm docs](#) for a better understanding of xorm's schema operations.

## How it Works

As mentioned earlier, xorm is unable to handle field name changes. To address this, xorm provides a [migrate](#) package that can assist with this problem.

To handle field renaming, you can write code like this:

```
migrations := []*migrate.Migration{
    {
        ID: "CasbinRule--fill ptype field with p",
        Migrate: func(tx *xorm.Engine) error {
            _, err :=
            tx.Cols("ptype").Update(&xormadapter.CasbinRule{
                Ptype: "p",
            })
            return err
        },
        Rollback: func(tx *xorm.Engine) error {
            return tx.DropTable(&xormadapter.CasbinRule{})
        }
    }
}
```

Our objective is to rename `p_type` to `ptype`. However, since xorm does not support field renaming, we must resort to a more intricate approach: assigning the value of `p_type` to `ptype`, and subsequently deleting the `p_type` field.

The `ID` field uniquely identifies the migration being performed. After `m.Migrate()` runs, the value of `ID` will be added to the migrations table of the database.

Upon starting the project again, the database will check for any existing `ID` field in the table and refrain from performing any operations associated with the same `ID`.

# How to Connect to Casdoor

## Overview

Connect your app to Casdoor

## Standard OIDC Client

Using OIDC discovery to migrate to Casdoor

## Casdoor SDKs

Using Casdoor SDKs instead of standard OIDC protocol

## Casdoor Authenticator App

Store TOTP code in Casdoor

## How to Enable Single Sign-On

Enable Single Sign-On

## Single Sign-Out (SSO Logout)

Implement Single Sign-Out to log users out from all applications simultaneously

## Vue SDK

Casdoor Vue SDK

## Desktop SDKs

4 items

## Mobile SDKs

1 items

## Casdoor CLI

Using Casdoor's official command-line interface for managing users, groups, and permissions

## Casdoor Plugin

Using Casdoor plugins or middlewares in other frameworks like Spring Boot, WordPress, Odoo, etc.

## Chrome Extension

Using Casdoor in Chrome extension

## Next.js

Using Casdoor in a Next.js project

## Nuxt

Using Casdoor in a Nuxt project

## OAuth 2.0

Using Access Token to authenticate clients



## Using Casdoor as a CAS Server

How to use Casdoor as a CAS server



## SAML

6 items



## Face ID

Use Face ID to log in in Casdoor



## WebAuthn

Use WebAuthn in Casdoor

# Overview

In this section, we will show you how to connect your application to Casdoor.

As a Service Provider (SP), Casdoor supports two authentication protocols:

- OAuth 2.0 (OIDC)
- SAML

As an Identity Provider (IdP), Casdoor supports four authentication protocols:

- OAuth 2.0
- OIDC
- SAML
- CAS 1.0, 2.0, 3.0

## OAuth 2.0 (OIDC)

What is OAuth 2.0?

OAuth 2 is an authorization framework that enables applications—such as Facebook, GitHub, and Casdoor—to obtain limited access to user accounts on an HTTP service. It works by delegating user authentication to the service that hosts a user account and authorizing third-party applications to access that user account. OAuth 2 provides authorization flows for web and desktop applications, as well as mobile devices.

Casdoor's authorization process is built upon the OAuth 2.0 protocol. We

recommend using the OAuth 2.0 protocol for the following reasons:

1. The protocol is simple and easy to implement, and can solve many scenarios.
2. It has a high maturity level and extensive community support.

Therefore, your application will communicate with Casdoor via OAuth 2.0 (OIDC). There are three ways to connect to Casdoor:

## Standard OIDC client

**Standard OIDC client:** Use a standard OIDC client implementation, which is widely provided in any programming language or framework.

What is OIDC?

OpenID Connect (OIDC) is an open authentication protocol that works on top of the OAuth 2.0 framework. Targeted toward consumers, OIDC allows individuals to use single sign-on (SSO) to access relying party sites using OpenID Providers (OPs), such as an email provider or social network, to authenticate their identities. It provides the application or service with information about the user, the context of their authentication, and access to their profile information.

Casdoor fully supports the OIDC protocol. If your application is already using another OAuth 2.0 (OIDC) identity provider via a **standard OIDC client library**, and you want to migrate to Casdoor, using OIDC discovery will make it very easy to switch to Casdoor.

## Casdoor SDKs

**Casdoor SDKs:** For most programming languages, Casdoor provides easy-to-use

- SDK libraries on top of OIDC, with extended functionality that is only available in Casdoor.

Compared to the standard OIDC protocol, Casdoor's SDK provides more functionalities, like user management and resource uploading, among others. Connecting to Casdoor via the Casdoor SDK requires more time than using a standard OIDC client library, but it offers the best **flexibility** and the most **powerful** API.

## Casdoor plugin

**Casdoor plugin:** If your application is built on top of a popular platform (like Spring Boot, WordPress, etc.) and Casdoor (or a third party) has already provided a plugin or middleware for it, you should use it. Using a plugin is much easier than manually invoking the Casdoor SDK because the former is specially made for the platform.

Plugins:

- [Jenkins plugin](#)
- [APISIX plugin](#)

Middleware:

- [Spring Boot plugin](#)
- [Django plugin](#)

## SAML

What is SAML?

---

Security Assertion Markup Language (SAML) is an open standard that allows identity providers (IdP) to pass authorization credentials to service providers (SP). What this jargon means is that you can use one set of credentials to log into many different websites. It's much simpler to manage one login per user than it is to manage separate logins to email, customer relationship management (CRM) software, Active Directory, etc.

SAML transactions use Extensible Markup Language (XML) for standardized communications between the identity provider and service providers. SAML is the link between the authentication of a user's identity and the authorization to use a service.

Casdoor can be used as an SAML IdP. Currently, Casdoor supports the main features of SAML 2.0. For more details, see [SAML](#).

Example:

[Casdoor as a SAML IdP in Keycloak](#)

Suggestions:

1. The protocol is **powerful** and covers many scenarios, making it one of the most comprehensive SSO protocols.
2. The protocol is **large**, with many optional parameters, so it is difficult to cover all application scenarios 100% in the actual implementation.
3. If the application is **newly** developed, SAML is **not** recommended due to its high technical complexity.

# CAS

## What is CAS?

The Central Authentication Service (CAS) is a single sign-on protocol for the web. Its purpose is to allow a user to access multiple applications while providing their credentials (such as user ID and password) only once. It also allows web applications to authenticate users without gaining access to a user's security credentials, such as a password.

Casdoor has implemented CAS 1.0, 2.0, and 3.0 features. For more details, see [CAS](#).

### Suggestions:

1. The protocol itself is relatively lightweight and easy to implement, but it can only solve a single scenario.
2. The mutual trust between the CAS Client and the CAS Server is established through interface invocation without any encryption or signature mechanism to ensure further security.
3. The CAS protocol has no advantage over other protocols.

# Integrations table

Some applications already have examples that connect to Casdoor. You can follow the documentation to quickly connect to Casdoor. You can see all applications in the [Integrations table](#).

# Standard OIDC Client

## OIDC Discovery

Casdoor has fully implemented the OIDC protocol. If your application is already using a standard OIDC client library to connect to another OAuth 2.0 identity provider, and you want to migrate to Casdoor, using OIDC discovery will make it very easy for you to switch.

### Global OIDC Endpoint

Casdoor's global OIDC discovery URL is:

```
<your-casdoor-backend-host>/.well-known/openid-configuration
```

For example, the OIDC discovery URL for the demo site is:

<https://door.casdoor.com/.well-known/openid-configuration>, and it contains the following information:

```
{
  "issuer": "https://door.casdoor.com",
  "authorization_endpoint": "https://door.casdoor.com/login/oauth/authorize",
  "token_endpoint": "https://door.casdoor.com/api/login/oauth/access_token",
  "userinfo_endpoint": "https://door.casdoor.com/api/userinfo",
  "jwks_uri": "https://door.casdoor.com/.well-known/jwks",
  "introspection_endpoint": "https://door.casdoor.com/api/login/oauth/introspect",
  "response_types_supported": [
    "code",
```

# Application-Specific OIDC Endpoints

Besides the global discovery endpoint, you can use application-specific OIDC discovery endpoints. Each application gets its own isolated OIDC configuration with a unique issuer. This comes in handy when running multi-tenant deployments where applications need their own certificates or when you want to gradually migrate applications without affecting others.

The application-specific discovery URL follows this pattern:

```
<your-casdoor-backend-host>/.well-known/<application-name>/openid-configuration
```

For example, if you have an application named `app-example`:

```
https://door.casdoor.com/.well-known/app-example/openid-configuration
```

The main difference is that the `issuer` and `jwks_uri` fields in the discovery response contain the application path. The `issuer` becomes

`https://door.casdoor.com/.well-known/app-example` instead of just `https://door.casdoor.com`, and the `jwks_uri` points to `/well-known/app-example/jwks`. Everything else, including the authorization and token endpoints, stays the same.

You can also access the JWKS and WebFinger endpoints for each application:

```
<your-casdoor-backend-host>/.well-known/<application-name>/jwks  
<your-casdoor-backend-host>/.well-known/<application-name>/webfinger
```

The JWKS endpoint returns the public keys for verifying tokens. When an application has its own certificate configured, that certificate is used. Otherwise, it falls back to the global certificates.

Here's what the responses look like. The global endpoint returns:

```
{  
  "issuer": "https://door.casdoor.com",  
  "jwks_uri": "https://door.casdoor.com/.well-known/jwks",  
  "authorization_endpoint": "https://door.casdoor.com/login/oauth/  
  authorize",  
  ...  
}
```

While the application-specific endpoint for `app-example` returns:

```
{  
  "issuer": "https://door.casdoor.com/.well-known/app-example",  
  "jwks_uri": "https://door.casdoor.com/.well-known/app-example/  
  jwks",  
  "authorization_endpoint": "https://door.casdoor.com/login/oauth/  
  authorize",  
  ...  
}
```

## List of OIDC Client Libraries

Here is a list of some OIDC client libraries for languages like Go and Java:

OIDC client library	Language	Link
go-oidc	Go	<a href="https://github.com/coreos/go-oidc">https://github.com/coreos/go-oidc</a>
pac4j-oidc	Java	<a href="https://www.pac4j.org/docs/clients/openid-connect.html">https://www.pac4j.org/docs/clients/openid-connect.html</a>

Please note that the above table is not exhaustive. For a full list of OIDC client libraries, you can find more details at:

1. <https://oauth.net/code/>
2. <https://openid.net/certified-open-id-developer-tools/>

## OIDC UserInfo Fields

The following table illustrates how OIDC UserInfo fields (via the `/api/userinfo` API) are mapped from properties of Casdoor's User table:

Casdoor User Field	OIDC UserInfo Field
Id	sub
originBackend	iss
Aud	aud
Name	preferred_username

Casdoor User Field	OIDC UserInfo Field
DisplayName	name
Email	email
Avatar	picture
Location	address
Phone	phone

You can see the definition of UserInfo [here](#).



# Casdoor SDKs

## Introduction

Compared to the standard OIDC protocol, Casdoor provides more functionalities in its SDK, like user management, resource uploading, etc. Connecting to Casdoor via Casdoor SDK costs more time than using a standard OIDC client library but will provide the best flexibility and the most powerful API.

Casdoor SDKs can be divided into two categories:

1. **Frontend SDK:** Like Javascript SDK, Vue SDK for websites, Android or iOS SDKs for Apps, etc. Casdoor supports providing authentication for both websites and mobile Apps.
2. **Backend SDK:** SDKs for backend languages like Go, Java, Node.js, Python, PHP, etc.

### TIP

If your website is developed in a frontend and backend separated manner, then you can use the Javascript SDK: `casdoor-js-sdk` or React SDK: `casdoor-react-sdk` or Vue SDK: `casdoor-vue-sdk` to integrate Casdoor in frontend. If your web application is a traditional website developed by JSP or PHP, you can just use the backend SDKs only. See an example: [casdoor-python-vue-sdk-example](#)

Mobile SDK	Description	SDK code	Example code
Android SDK	For Android apps	<code>casdoor-android-sdk</code>	<code>casdoor-android-example</code>
iOS SDK	For iOS apps	<code>casdoor-ios-sdk</code>	<code>casdoor-ios-example</code>
React Native SDK	For React Native apps	<code>casdoor-react-native-sdk</code>	<code>casdoor-react-native-example</code>
Flutter SDK	For Flutter apps	<code>casdoor-flutter-sdk</code>	<code>casdoor-flutter-example</code>
Firebase SDK	For Google Firebase apps		<code>casdoor-firebase-example</code>
Unity Games SDK	For Unity 2D/3D PC/Mobile games	<code>casdoor-dotnet-sdk</code>	<code>casdoor-unity-example</code>
uni-app SDK	For uni-app apps	<code>casdoor-uniapp-sdk</code>	<code>casdoor-uniapp-example</code>

Desktop SDK	Description	SDK code	Example code
Electron SDK	For Electron apps	<code>casdoor-js-sdk</code>	<code>casdoor-electron-example</code>
.NET Desktop SDK	For .NET desktop apps	<code>casdoor-dotnet-sdk</code>	WPF: <code>casdoor-dotnet-desktop-example</code> WinForms: <code>casdoor-dotnet-winform-example</code> Avalonia UI: <code>casdoor-dotnet-avalonia-example</code>
C/C++ SDK	For C/C++ desktop apps	<code>casdoor-cpp-sdk</code>	<code>casdoor-cpp-qt-example</code>

Web frontend SDK	Description	SDK code	Example code
Javascript SDK	For traditional non-SPA websites	<code>casdoor-js-sdk</code>	Nodejs backend: <code>casdoor-raw-js-example</code> Go backend: <code>casdoor-go-react-sdk-example</code>

Web frontend SDK	Description	SDK code	Example code
Frontend-only SDK	For frontend-only SPA websites	<a href="#">casdoor-js-sdk</a>	<a href="#">casdoor-react-only-example</a>
React SDK	For React websites	<a href="#">casdoor-react-sdk</a>	Nodejs backend: <a href="#">casdoor-nodejs-react-example</a> Java backend: <a href="#">casdoor-spring-security-react-example</a>
Next.js SDK	For Next.js websites		<a href="#">nextjs-auth</a>
Nuxt SDK	For Nuxt websites		<a href="#">nuxt-auth</a>
Vue SDK	For Vue websites	<a href="#">casdoor-vue-sdk</a>	<a href="#">casdoor-python-vue-sdk-example</a>
Angular SDK	For Angular websites	<a href="#">casdoor-angular-sdk</a>	<a href="#">casdoor-nodejs-angular-example</a>
Flutter SDK	For Flutter Web websites	<a href="#">casdoor-flutter-sdk</a>	<a href="#">casdoor-flutter-example</a>
ASP.NET SDK	For ASP.NET Blazor WASM websites	<a href="#">Blazor.BFF.OpenIDConnect.Template</a>	<a href="#">casdoor-dotnet-blazorwasm-oidc-example</a>
Firebase SDK	For Google Firebase apps		<a href="#">casdoor-firebase-example</a>

Next, use one of the following backend SDKs based on the language of your backend:

Web backend SDK	Description	Sdk code	Example code
Go SDK	For Go backends	<a href="#">casdoor-go-sdk</a>	<a href="#">casdoor-go-react-sdk-example</a>
Java SDK	For Java backends	<a href="#">casdoor-java-sdk</a>	<a href="#">casdoor-spring-boot-starter</a> , <a href="#">casdoor-spring-boot-example</a> , <a href="#">casdoor-spring-security-react-example</a>
Node.js SDK	For Node.js backends	<a href="#">casdoor-nodejs-sdk</a>	<a href="#">casdoor-nodejs-react-example</a>
Python SDK	For Python backends	<a href="#">casdoor-python-sdk</a>	Flask: <a href="#">casdoor-python-vue-sdk-example</a> Django: <a href="#">casdoor-django-js-sdk-example</a> FastAPI: <a href="#">casdoor-fastapi-js-sdk-example</a>
PHP SDK	For PHP backends	<a href="#">casdoor-php-sdk</a>	<a href="#">wordpress-casdoor-plugin</a>
.NET SDK	For ASP.NET backends	<a href="#">casdoor-dotnet-sdk</a>	<a href="#">casdoor-dotnet-sdk-example</a>
Rust SDK	For Rust backends	<a href="#">casdoor-rust-sdk</a>	<a href="#">casdoor-rust-example</a>
C/C++ SDK	For C/C++ backends	<a href="#">casdoor-cpp-sdk</a>	<a href="#">casdoor-cpp-qt-example</a>

Web backend SDK	Description	Sdk code	Example code
Dart SDK	For Dart backends	<a href="#">casdoor-dart-sdk</a>	
Ruby SDK	For Ruby backends	<a href="#">casdoor-ruby-sdk</a>	

For a full list of the official Casdoor SDKs, please see: <https://github.com/orgs/casdoor/repositories?q=sdk&type=all&language=&sort=>

## How to use Casdoor SDK?

### 1. Backend SDK configuration

When your application starts up, you need to initialize the Casdoor SDK config by calling the `InitConfig()` function with required parameters. Take casdoor-go-sdk as example: <https://github.com/casbin/casnnode/blob/6d4c55f5c9a3c4bd8c85f2493abad3553b9c7ac0/controllers/account.go#L51-L64>

```
var CasdoorEndpoint = "https://door.casdoor.com"
var ClientId = "541738959670d221d59d"
var ClientSecret = "66863369a64a5863827cf949bab70ed560ba24bf"
var CasdoorOrganization = "casbin"
var CasdoorApplication = "app-casnnode"

//go:embed token_jwt_key.pem
var JwtPublicKey string

func init() {
    auth.InitConfig(CasdoorEndpoint, ClientId, ClientSecret, JwtPublicKey, CasdoorOrganization, CasdoorApplication)
}
```

All the parameters for `InitConfig()` are explained as follows:

Parameter	Must	Description
endpoint	Yes	Casdoor Server URL, like <code>https://door.casdoor.com</code> or <code>http://localhost:8000</code>
clientId	Yes	Client ID for the Casdoor application
clientSecret	Yes	Client secret for the Casdoor application
jwtPublicKey	Yes	The public key for the Casdoor application's cert
organizationName	Yes	The name for the Casdoor organization
applicationName	No	The name for the Casdoor application



TIP

The `jwtPublicKey` can be managed in the `Certs` page as below.

Certificates								Action
Name	Created time	Display name	Scope	Type	Crypto algorithm	Bit size	Expire in years	Action
cert_rjeegc	2022-02-16 11:04:10	New Cert - rjeegc	JWT	x509	RSA	4096	20	<button>Edit</button> <button>Delete</button>
cert-built-in	2022-02-15 12:31:46	Built-in Cert	JWT	x509	RSA	4096	20	<button>Edit</button> <button>Delete</button>

2 in total < 1 > 10 / page

You can find the public key in the cert edit page, copy it or download it for the sdk.

Public key [Copy public key](#) [Download public key](#)

```
-----BEGIN CERTIFICATE-----
MIIE+TCzAuGgAwIBAgDAlEAMA0GCSqGSIb3DQEBCwUAAMDyvxtHAbBgNVBAoTFNh
c2Rvb3lT3InWSpemf0aWsuMRUuvEwDVQQDEiwDXNkb29yENlcnQvhHcNMjEx
MDE1MDgxMTUyWhcNNDExMDE1MDgxMTUyWjA2MR0wGwYDVQQKExRDYXNkb29yIe9y
Z2fVpxpHdGlvbjLVMBMGAE1EAxuM0GQFzZG9vcBDZX0M0IICjAnBQgkhG9w0B
AQEFAOCAGSAM1CicKAgEaInpbSE1/y0nf1RSDSSE8IR7y+lw+RJj74e5jq4b8zMY
rq4b8zMyk7HCyZ/rImNevEXnhxu1P0mbeQ5pp/QGo8vgEmjAETNmzkl1NjOQCjCywUra
sOj/Mh1C0j3v6mV1KhZjsRksMh1Y1vaxTEP3+VB8Hj3mHWFwbu7uvFMCje5
W8+0rkTcCKTR8+2B9Ja0bz/z0pPVfV79bfzate/HlrPK0Gg9P1gOwloC1A
3sarHTPAQm/LQR0tHqZfybdySpvQaVnNaDEF7mTrSBb/UjNCUBDPTSlvjCo
4WlISf6Nk027kmPstj+btcvcsRAFwd62Kp1js1Yn7Gauo3q14zo
KbURYxkQjXlvwcQzftUu5ew5zuPSDRloByQTlxboJqlAFNFW3/pz5Djd/
60d6HtmvbZn145mjdyfHXCdb1Kn7N+xTojnaHkwep2REV+RMcf4xGuRsnLsmk
mtDey9zaBL9j1YEQM21Eq+RVtU+vB8d1C0j1f0nBpWlDp526b
cq45Rsv327lB0w42zxOf/1YnLRFjpLlfb0bfir/AeZMh1PK0Xzfy2z+E+hqz6
8wfDOV9rxYcRbsAF7323osjnjEghUvRohnRgCpljk/MZ2K84kXb0
hRaawd5djjH2Rgnf0De28rNvrlhr8RknC01dTku1N0/irh21W4jt4rxzCvL
2nR42Fyap8wDf0V9rxYc/RbsAF7323osjnjEghUvRohnRgCpljk/MZ2K84kXb0
omKNNNcc8h1Fcekj/nmbGmhodnFWKDtslcbImcOPNHo6izqzMyHqC+wMyy7maAG
JtevsqgMZ8F9Qz3HpuC6R3ZYWDY/xoPisukHtOpZgtH97XC4md0W/Pn0BLql
2D12abmjGjlvb7XNVKc0UDXYw85ZT2Q5b9c14e+6bmwyWqQtlwt+At/uEV
XzG7084IAL6xau1kEp0tGERuzRy5P9JUNA7koOSAvMp9wDD0Tk+LbxzE
HHnVky8xQKZ9sR7YBPLGslAc6iviu5U15Qg/8dLRZ/veyfGo2yZs+hKVUs
nCJH8CaYfnn1hdvdwEdH3jDbjNB6ciot1Zrff/3VyalWSalAdosHAgMwfuxWP+h
8XKxmzlxuHbTMQY1ZPdgps5a+54Q9wb8RAY=
-----END CERTIFICATE-----
```

Private key [Copy private key](#) [Download private key](#)

```
-----BEGIN PRIVATE KEY-----
MIUKQIBAAKCAGAsInpbSE1/y0nf1RSDSSE8IR7y+lw+RJj74e5jq4b8zMY
k7HeHcYzrhmNewEVxnhxu1P0mbeQ5pp/QGo8vgEmjAETNmzkl1NjOQCjCywUra
sOj/Mh1C0j3v6mV1KhZjsRksMh1Y1vaxTEP3+VB8Hj3mHWFwbu7uvFMCje5
W8+0rkTcCKTR8+2B9Ja0bz/z0pPVfV79bfzate/HlrPK0Gg9P1gOwloC1A
3sarHTPAQm/LQR0tHqZfybdySpvQaVnNaDEF7mTrSBb/UjNCUBDPTSlvjCo
4WlISf6Nk027kmPstj+btcvcsRAFwd62Kp1js1Yn7Gauo3q14zo
KbURYxkQjXlvwcQzftUu5ew5zuPSDRloByQTlxboJqlAFNFW3/pz5Djd/
60d6HtmvbZn145mjdyfHXCdb1Kn7N+xTojnaHkwep2REV+RMcf4xGuRsnLsmk
mtDey9zaBL9j1YEQM21Eq+RVtU+vB8d1C0j1f0nBpWlDp526b
cq45Rsv327lB0w42zxOf/1YnLRFjpLlfb0bfir/AeZMh1PK0Xzfy2z+E+hqz6
8wfDOV9rxYcRbsAF7323osjnjEghUvRohnRgCpljk/MZ2K84kXb0
hRaawd5djjH2Rgnf0De28rNvrlhr8RknC01dTku1N0/irh21W4jt4rxzCvL
2nR42Fyap8wDf0V9rxYc/RbsAF7323osjnjEghUvRohnRgCpljk/MZ2K84kXb0
omKNNNcc8h1Fcekj/nmbGmhodnFWKDtslcbImcOPNHo6izqzMyHqC+wMyy7maAG
JtevsqgMZ8F9Qz3HpuC6R3ZYWDY/xoPisukHtOpZgtH97XC4md0W/Pn0BLql
2D12abmjGjlvb7XNVKc0UDXYw85ZT2Q5b9c14e+6bmwyWqQtlwt+At/uEV
XzG7084IAL6xau1kEp0tGERuzRy5P9JUNA7koOSAvMp9wDD0Tk+LbxzE
HHnVky8xQKZ9sR7YBPLGslAc6iviu5U15Qg/8dLRZ/veyfGo2yZs+hKVUs
nCJH8CaYfnn1hdvdwEdH3jDbjNB6ciot1Zrff/3VyalWSalAdosHAgMwfuxWP+h
8XKxmzlxuHbTMQY1ZPdgps5a+54Q9wb8RAY=
-----END PRIVATE KEY-----
```

[Save](#) [Save & Exit](#)

Then you can select the cert in the application edit page.

Edit Application [Save](#) [Save & Exit](#)

Name <a href="#">:</a>	app-built-in
Display name <a href="#">:</a>	Casdoor
Logo <a href="#">:</a>	<a href="https://cdn.casbin.com/logo/logo_1024x256.png">https://cdn.casbin.com/logo/logo_1024x256.png</a>
Preview:	
Home <a href="#">:</a>	<a href="https://casdoor.org">https://casdoor.org</a>
Description <a href="#">:</a>	
Organization <a href="#">:</a>	built-in
Client ID <a href="#">:</a>	c2ab05e8460fd3ff9d0e
Client secret <a href="#">:</a>	c9199f102508f089d253638f1a72b4c3e926d05
Cert <a href="#">:</a>	<input type="text" value="cert-built-in"/> <span style="color: red;">←</span>
Redirect URLs <a href="#">:</a>	<a href="#">cert_rjeegc</a> <a href="#">cert-built-in</a>
Redirect URL	

Action

## 2. Frontend configuration

First, install `casdoor-js-sdk` via NPM or Yarn:

```
npm install casdoor-js-sdk
```

Or:

```
yarn add casdoor-js-sdk
```

Then define the following utility functions (better in a global JS file like `Setting.js`):

```
import Sdk from "casdoor-js-sdk";

export function initCasdoorSdk(config) {
  CasdoorSdk = new Sdk(config);
}

export function getSignupUrl() {
  return CasdoorSdk.getSignupUrl();
}

export function getSigninUrl() {
  return CasdoorSdk.getSigninUrl();
}

export function getUserProfileUrl(userName, account) {
  return CasdoorSdk.getUserProfileUrl(userName, account);
}

export function getMyProfileUrl(account) {
  return CasdoorSdk.getMyProfileUrl(account);
}

export function getMyResourcesUrl(account) {
  return CasdoorSdk.getMyProfileUrl(account).replace("/account?", "/resources?");
}

export function signin() {
  return CasdoorSdk.signin(ServerUrl);
}

export function showMessage(type, text) {
  if (type === "") {
    return;
  } else if (type === "success") {
    message.success(text);
  } else if (type === "error") {
    message.error(text);
  }
}

export function goToLink(link) {
  window.location.href = link;
}
```

In the entrance file of your frontend code (like `index.js` or `app.js` in React), you need to initialize the `casdoor-js-sdk` by calling the `InitConfig()` function with required parameters. The first 4 parameters should use the same value as the Casdoor backend SDK. The last parameter `redirectPath` is relative path for the redirected URL, returned from Casdoor's login page.

```
const config = {
  serverUrl: "https://door.casdoor.com",
  clientId: "014ae4bd048734ca2dea",
  organizationName: "casbin",
  appName: "app-casnode",
  redirectPath: "/callback",
```

(Optional) Because we are using React as example, our `/callback` path is hitting the React route. We use the following React component to receive the `/callback` call and send to the backend. You can ignore this step if you are redirecting to backend directly (like in JSP or PHP).

```
import React from "react";
import {Button, Result, Spin} from "antd";
import {withRouter} from "react-router-dom";
import * as Setting from "./Setting";

class AuthCallback extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      classes: props,
      msg: null,
    };
  }

  componentWillMount() {
    this.login();
  }

  login() {
    Setting.signin().then((res) => {
      if (res.status === "ok") {
        Setting.showMessage("success", `Logged in successfully`);
        Setting.goToLink("/");
      } else {
        this.setState({
          msg: res.msg,
        });
      }
    });
  }

  render() {
    return (
      <div style={{textAlign: "center"}>
        {this.state.msg === null ? (
          <Spin
            size="large"
            tip="Signing in..."
            style={{paddingTop: "10%"}}
          />
        ) : (
          <div style={{display: "inline"}>
            <Result
              status="error"
              title="Login Error"
              subTitle={this.state.msg}
              extra={[
                <Button type="primary" key="details">
                  Details
                </Button>,
                <Button key="help">Help</Button>,
              ]}
            />
          </div>
        )}
      </div>
    );
  }
}

export default withRouter(AuthCallback);
```

### 3. Get login URLs

Next you can show the "Sign up" and "Sign in" buttons or links to your users. The URLs can either be retrieved in the frontend or backend. See more details at: [/docs/basic/core-concepts#login-urls](#)

### 4. Get and verify access token

Here are the steps:

1. The user clicks the login URL and is redirected to Casdoor's login page, like: `https://door.casdoor.com/login/oauth/authorize?client_id=014ae4bd048734ca2dea&response_type=code&redirect_uri=https%3A%2F%2Fforum.casbin.com%2Fcallback&scope=read&state=app-casnode`
2. The user enters username & password and clicks `Sign In` (or just click the third-party login button like `Sign in with GitHub`).
3. The user is redirected back to your application with the authorization code issued by Casdoor ( like: `https://forum.casbin.com?code=xxx&state=yyy`), your application's backend needs to exchange the authorization code with the access token and verify that the access token is valid and issued by Casdoor. The functions `GetOAuthToken()` and `ParseJwtToken()` are provided by Casdoor backend SDK.

The following code shows how to get and verify the access token. For a real example of Casnode (a forum website written in Go), see: [https://github.com/casbin/casnode/blob/6d4c55f5c9a3c4bd8c85f2493abad3553b9c7ac0/controllers/account.go#L51-L64](#)

```
// get code and state from the GET parameters of the redirected URL
code := c.Input().Get("code")
state := c.Input().Get("state")

// exchange the access token with code and state
token, err := auth.GetOAuthToken(code, state)
if err != nil {
    panic(err)
}

// verify the access token
claims, err := auth.ParseJwtToken(token.AccessToken)
if err != nil {
    panic(err)
}
```

If `ParseJwtToken()` finishes with no error, then the user has successfully logged into the application. The returned `claims` can be used to identify the user later.

### 4. Identify user with access token



#### INFO

This part is actually your application's own business logic and not part of OIDC, OAuth or Casdoor. We just provide good practices as a lot of people don't know what to do for the next step.

In Casdoor, access token is usually identical as ID token. They are the same thing. So the access token contains all information for the logged-in user.

The variable `claims` returned by `ParseJwtToken()` is defined as:

```
type Claims struct {
    User
    AccessToken string `json:"accessToken"`
    jwt.RegisteredClaims
}
```

1. `User`: the User object, containing all information for the logged-in user, see definition at: [/docs/basic/core-concepts#user](#)
2. `AccessToken`: the access token string.
3. `jwt.RegisteredClaims`: some other values required by JWT.

At this moment, the application usually has two ways to remember the user session: `session` and `JWT`.

## Session

The Method to set session varies greatly depending on the language and web framework. E.g., Casnode uses [Beego web framework](#) and set session by calling: `c.SetSessionUser()`.

```
token, err := auth.GetOAuthToken(code, state)
if err != nil {
    panic(err)
}

claims, err := auth.ParseJwtToken(token.AccessToken)
if err != nil {
    panic(err)
}

claims.AccessToken = token.AccessToken
c.SessionUser(claims) // set session
```

## JWT

The `accessToken` returned by Casdoor is actually a JWT. So if your application uses JWT to keep user session, just use the access token directly for it:

1. Send the access token to frontend, save it in places like localStorage of the browser.
2. Let the browser send the access token to backend for every request.
3. Call `ParseJwtToken()` or your own function to verify the access token and get logged-in user information in your backend.

## 5. (Optional) Interact with the User table



### INFO

This part is provided by [Casdoor Public API](#) and not part of the OIDC or OAuth.

Casdoor Backend SDK provides a lot of helper functions, not limited to:

- `GetUser(name string)`: get a user by username.
- `GetUsers()`: get all users.
- `AddUser()`: add a user.
- `UpdateUser()`: update a user.
- `DeleteUser()`: delete a user.
- `CheckUserPassword(auth.User)`: check user's password.

These functions are implemented by making RESTful calls against [Casdoor Public API](#). If a function is not provided in Casdoor Backend SDK, you can make RESTful calls by yourself.

# Casdoor Authenticator App

## Overview

Casdoor-Authenticator (<https://app.casdoor.org/>) is an open-source authenticator App (source code: <https://github.com/casdoor/casdoor-authenticator>) like Google Authenticator, Microsoft Authenticator or Authy. It provides Multi-Factor Authentication (MFA) with TOTP for both iOS and Android. This app allows users to store Time-based One-Time Password (TOTP) securely in the App, which is cloud-synced with Casdoor, offering a comprehensive solution for managing Two-Factor Authentication (2FA) needs directly from mobile devices.

## Key Features

- **Multi-Factor Authentication (MFA):** Generate secure TOTP-based codes for enhanced account protection.
- **Offline mode:** Generate TOTP codes without an internet connection.
- **Account synchronization:** Securely sync your accounts across multiple devices.
- **Privacy-focused:** All data is encrypted and stored securely.
- **Friendly UI:** Simple and intuitive design for easy navigation.

Android

22:21



## Casdoor

admin



Search



Google:test/admin

**192 592**

7s



Github:test/admin

**472 889**

7s



Amazon:test/admin

**124 416**

7s



slack:test

**835 125**

7s

# What is TOTP?

TOTP stands for Time-based One-Time Passwords and is a common form of two-factor authentication (2FA). Unique numeric passwords are generated with a standardized [algorithm](#) that uses the current time as an input. These time-based passwords:

- Change every 30 seconds for enhanced security
- Are available offline
- Are widely supported by many services and apps
- Provide user-friendly, increased account security as a second factor

# How to use the Casdoor Authenticator App?

## Step 0: Install the Casdoor Authenticator App

Casdoor-Authenticator is currently available for Android devices. You can download the app from the following sources:

1. Homepage: <https://app.casdoor.org>
2. Source code: <https://github.com/casdoor/casdoor-authenticator>
3. Binary release: <https://github.com/casdoor/casdoor-authenticator/releases>

For developers interested in building the app from source, you can find the source code and build instructions in the [Casdoor Authenticator GitHub Repository](#).

## Step 1: Enable Totp Account storage in Casdoor Server

## (Optional)

This setup is optional for users who want to store their TOTP codes in the Casdoor server. Before using the Casdoor Authenticator App, you need to make sure that the MFA accounts setting is enabled in the Casdoor server.

Account items		Visible	Regex	View rule	Modify rule	Action		
Name	Organization	<input checked="" type="checkbox"/>		Public	Admin			
ID		<input checked="" type="checkbox"/>		Public	Immutable			
Name		<input checked="" type="checkbox"/>		Public	Admin			
Display name		<input checked="" type="checkbox"/>		Public	Self			
Avatar		<input checked="" type="checkbox"/>		Public	Self			
Face ID		<input checked="" type="checkbox"/>		Public	Self			
Managed accounts		<input checked="" type="checkbox"/>		Self	Self			
MFA accounts		<input checked="" type="checkbox"/>		Public	Self			

## Step 2: Log in to the Casdoor Authenticator App

After installing the Casdoor Authenticator App and enabling the MFA accounts setting in the Casdoor server, you have three convenient ways to connect to your Casdoor server:

### 1. Manual Configuration

- Tap "Enter Server Manually"
- Enter your server URL, client ID, and organization name
- Log in with your Casdoor account credentials

### 2. QR Code Scan

- Tap "Scan QR Code"
- Use your device's camera to scan the QR code from your Casdoor server
- The QR code can be found in "My Account" → "MFA accounts" section

- The app will automatically configure the connection

### 3. Demo Server

- Tap "Try Demo Server" to connect to a pre-configured demo instance
- Useful for testing the app's functionality without setting up your own server

# Casdoor server

X

Endpoint

<https://door.casdoor.com>

Client ID

b800a86702dd4d29ec4d

App Name

app-example

Organization Name

casbin

Confirm

Scan to Login

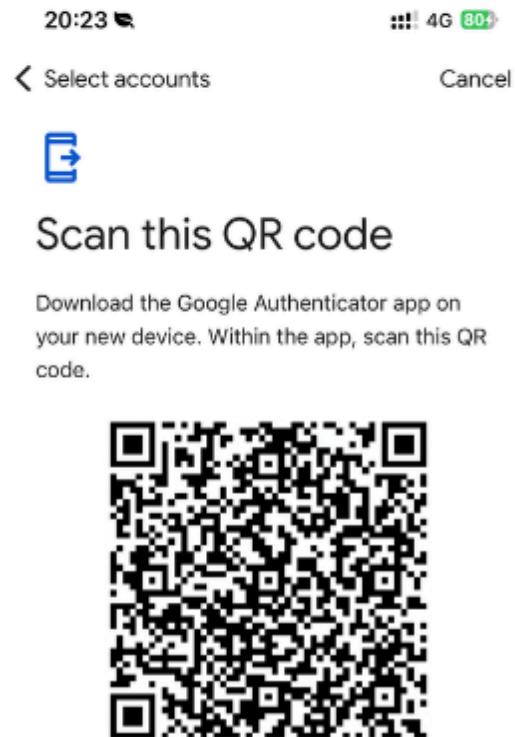
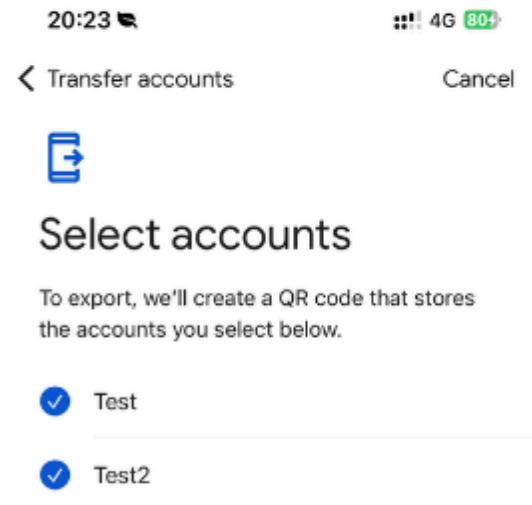
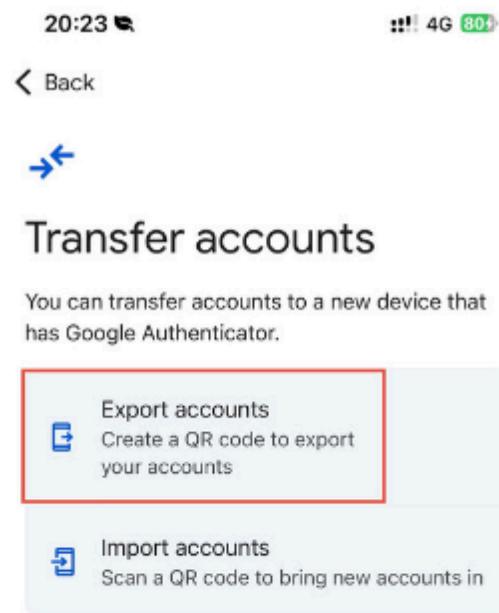
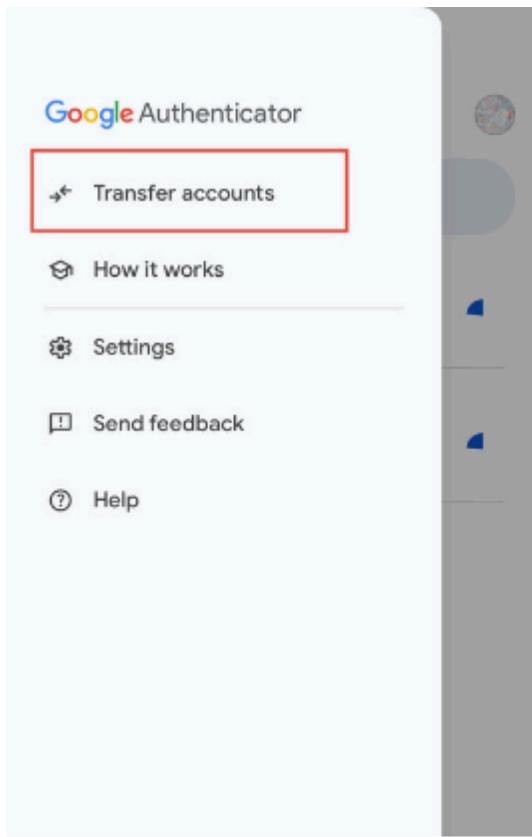
Use Casdoor Demo Site

Once connected, you can view your TOTP codes and manage your 2FA settings directly from the Casdoor Authenticator App like other authenticator apps.

# Migration from Other Authenticator Apps

## Migration from Google Authenticator

Select the "Transfer Accounts" option in the menu of Google Authenticator and choose the accounts you want to transfer. Then, click the "Export" button to generate a QR code.



In the Casdoor Authenticator App, scan the QR code generated by Google Authenticator to import your TOTP data. The app will automatically add the accounts to your Casdoor Authenticator App, allowing you to manage your TOTP codes securely.

22:12



# Casdoor

Login



Search



Test

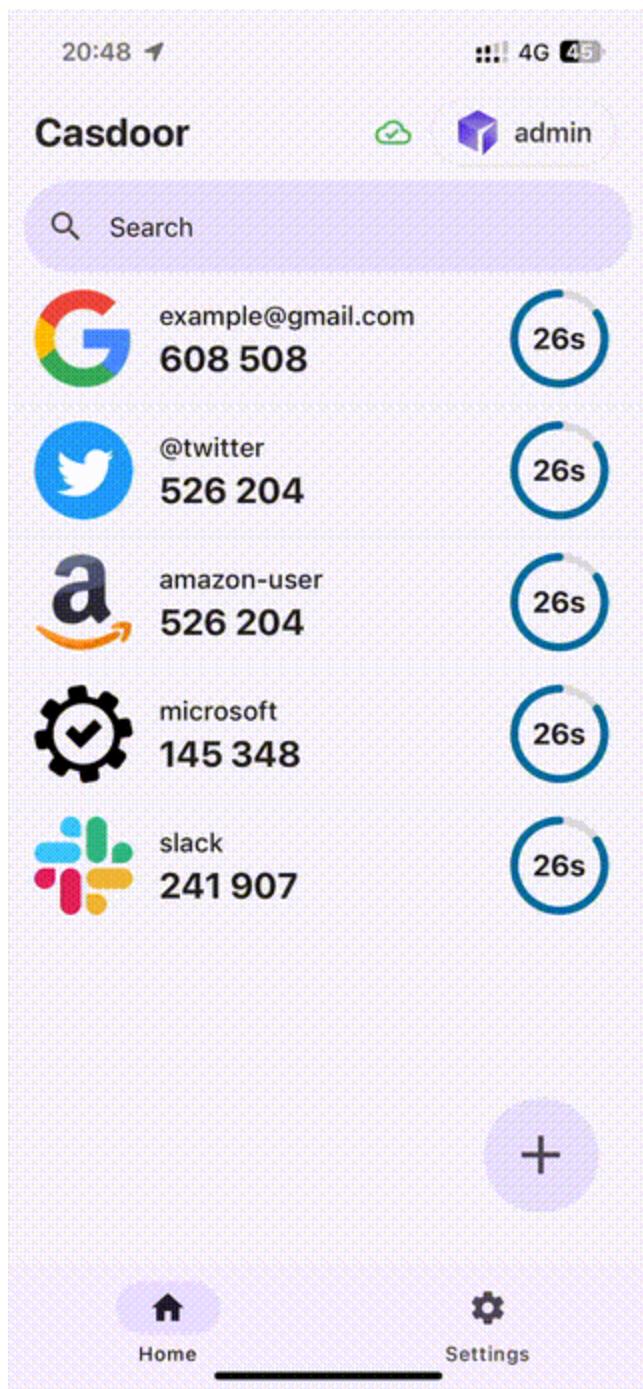
145 112



## Migration from Microsoft Authenticator (requires root access)

If you are using Microsoft Authenticator, you can migrate your TOTP data to the Casdoor Authenticator App using the Microsoft Authenticator's database backup. Here's how:

1. On your Android device with Microsoft Authenticator installed, locate the app's data directory: `/data/data/com.azure.authenticator/databases/`
2. You will need root access to extract the `PhoneFactor` database file.
3. In the Casdoor Authenticator App, go to the import section
4. Select "Import from Microsoft Authenticator"
5. Choose the extracted `PhoneFactor` database file
6. The app will automatically import all your TOTP accounts from Microsoft Authenticator



# How to Enable Single Sign-On

## Introduction

You have connected Casdoor and configured more than one application in an organization. You want users to sign in once to any app in the organization and then be able to sign in when they go to another app without any extra clicks.

We offer this single sign-on feature. To enable it, you just need to:

- Enable the Auto Sign-In button.
- Fill in the URL for the home page.
- Add a Silent Sign-In function to the application home page.

### NOTE

The basic sign-in process provided by Casdoor allows users to log in to other applications in the organization by selecting the user who is currently logged in or using another account.

After enabling auto sign-in, the selection box will not be displayed, and the logged-in user will log in directly.

## Configuration

1. Fill in the "home" field. It can be the application's home page or the login page.

**Casdoor** Home Organizations Users Roles Permissions Models Adapters Providers Applications

Edit Application

Name [?](#) : app-casbin-oa

Display name [?](#) : Casbin OA

Logo [?](#) : URL [?](#) [https://cdn.casbin.org/img/casbin\\_logo\\_1024x256.png](https://cdn.casbin.org/img/casbin_logo_1024x256.png)

Preview: 

Home [?](#) : <https://oa.casbin.com>

Description [?](#) : OA system for Casbin

## 2. Enable the Auto Sign-In button.

Password ON [?](#) :

Enable signup [?](#) :

Signin session [?](#) :

Auto signin [?](#) :

Enable code signin [?](#) :

Enable WebAuthn signin [?](#) :

# Add Silent Sign-In

In fact, we implement auto login by carrying parameters in the URL. Therefore, your applications need to have a method to trigger the login after jumping to the URL. We provide the [casdoor-react-sdk](#) to help you quickly implement this feature. You can see the details in [use-in-react](#).



INFO

How it works

1. In the URL to the application home page, we will carry the `silentSignin` parameter.
2. In your home page, determine whether you need to log in silently (automatically) by checking the `silentSignin` parameter. If `silentSignin === 1`, the function should return the `SilentSignin` component, which will help you initiate a login request. Since you have auto-login enabled, users will log in automatically without clicking.

# Add Popup Sign-In

The "popup sign-in" feature will open a small window. After logging in to Casdoor in the child window, it will send authentication information to the main window and then close automatically. We implement this feature by carrying parameters in the URL.



INFO

## How to use

Use the `popupSignin()` method in the [casdoor-js-sdk](#) to quickly implement this feature. You can see a demo in [casdoor-nodejs-react-example](#).

## How it works

1. In the URL to the application home page, we will carry the `popup` parameter.
2. When `popup=1` is in the login parameters, Casdoor will send `code` and `state` as a message to the main window and finish getting the `token` in the main window using the SDK.

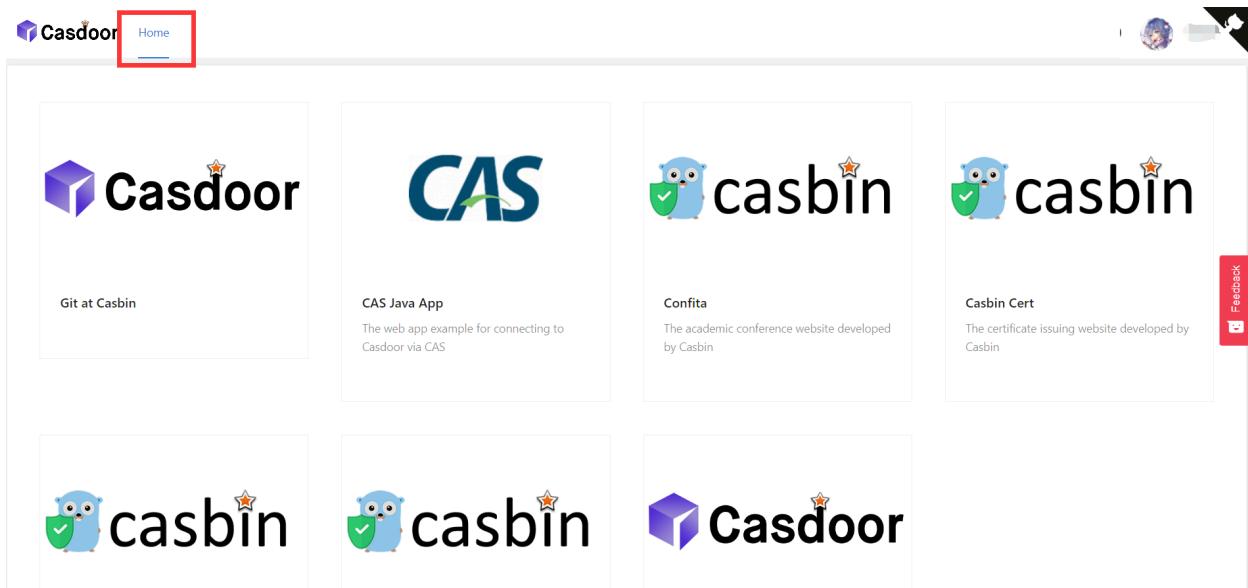
# Using SSO

The configuration is complete. Below, we will show you how to use auto login.

### INFO

Make sure your application can redirect to the user's profile page. The [getMyProfileUrl\(account, returnUrl\)](#) API is provided in our SDK for each language.

Open the profile page and go to the "Home" page (/ URL path). You will see the application list provided by the organization. It's worth noting that only users in organizations other than "built-in" can see the application list on the "Home" page. All the global administrators (those in the "built-in" organization) cannot see it.



Click on a tile in the application list, and it will jump to the homepage URL of that application with the GET parameter `?silentSignin=1`. It will automatically log into the application if the application has integrated with Casdoor SSO (so it will recognize the `?silentSignin=1` parameter and perform a silent login in the background).

## SSO Logout

When using SSO, you might need to log a user out from all applications simultaneously. Casdoor provides an SSO logout endpoint that terminates all active sessions and expires all tokens for a user across all applications in the organization.

To implement SSO logout in your application, make a request to the `/api/sso-logout` endpoint. This endpoint will ensure the user is completely logged out from all integrated applications. For detailed information about the SSO logout API, including authentication methods and request examples, see the [SSO Logout](#) section in the Public API documentation.

# Single Sign-Out (SSO Logout)

## Introduction

Single Sign-Out (SSO Logout) is a feature that allows you to log a user out from all applications in an organization simultaneously. When a user logs out from one application, they are automatically logged out from all other applications that are part of the same SSO ecosystem.

This is particularly useful in scenarios such as:

- **Security incidents:** Immediately terminate all active sessions when a security breach is detected
- **Organization-wide logout policies:** Enforce logout across all services when users leave the organization or change roles
- **Compliance requirements:** Ensure users are completely logged out from all systems when required by regulations
- **User-initiated logout:** Allow users to log out from all applications with a single action

## How SSO Logout Works

When the SSO logout endpoint is called, Casdoor performs the following actions:

1. **Delete all active sessions:** All active sessions for the user across all applications in the organization are terminated
2. **Expire all access tokens:** All access tokens that were issued to the user are

immediately invalidated

3. **Clear the current session:** The user's current session and authentication state are cleared

This ensures that the user is completely logged out from all integrated applications and cannot access any resources without re-authenticating.

# SSO Logout API

## Endpoint

GET or POST /api/sso-logout

The SSO logout endpoint accepts both `GET` and `POST` requests, making it flexible for different integration scenarios.

## Authentication

This endpoint requires the user to be authenticated. You can use any of the authentication methods supported by Casdoor:

- **Access token:** Include the access token in the `Authorization` header
- **Session cookie:** Use the session cookie that was set during login
- **Client credentials:** Use the application's client ID and secret for machine-to-machine scenarios

For more details on authentication methods, see the [Casdoor Public API](#) documentation.

# Request Examples

## Using Access Token

```
curl -X POST https://door.casdoor.com/api/sso-logout \
-H "Authorization: Bearer YOUR_ACCESS_TOKEN"
```

## Using Session Cookie

```
curl -X POST https://door.casdoor.com/api/sso-logout \
--cookie "casdoor_session_id=abc123def456"
```

## Using JavaScript Fetch API

```
fetch('https://door.casdoor.com/api/sso-logout', {
  method: 'POST',
  headers: {
    'Authorization': `Bearer ${accessToken}`
  },
  credentials: 'include'
})
.then(response => response.json())
.then(data => {
  console.log('Logout successful:', data);
  // Redirect to login page or home page
  window.location.href = '/login';
})
.catch(error => {
  console.error('Logout failed:', error);
});
```

# Response

The API returns a standard Casdoor response:

```
{  
  "status": "ok",  
  "msg": "",  
  "data": ""  
}
```

Response Fields:

- `status`: Indicates whether the operation was successful ("ok") or failed ("error")
- `msg`: Contains an error message if the operation failed, otherwise empty
- `data`: Additional data returned by the API, typically empty for logout operations

# Implementing SSO Logout in Your Application

## Using Casdoor SDKs

Most Casdoor SDKs provide built-in support for SSO logout. Here are examples for different platforms:

## Go SDK

```
import "github.com/casdoor/casdoor-go-sdk/casdoorsdk"

func logout(w http.ResponseWriter, r *http.Request) {
    // Get the access token from the session or request
    token := getAccessTokenFromSession(r)

    // Call the SSO logout endpoint
    err := casdoorsdk.Logout(token)
    if err != nil {
        http.Error(w, "Logout failed",
            http.StatusInternalServerError)
        return
    }

    // Clear local session
    clearSession(w, r)

    // Redirect to login page
    http.Redirect(w, r, "/login", http.StatusFound)
}
```

## JavaScript SDK

```
import Sdk from "casdoor-js-sdk";

const CasdoorSDK = new Sdk({
    serverUrl: "https://door.casdoor.com",
    clientId: "YOUR_CLIENT_ID",
    appName: "YOUR_APP_NAME",
    organizationName: "YOUR_ORG_NAME",
});

async function handleLogout() {
```

## Python SDK

```
from casdoor import CasdoorSDK

sdk = CasdoorSDK(
    endpoint="https://door.casdoor.com",
    client_id="YOUR_CLIENT_ID",
    client_secret="YOUR_CLIENT_SECRET",
    certificate="YOUR_CERT",
    org_name="YOUR_ORG_NAME",
    app_name="YOUR_APP_NAME",
)

def logout(access_token):
    try:
        # Call the SSO logout endpoint
        result = sdk.logout(access_token)

        if result['status'] == 'ok':
            # Clear local session
            clear_session()
            return True
        else:
            print(f"Logout failed: {result['msg']}")
            return False
    except Exception as e:
        print(f"Logout error: {e}")
        return False
```

## Manual Implementation

If you're not using a Casdoor SDK, you can implement SSO logout manually by making an HTTP request to the logout endpoint:

```
async function logout() {
  const accessToken = localStorage.getItem('access_token');

  try {
    // Use the full Casdoor server URL in your application
    const response = await fetch('https://door.casdoor.com/api/sso-logout', {
      method: 'POST',
      headers: {
        'Authorization': `Bearer ${accessToken}`,
        'Content-Type': 'application/json'
      },
      credentials: 'include'
    });

    const result = await response.json();

    if (result.status === 'ok') {
      // Clear local storage
      localStorage.removeItem('access_token');
      localStorage.removeItem('user_info');
      sessionStorage.clear();

      // Redirect to login page
      window.location.href = '/login';
    } else {
      console.error('Logout failed:', result.msg);
    }
  } catch (error) {
    console.error('Logout error:', error);
  }
}
```

# Best Practices

## 1. Clear Local State

After calling the SSO logout endpoint, make sure to clear all local authentication state:

- Remove access tokens from local storage or session storage
- Clear any cached user information
- Invalidate any local session cookies
- Reset application state to the logged-out state

## 2. Handle Logout Errors Gracefully

Even if the SSO logout endpoint fails, you should still clear local authentication state to ensure the user appears logged out from your application:

```
async function logout() {
  try {
    await callSSOLogout();
  } catch (error) {
    console.error('SSO logout failed, clearing local state
anyway:', error);
  } finally {
    // Always clear local state
    clearLocalAuthenticationState();
    redirectToLogin();
  }
}
```

### 3. Provide User Feedback

Give users clear feedback about the logout process:

```
async function logout() {
  // Show loading indicator
  showLoadingIndicator('Logging out...');

  try {
    await callSSOLogout();
    showSuccessMessage('Logged out successfully');
  } catch (error) {
    showErrorMessage('Logout failed, but you have been logged out
locally');
  } finally {
    clearLocalAuthenticationState();
    // Redirect after a short delay to allow users to see the
message
    setTimeout(() => redirectToLogin(), 1000);
  }
}
```

### 4. Implement Logout Timeout

Set a reasonable timeout for the logout request to prevent users from waiting indefinitely:

```
async function logout() {
  const timeout = 5000; // 5 seconds

  try {
    await Promise.race([
      callSSOLogout(),
      ...
```

# Security Considerations

## 1. Secure Communication

Always use HTTPS when calling the SSO logout endpoint to prevent token interception:

```
// ✓ Good: Uses HTTPS
const logoutUrl = 'https://door.casdoor.com/api/sso-logout';

// ✗ Bad: Uses HTTP (insecure)
const logoutUrl = 'http://door.casdoor.com/api/sso-logout';
```

## 2. Token Validation

Casdoor validates the access token before processing the logout request. Ensure your token is valid and has not expired before making the logout call.

## 3. CSRF Protection

When using session cookies for authentication, ensure CSRF protection is enabled to prevent unauthorized logout requests:

```
// Include CSRF token in the request headers
// Replace with your actual Casdoor server URL
fetch('https://door.casdoor.com/api/sso-logout', {
  method: 'POST',
  headers: {
    'X-CSRF-Token': getToken()
  },
});
```

## 4. Audit Logging

Consider logging logout events for security auditing and compliance:

```
func logout(userID string, token string) error {
    // Call SSO logout
    err := casdoorsdk.Logout(token)

    // Log the logout event
    auditLog.Info(map[string]interface{}{
        "event": "sso_logout",
        "user_id": userID,
        "timestamp": time.Now(),
        "success": err == nil,
    })

    return err
}
```

## Troubleshooting

### Logout Not Working Across All Applications

If users remain logged in to some applications after SSO logout:

1. Verify application integration: Ensure all applications are properly integrated with Casdoor and use the same organization
2. Check token validation: Make sure all applications validate tokens on each request
3. Review session management: Applications should not rely solely on local sessions; they must validate tokens with Casdoor

## Token Still Valid After Logout

If access tokens remain valid after logout:

1. Verify the logout endpoint: Ensure you're calling the correct endpoint (`/api/sso-logout`)
2. Check authentication: Make sure you're sending valid authentication credentials with the logout request
3. Review token caching: Ensure applications don't cache token validation results

## Logout Endpoint Returns Error

Common error scenarios:

- 401 Unauthorized: The access token is invalid or expired. Clear local state and redirect to login.
- 403 Forbidden: The user doesn't have permission to logout. This is rare and may indicate a configuration issue.
- 500 Internal Server Error: Server-side error. Log the error and clear local state anyway.

```
async function logout() {
  try {
    // Replace with your actual Casdoor server URL
    const response = await fetch('https://door.casdoor.com/api/sso-logout', {
      method: 'POST',
      headers: { 'Authorization': `Bearer ${token}` }
    });
  }
}
```

# Related Documentation

- [Single Sign-On \(SSO\)](#): Learn how to enable SSO for your applications
- [Casdoor Public API](#): Complete API reference including authentication methods
- [Tokens](#): Understand how Casdoor manages access tokens and sessions
- [OAuth 2.0](#): Learn about OAuth 2.0 flows supported by Casdoor

# Vue SDK

The Casdoor Vue SDK is designed for Vue 2 and Vue 3, making it very convenient to use.

The Vue SDK is based on casdoor-js-sdk. You can also use the casdoor-js-sdk directly, which will allow for more customization.

Please note that this plugin is still in development. If you have any questions or suggestions, please feel free to contact us by opening an [issue](#).

We will now show you the necessary steps below.

If you are still unsure how to use it after reading the README.md, you can refer to the example: [casdoor-python-vue-sdk-example](#) for more details.

The example's front-end is built with casdoor-vue-sdk, while the back-end is built with casdoor-python-sdk. You can view the source code in the example.

## Installation

```
# NPM
npm install casdoor-vue-sdk

# Yarn
yarn add casdoor-vue-sdk
```

# Initializing the SDK

To initialize the SDK, you will need to provide 5 string parameters in the following order:

Name	Required	Description
serverUrl	Yes	The URL of your Casdoor server.
clientId	Yes	The Client ID of your Casdoor application.
appName	Yes	The name of your Casdoor application.
organizationName	Yes	The name of the Casdoor organization linked to your Casdoor application.
redirectPath	No	The path of the redirect URL for your Casdoor application. If not provided, it will default to <code>/callback</code> .

For Vue 3:

```
// in main.js
import Casdoor from 'casdoor-vue-sdk'

const config = {
  serverUrl: "http://localhost:8000",
  clientId: "4262bea2b293539fe45e",
  organizationName: "casbin",
```

For Vue 2:

```
// in main.js
import Casdoor from 'casdoor-vue-sdk'
import VueCompositionAPI from '@vue/composition-api'

const config = {
  serverUrl: "http://localhost:8000",
  clientId: "4262bea2b293539fe45e",
  organizationName: "casbin",
  appName: "app-casnnode",
  redirectPath: "/callback",
};

Vue.use(VueCompositionAPI)
Vue.use(Casdoor, config)

new Vue({
  render: h => h(App),
}).$mount('#app')
```

## Example

```
// in app.vue
<script>
export default {
  name: 'App',
  methods: {
    login() {
      window.location.href = this.getSigninUrl();
    },
    signup() {
      window.location.href = this.getSignupUrl();
    }
}
```

## Auto Fix

If the `postinstall` hook does not get triggered or if you have updated the Vue version, try running the following command to resolve the redirecting issue:

```
npx vue-demi-fix
```

For more information about switching Vue versions, please refer to the [vue-demi docs](#).

# Desktop SDKs

## Electron App Example for Casdoor

This is an Electron app example that demonstrates Casdoor's integration capabilities.

## dotNET Desktop App

A dotNET desktop app example for Casdoor

## Mobile SDKs .NET MAUI App

A .NET MAUI App example for Casdoor

## Qt Desktop App

A Qt desktop app example for Casdoor

# Electron App Example for Casdoor

An [Electron app example](#) that demonstrates Casdoor's integration capabilities.

## How to Run the Example

### Initialization

You need to initialize 6 parameters, all of which are string type:

Name	Description	Path
serverUrl	Your Casdoor server URL	<code>src/App.js</code>
clientId	The Client ID of your Casdoor application	<code>src/App.js</code>
appName	The name of your Casdoor application	<code>src/App.js</code>
redirectPath	The path of the redirect URL for your Casdoor application, will be <code>/callback</code> if not provided	<code>src/App.js</code>
clientSecret	The Client Secret of your Casdoor application	<code>src/App.js</code>
casdoorServiceDomain	Your Casdoor server URL	<code>public/electron.js</code>

If you don't set these parameters, this project will use the [Casdoor online demo](#) as the default Casdoor server and use the [Casnode](#) as the default Casdoor application.

### Available Commands

In the project directory, you can run:

`npm run dev` or `yarn dev`

Builds the electron app and runs this app.

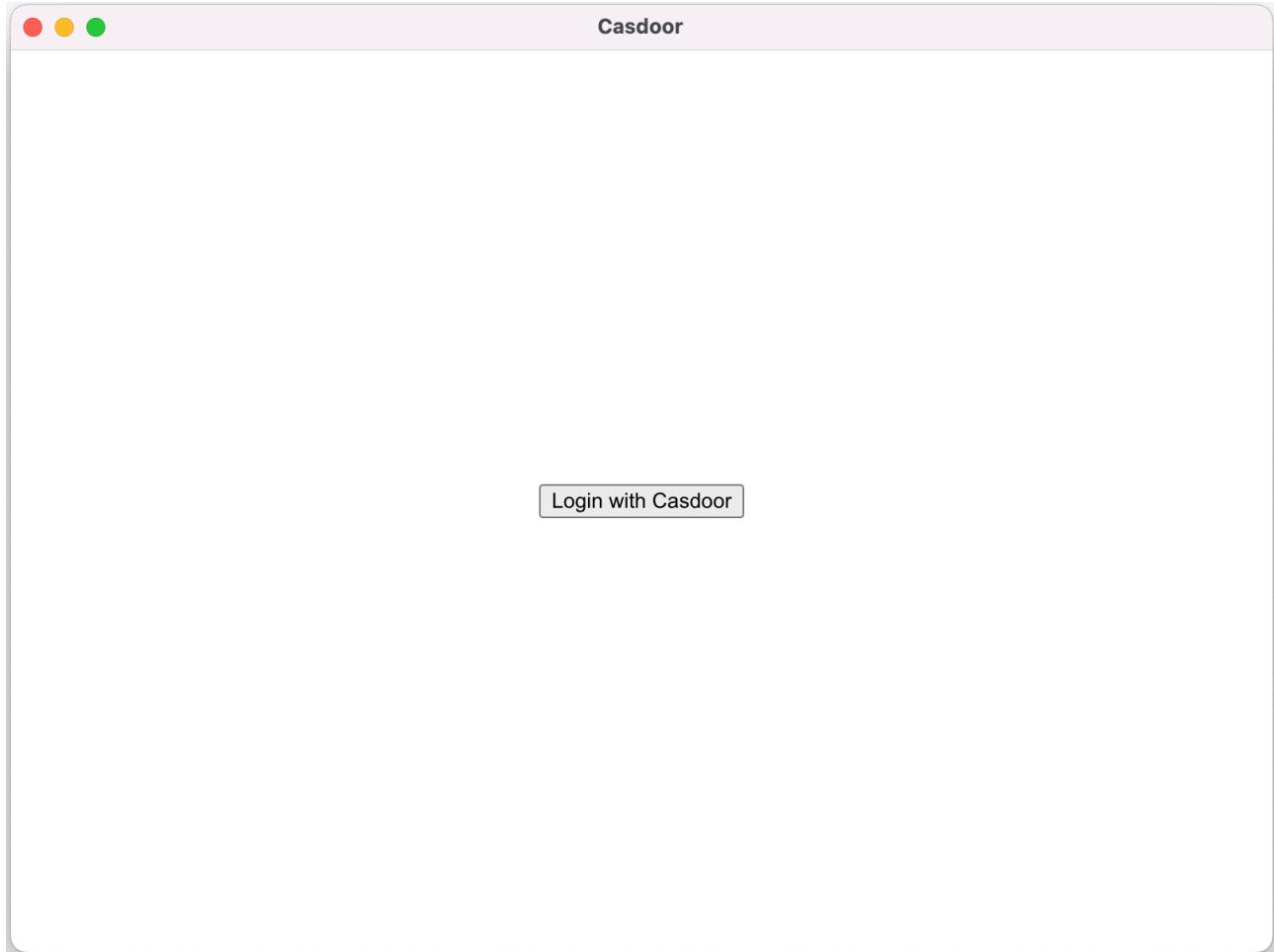
`npm run make` or `yarn make`

Packages and distributes your application. It will create the `out` folder where your package will be located:

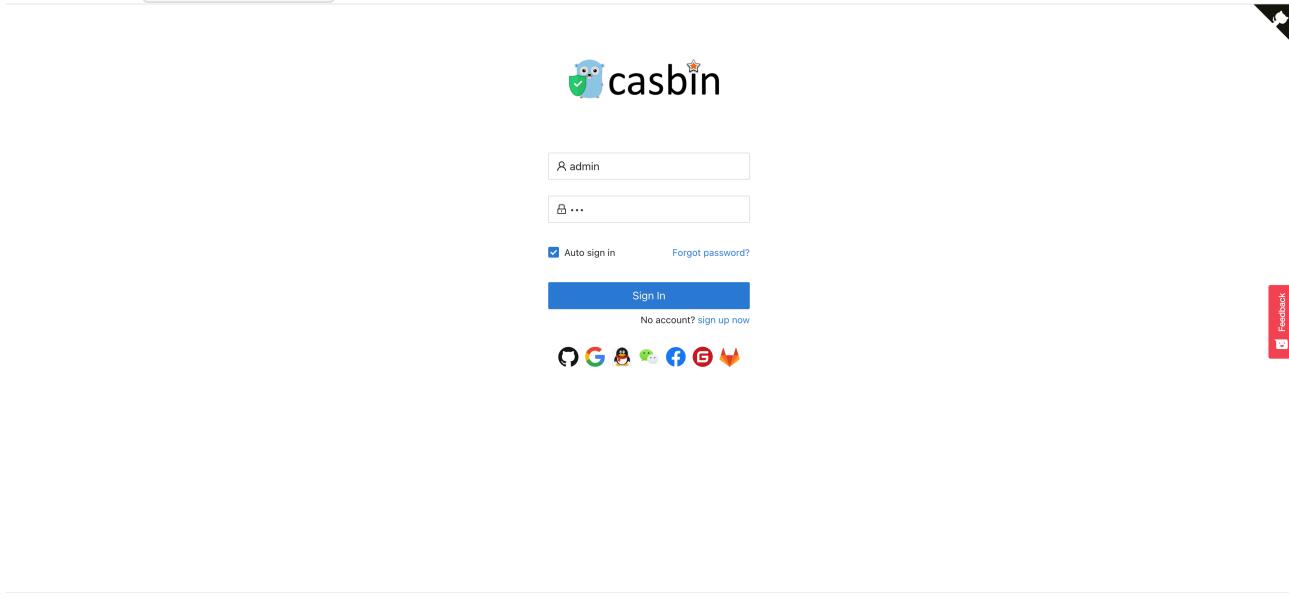
```
// Example for macOS out/
├── out/make/zip/darwin/x64/casdoor-electron-example-darwin-x64-1.0.0.zip
└── ...
└── out/casdoor-electron-example-darwin-x64/casdoor-electron-example.app/Contents/MacOS/casdoor-electron-example
```

### Preview

Once you run this Electron application, a new window will appear on your desktop.



If you click the `Login with Casdoor` button, your default browser will automatically open and display the login page.

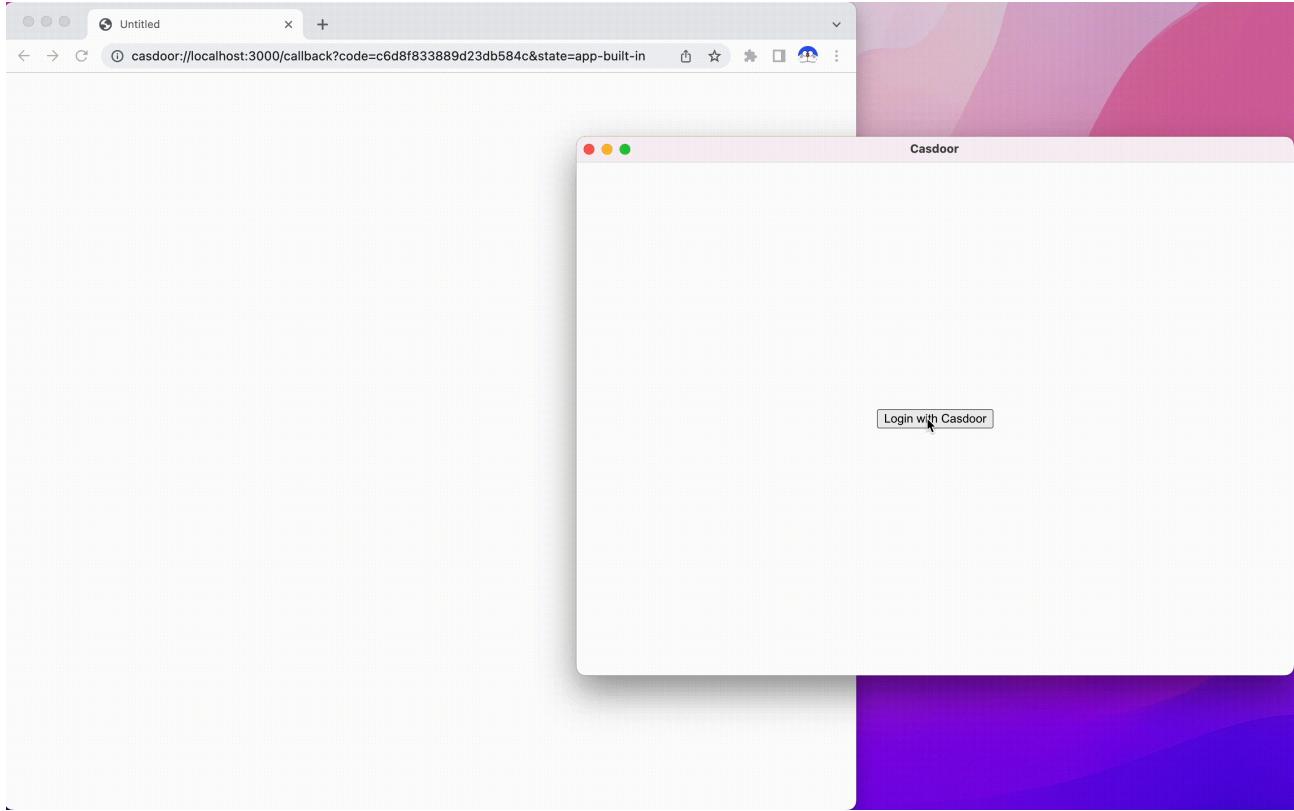


Made with ❤ by [Casdoor](#)

Following a successful login, your Electron application will open, and your user name will be displayed on your application.



You can preview the entire process in the gif image below.



## Integration Steps

### Set the custom protocol

Firstly, you need to set the custom protocol called `casdoor`.

```
const protocol = "casdoor";

if (process.defaultApp) {
  if (process.argv.length >= 2) {
    app.setAsDefaultProtocolClient(protocol, process.execPath, [
      path.resolve(process.argv[1]),
    ]);
  }
} else {
  app.setAsDefaultProtocolClient(protocol);
}
```

This will allow the browser to open your electron application and send the login info to the electron application.

### Open the login URL in the browser

```
const serverUrl = "https://door.casdoor.com";
const appName = "app-casnode";
const redirectPath = "/callback";
const clientId = "014ae4bd048734ca2dea";
const clientSecret = "f26a4115725867b7bb7b668c81e1f8f7fae1544d";

const redirectUrl = "casdoor://localhost:3000" + redirectPath;
```

You can change the first five parameters.

## Listen to the open application event

Once you successfully log in through the browser, the browser will open your Electron application. Therefore, you must listen to the open application event.

```
const gotTheLock = app.requestSingleInstanceLock();
const ProtocolRegExp = new RegExp(`^${protocol}://`);

if (!gotTheLock) {
  app.quit();
} else {
  app.on("second-instance", (event, commandLine, workingDirectory) => {
    if (mainWindow) {
      if (mainWindow.isMinimized()) mainWindow.restore();
      mainWindow.focus();
      commandLine.forEach((str) => {
        if (ProtocolRegExp.test(str)) {
          const params = url.parse(str, true).query;
          if (params && params.code) {
            store.set("casdoor_code", params.code);
            mainWindow.webContents.send("receiveCode", params.code);
          }
        }
      });
    }
  });
  app.whenReady().then(createWindow);

app.on("open-url", (event, openUrl) => {
  const isProtocol = ProtocolRegExp.test(openUrl);
  if (isProtocol) {
    const params = url.parse(openUrl, true).query;
    if (params && params.code) {
      store.set("casdoor_code", params.code);
      mainWindow.webContents.send("receiveCode", params.code);
    }
  }
});
}
```

You can get the code from the browser, which is `casdoor_code` or `params.code`.

## Parse the code and get the user info

```
async function getUserInfo(clientId, clientSecret, code) {
  const { data } = await axios({
    method: "post",
    url: authCodeUrl,
    headers: {
      "content-type": "application/json",
    },
    data: JSON.stringify({
      grant_type: "authorization_code",
      client_id: clientId,
      client_secret: clientSecret,
      code: code,
    }),
  });
  const resp = await axios({
    method: "get",
    url: `${getUserInfoUrl}?accessToken=${data.access_token}`,
  });
  return resp.data;
}
```

Finally, you can parse the code and get the user info following the [OAuth docs page](#).

# dotNET Desktop App

A Dotnet desktop app example for Casdoor.

## How to Run the Example

### Prerequisites

- [dotNET 6 SDK](#)
- [WebView2 Runtime](#) (It is usually preinstalled on Windows)

### Initialization

The initialization requires 5 parameters, all of which are of type string:

Name	Description	File
Domain	The host/domain of your Casdoor server	<a href="#">CasdoorVariables.cs</a>
ClientId	The Client ID of your Casdoor application	<a href="#">CasdoorVariables.cs</a>
AppName	The name of your Casdoor application	<a href="#">CasdoorVariables.cs</a>
CallbackUrl	The path of the callback URL for your Casdoor application. If not	<a href="#">CasdoorVariables.cs</a>

Name	Description	File
	provided, it will be <code>casdoor://callback</code>	
ClientSecret	The Client Secret of your Casdoor application	<code>CasdoorVariables.cs</code>

If you do not set these parameters, the project will default to using the [Casdoor online demo](#) as the Casdoor server and the [Casnode](#) as the Casdoor application.

## Running

### Visual Studio

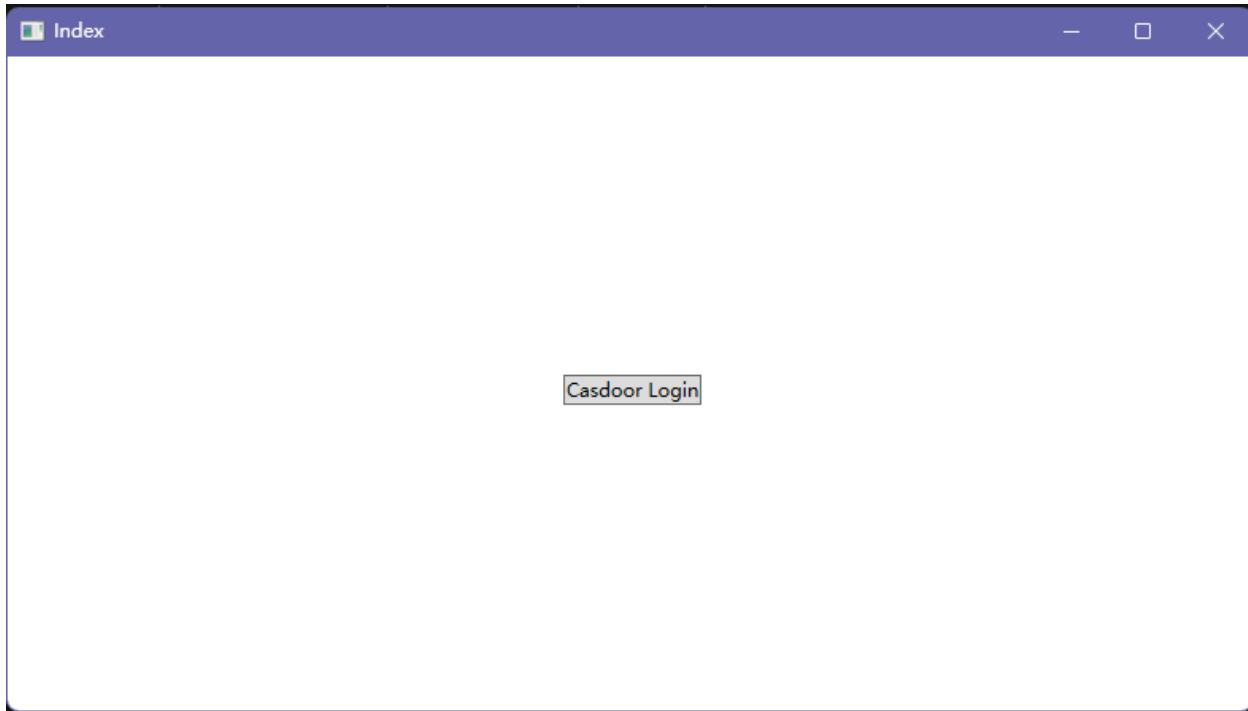
1. Open `casdoor-dotnet-desktop-example.sln`
2. Press `Ctrl + F5` to start

### Command Line

1. `cd src/DesktopApp`
2. `dotnet run`

## Preview

After running the dotNET desktop application, a new window will appear on your desktop.

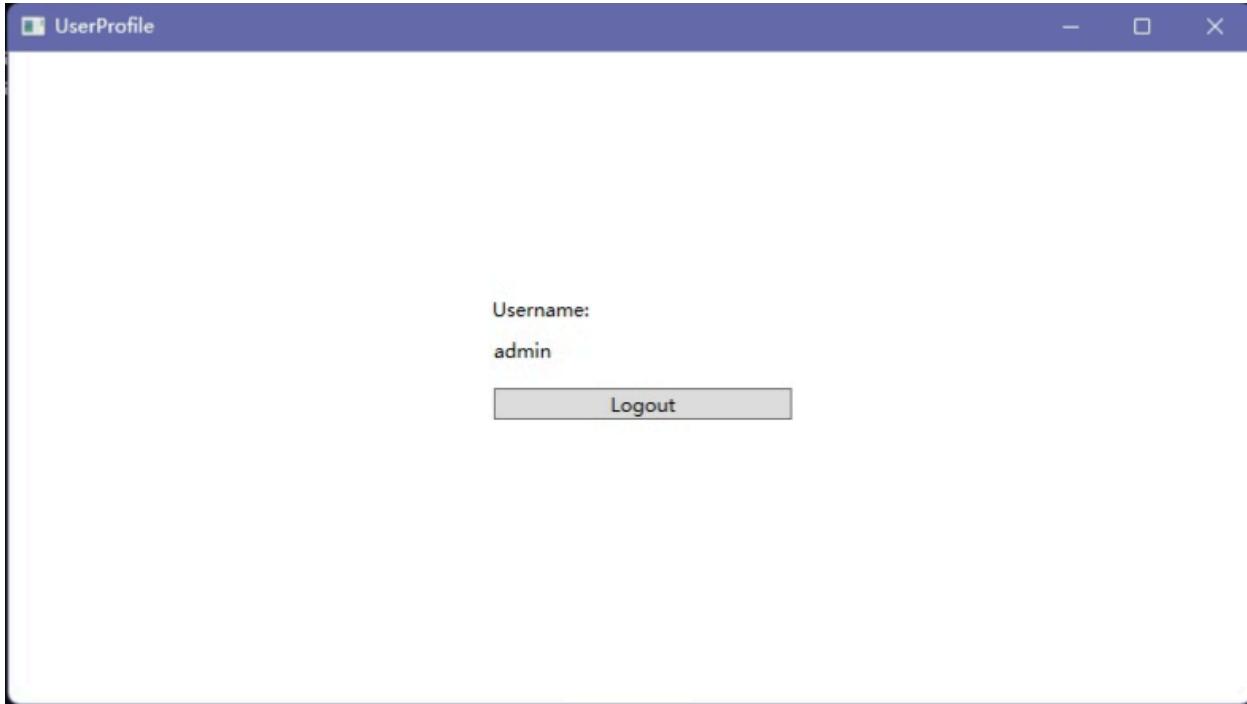


If you click the `Casdoor Login` button, a login window will appear on your

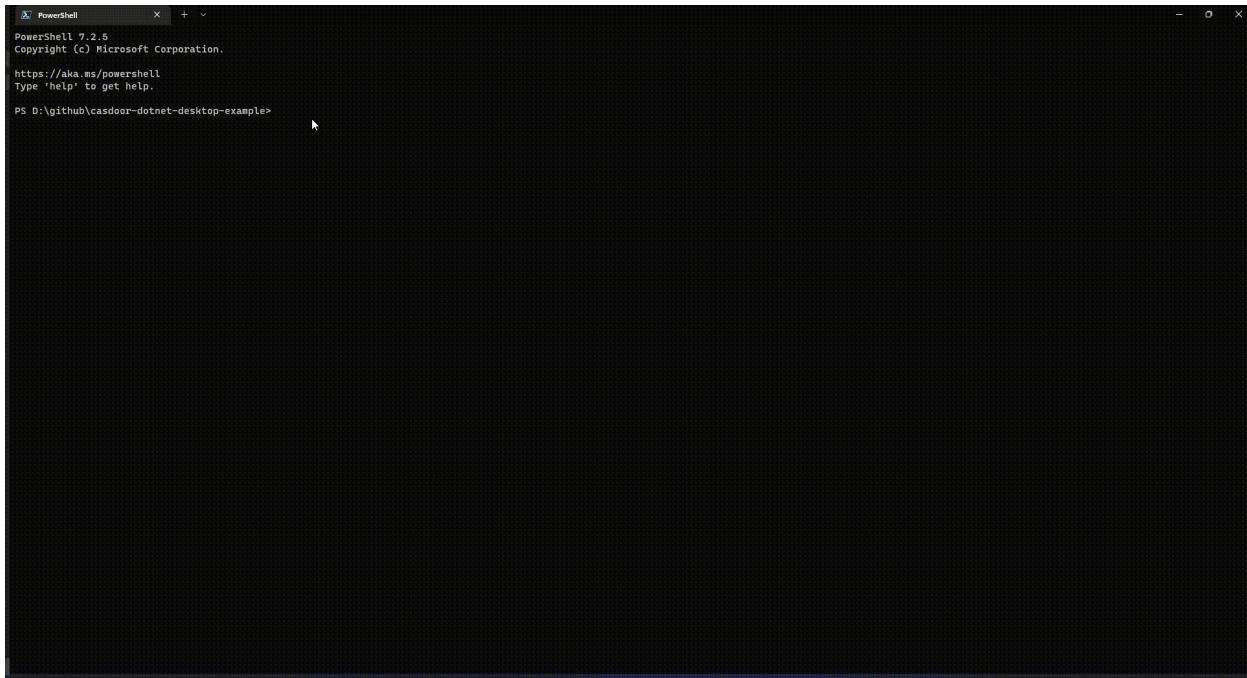


desktop.

After successfully logging in, a user profile window will appear on your desktop, displaying your username.



You can preview the entire process in the GIF image below.



# How to Integrate

## Opening the Login Window

```
var login = new Login();
// Triggered when login succeeds, you will receive an auth code in
// the event handler
login.CodeReceived += Login_CodeReceived;
login.ShowDialog();
```

## Using the Auth Code to Get User Info

```
public async Task<string?> RequestToken(string clientId, string
clientSecret, string code)
{
    var body = new
    {
        grant_type = "authorization_code",
        client_id = clientId,
        client_secret = clientSecret,
        code
    };

    var req = new RestRequest(_requestTokenUrl).AddJsonBody(body);
    var token = await _client.PostAsync<TokenDto>(req);

    return token?.AccessToken;
}

public async Task<UserDto?> GetUserInfo(string token)
{
    var req = new
    RestRequest(_getUserInfoUrl).AddQueryParameter("accessToken",
```



# Mobile SDKs .NET MAUI App

This repository contains a .NET MAUI app and .NET MAUI library for demonstrating Casdoor authentication by OpenID Connect.

# Demonstration

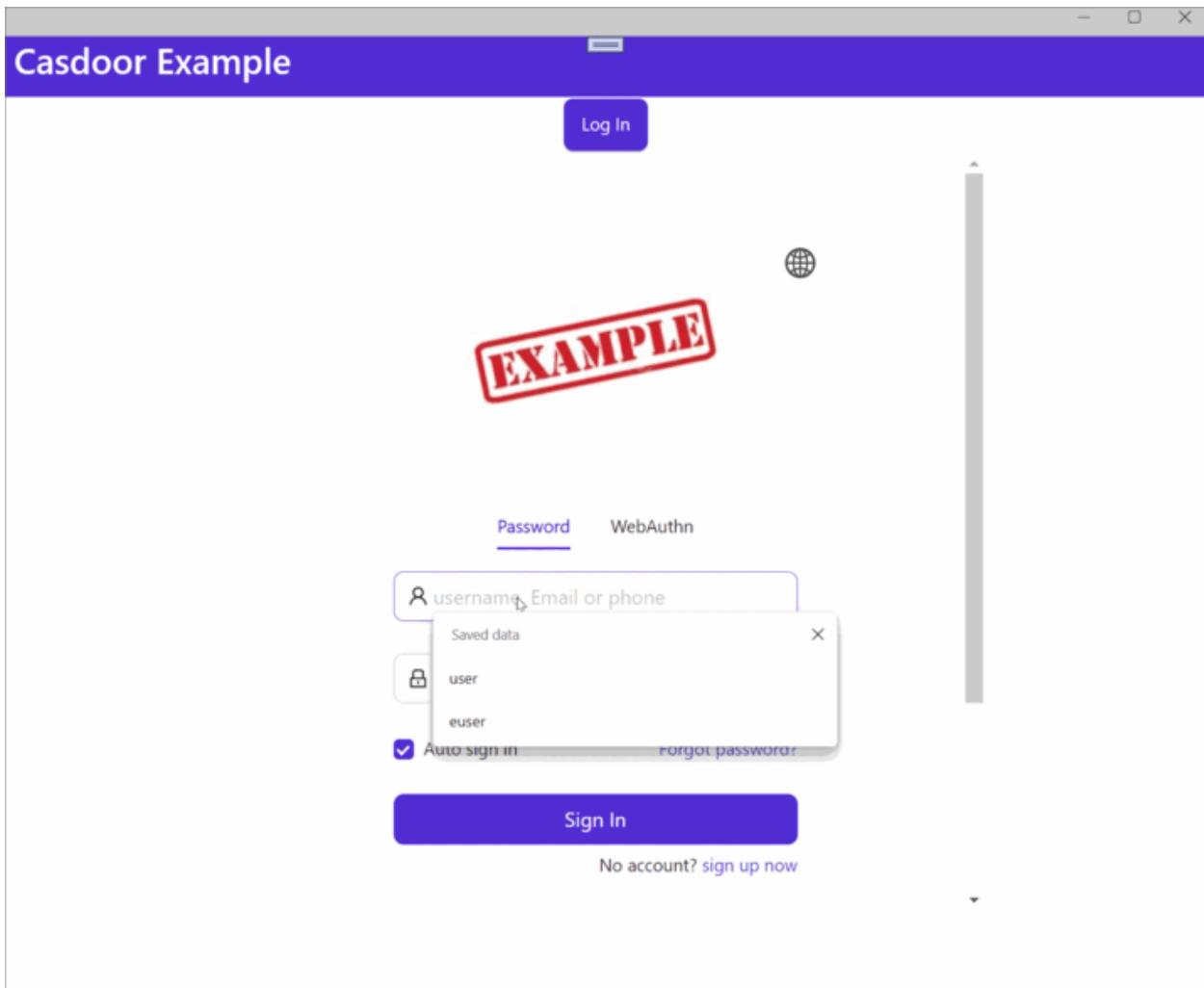
Android

21:06



.NET

## Windows



## Requirements

- [.NET 7 SDK](#) installed on your machine
- The required assets needed for your target platform(s), as described [here](#)
- Visual Studio 2022 for Windows 17.3 or Visual Studio 2022 for Mac 17.4 (optional)

# Getting Started

## Step 1: Create a MAUI Application

Create your [MAUI Application](#).

## Step 2: Add a Reference

Add a reference to the `Casdoor.MauiOidcClient` in your project.

## Step 3: Add the Casdoor Client

Add `CasdoorClient` as a singleton in the services.

```
builder.Services.AddSingleton(new CasdoorClient(new()
{
    Domain = "<your domain>",
    ClientId = "<your client>",
    Scope = "openid profile email",

#if WINDOWS
    RedirectUri = "http://localhost/callback"
#else
    RedirectUri = "casdoor://callback"
#endif
}));
```

## Step 4: Design the UI

Add code to the `MainPage` file.

## MainPage.xaml

```
<?xml version="1.0" encoding="utf-8" ?>
<ContentPage xmlns="http://schemas.microsoft.com/dotnet/2021/maui"
    xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"
    x:Class="Casdoor.MauiOidcClient.Example.MainPage">

    <ScrollView>
        <VerticalStackLayout>

            <StackLayout
                x:Name="LoginView">
                <Button
                    x:Name="LoginBtn"
                    Text="Log In"
                    SemanticProperties.Hint="Click to log in"
                    Clicked="OnLoginClicked"
                    HorizontalOptions="Center" />

                <WebView x:Name="WebViewInstance" />
            </StackLayout>

            <StackLayout
                x:Name="HomeView"
                IsVisible="false">

                <Label
                    Text="Welcome to .NET Multi-platform App UI"
                    SemanticProperties.HeadingLevel="Level2"
                    SemanticProperties.Description="Welcome to dot net
Multi-platform App UI"
                    FontSize="18"
                    HorizontalOptions="Center" />

                <Button
                    x:Name="CounterBtn"
                    Text="Click me"
```

## MainPage.cs

```
namespace Casdoor.MauiOidcClient.Example
{
    public partial class MainPage : ContentPage
    {
        int count = 0;
        private readonly CasdoorClient client;
        private string accessToken;
        public MainPage(CasdoorClient client)
        {
            InitializeComponent();
            this.client = client;

#if WINDOWS
            client.Browser = new
                WebViewBrowserAuthenticator(WebViewInstance);
#endif
        }

        private void OnCounterClicked(object sender, EventArgs e)
        {
            count++;

            if (count == 1)
                CounterBtn.Text = $"Clicked {count} time";
            else
                CounterBtn.Text = $"Clicked {count} times";

            SemanticScreenReader.Announce(CounterBtn.Text);
        }

        private async void OnLoginClicked(object sender, EventArgs
e)
        {
            var loginResult = await client.LoginAsync();
            accessToken = loginResult.AccessToken;
```

## Step 5: Support the Android Platform

Modify the `AndroidManifest.xml` file.

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/
    android">
    <application android:allowBackup="true" android:icon="@mipmap/
        appicon" android:roundIcon="@mipmap/appicon_round"
        android:supportsRtl="true"></application>
    <uses-permission
        android:name="android.permission.ACCESS_NETWORK_STATE" />
    <uses-permission android:name="android.permission.INTERNET" />
    <queries>
        <intent>
            <action
                android:name="android.support.customtabs.action.CustomTabsService"
            />
            </intent>
        </queries>
    </manifest>
```

## Step 6: Launch the Application

Visual Studio: Press Ctrl + F5 to start.

# Qt Desktop App

A [Qt desktop app example](#) for Casdoor.

## How to Run the Example

### Prerequisites

- [Qt6 SDK](#)
- [OpenSSL toolkit](#)

### Initialization

You need to initialize 7 string parameters:

Name	Description	File
endpoint	Your Casdoor server host/domain	<code>mainwindow.h</code>
client_id	The Client ID of your Casdoor application	<code>mainwindow.h</code>
client_secret	The Client Secret of your Casdoor application	<code>mainwindow.h</code>
certificate	The public key for the Casdoor application's cert	<code>mainwindow.h</code>
org_name	The name of your Casdoor organization	<code>mainwindow.h</code>

Name	Description	File
app_name	The name of your Casdoor application	mainwindow.h
redirect_url	The path of the callback URL for your Casdoor application, will be <code>http://localhost:8080/callback</code> if not provided	mainwindow.h

If you don't set the `endpoint` parameter, this project will use `http://localhost:8000` as the default Casdoor server.

## Running the Application

### Using Qt Creator

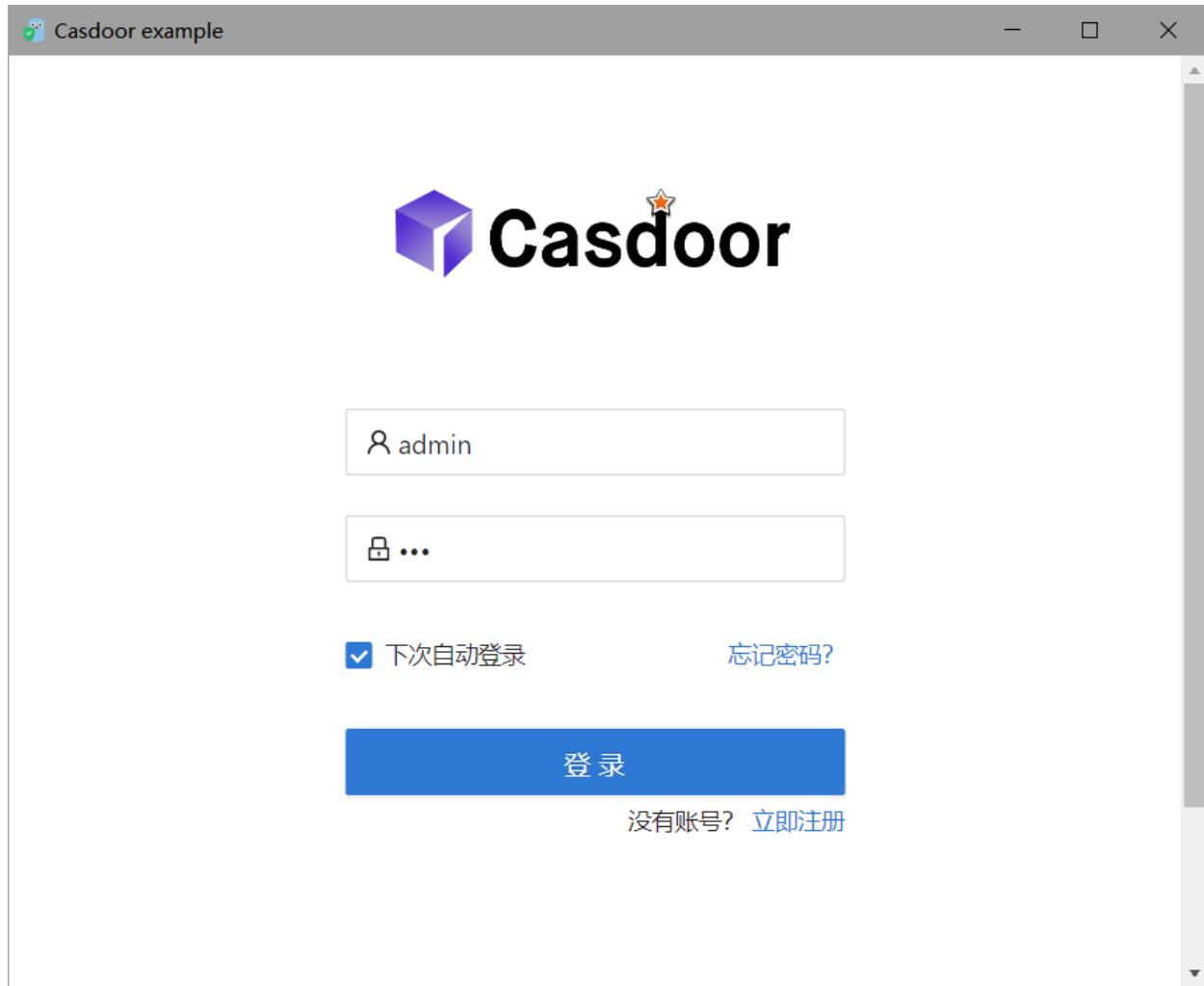
1. Open `casdoor-cpp-qt-example.pro`
2. Set the `INCLUDEPATH` of OpenSSL in `casdoor-cpp-qt-example.pro`
3. Press `Ctrl + R` to start

## Preview

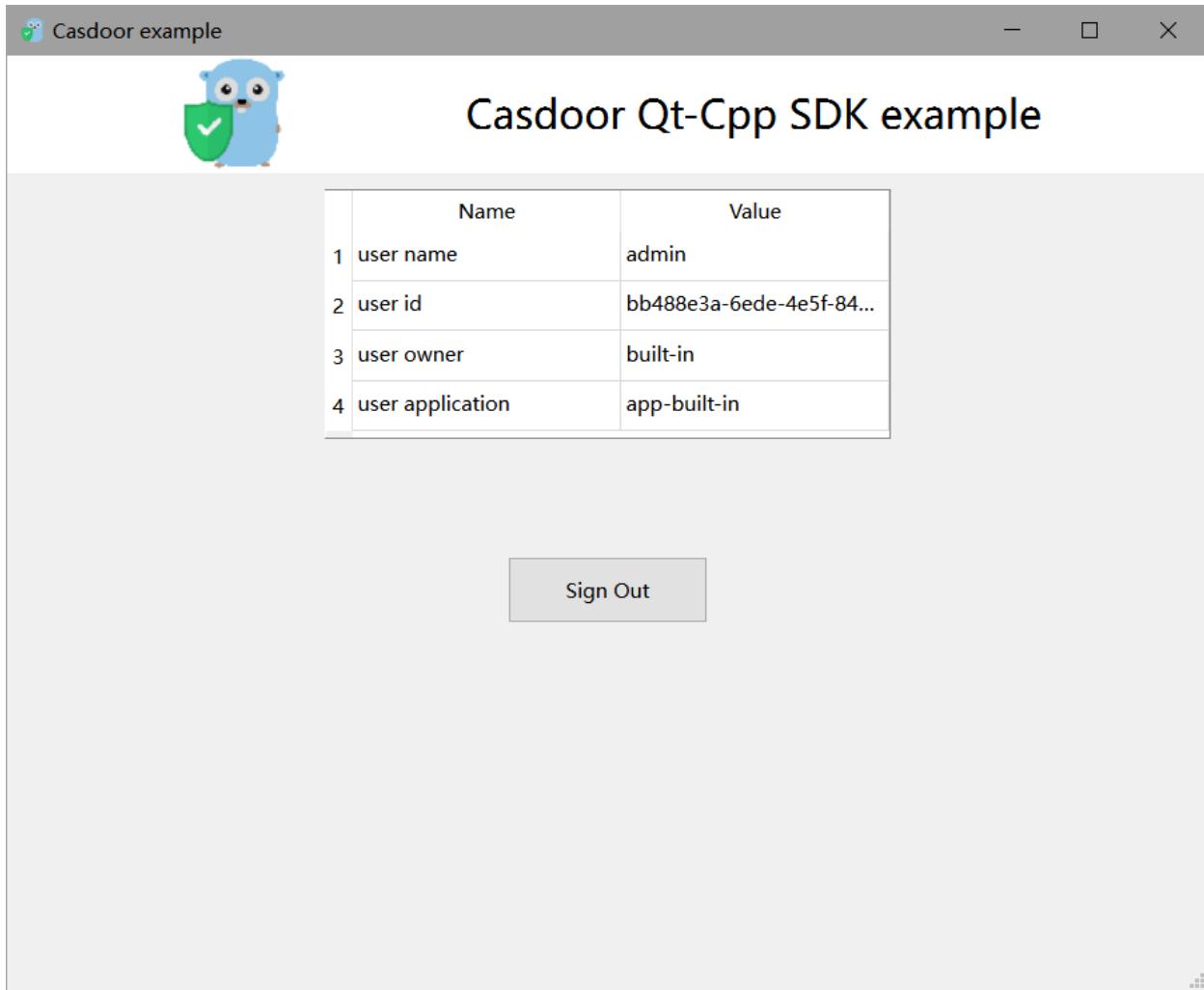
After running this Qt desktop application, a new window will be shown on your desktop.



If you click the `Sign In` button, a login window will be shown on your desktop.



After a successful login, a user profile window will be shown on your desktop, displaying your user information.



You can preview the entire process in the following GIF image.



# How to Integrate

## Opening the Login Window

```
// Load and display the login page of Casdoor
m_webview->page()->load(*m_signin_url);
m_webview->show();
```

## Listening to the Open Application Event

```
// Initialize the TcpServer object and listen on port 8080
m_tcpserver = new QTcpServer(this);
if (!m_tcpserver->listen(QHostAddress::LocalHost, 8080)) {
    qDebug() << m_tcpserver->errorString();
    close();
}
connect(m_tcpserver, SIGNAL(newConnection()), this,
SLOT(on_tcp_connected()));
```

## Using Auth Code to Get the User Info

```
// Get the token and parse it with the JWT library
std::string token = m_casdoor->GetOAuthToken(code.toStdString());
auto decoded = m_casdoor->ParseJwtToken(token);
```

# Mobile SDKs

## React Native App

A React Native mobile app example for Casdoor

# React Native App

There is a [Casdoor React Native mobile app example](#) to get you up to speed on how to use Casdoor in React Native.

## How to Run the Example

### Quick Start

- download the code

```
git clone git@github.com:casdoor/casdoor-react-native-example.git
```

- install dependencies

```
cd casdoor-react-native-example
yarn install
cd ios/
pod install
```

- run on ios

```
cd casdoor-react-native-example
react-native start
react-native run-ios
```

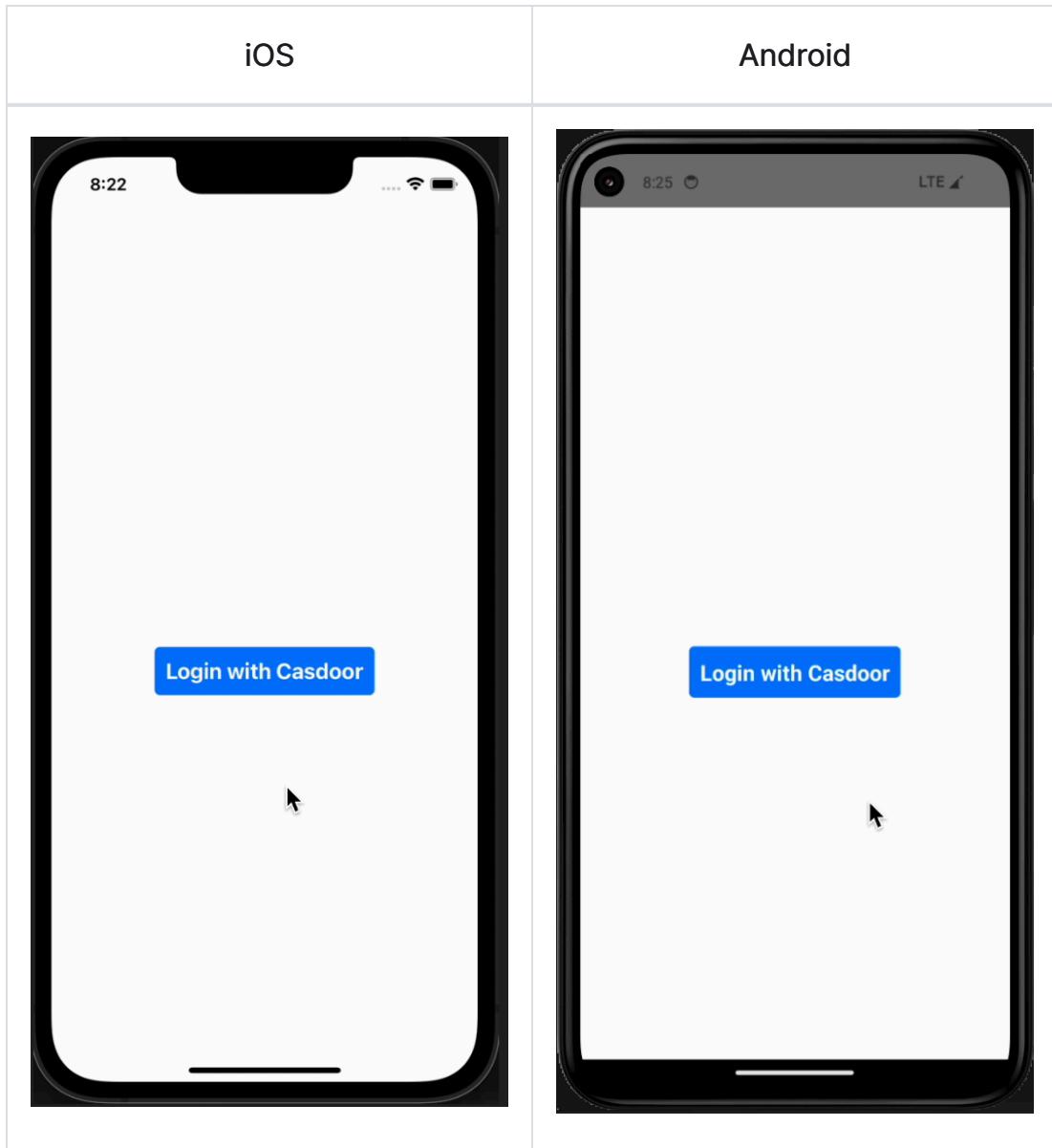
- run on android

```
cd casdoor-react-native-example  
react-native start  
react-native run-android
```

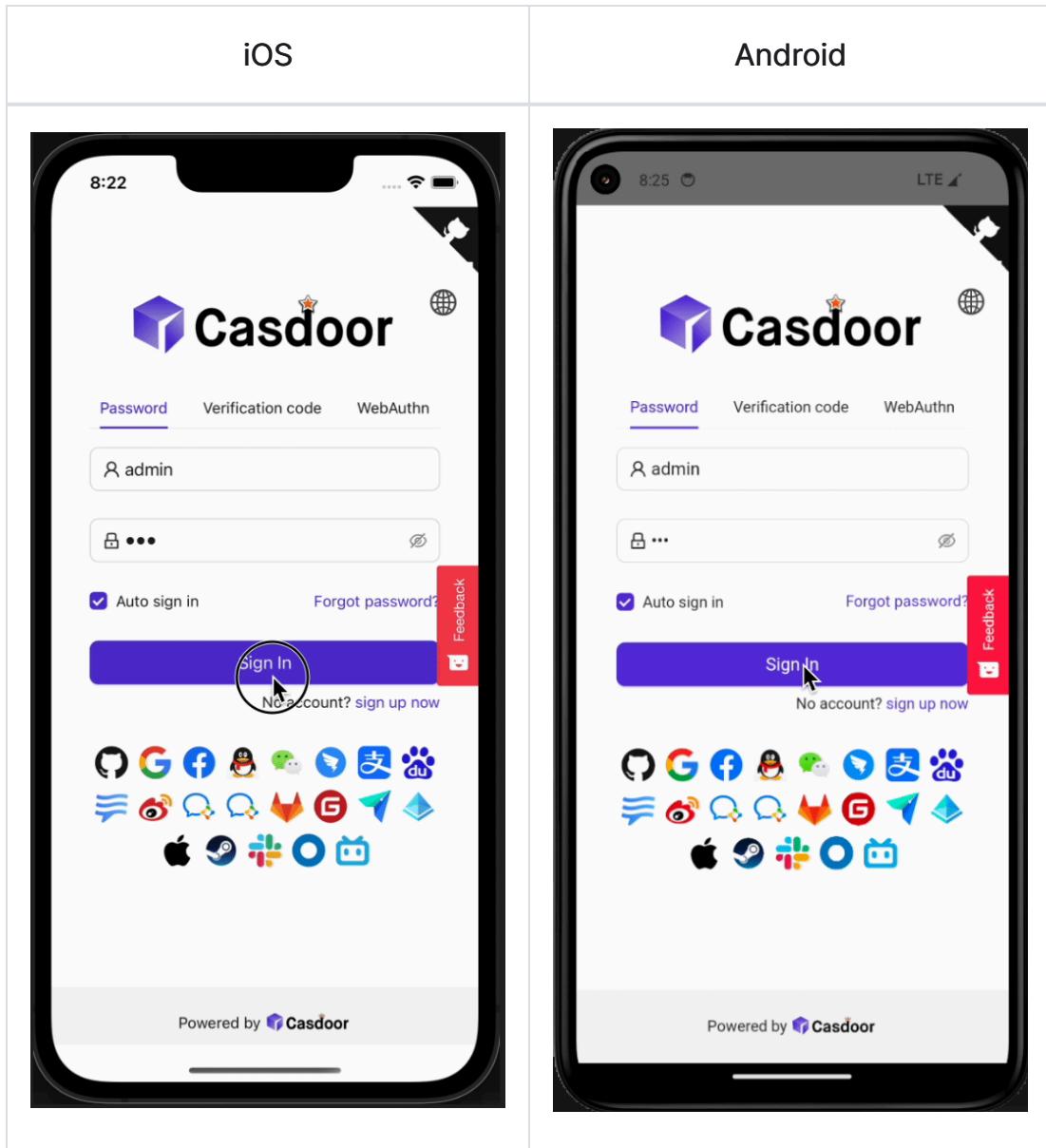
Make sure to turn on the emulator or real device before running.

## Preview

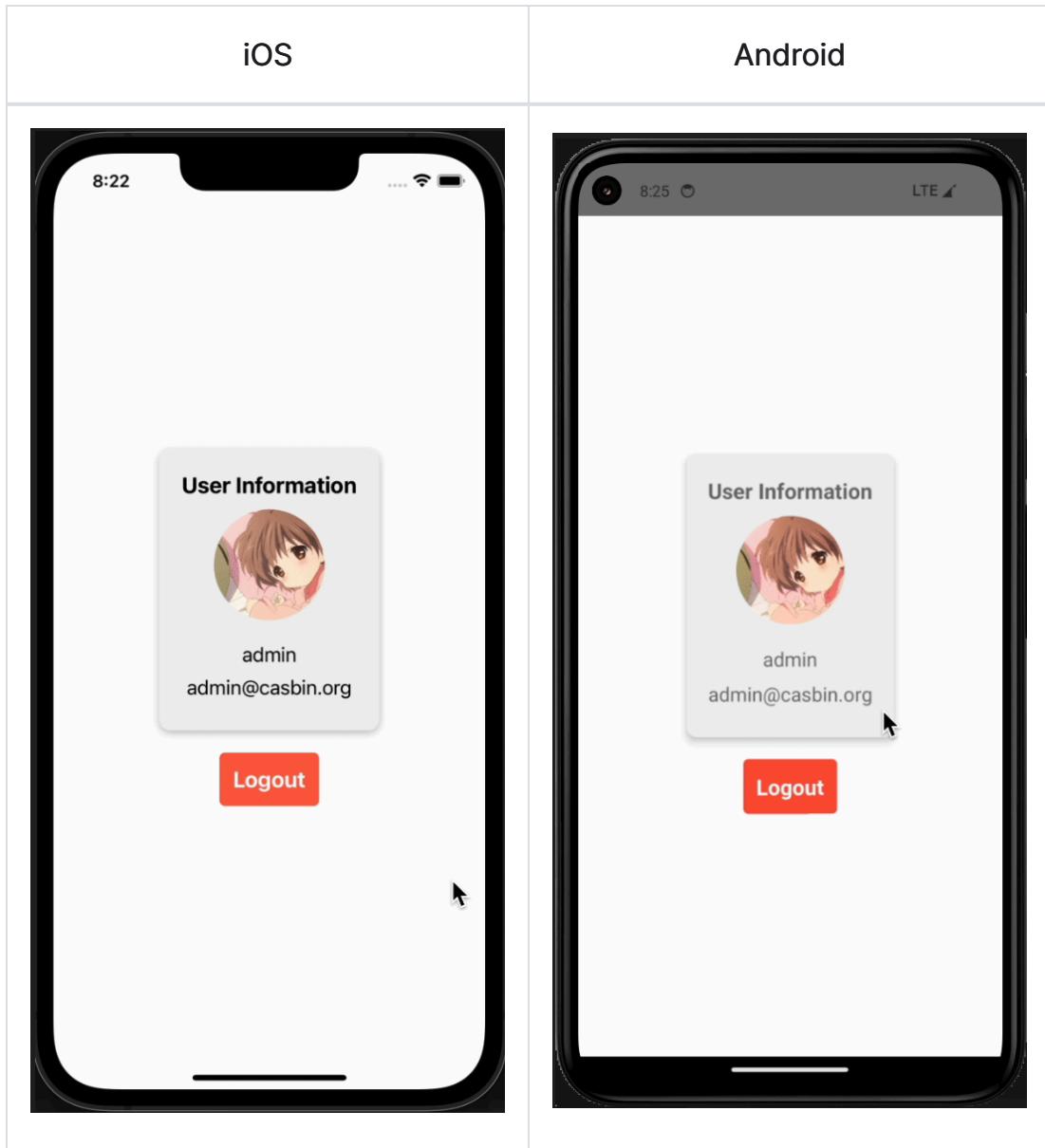
After running this react-native-example mobile application, the following window will be displayed on the emulator or real device.



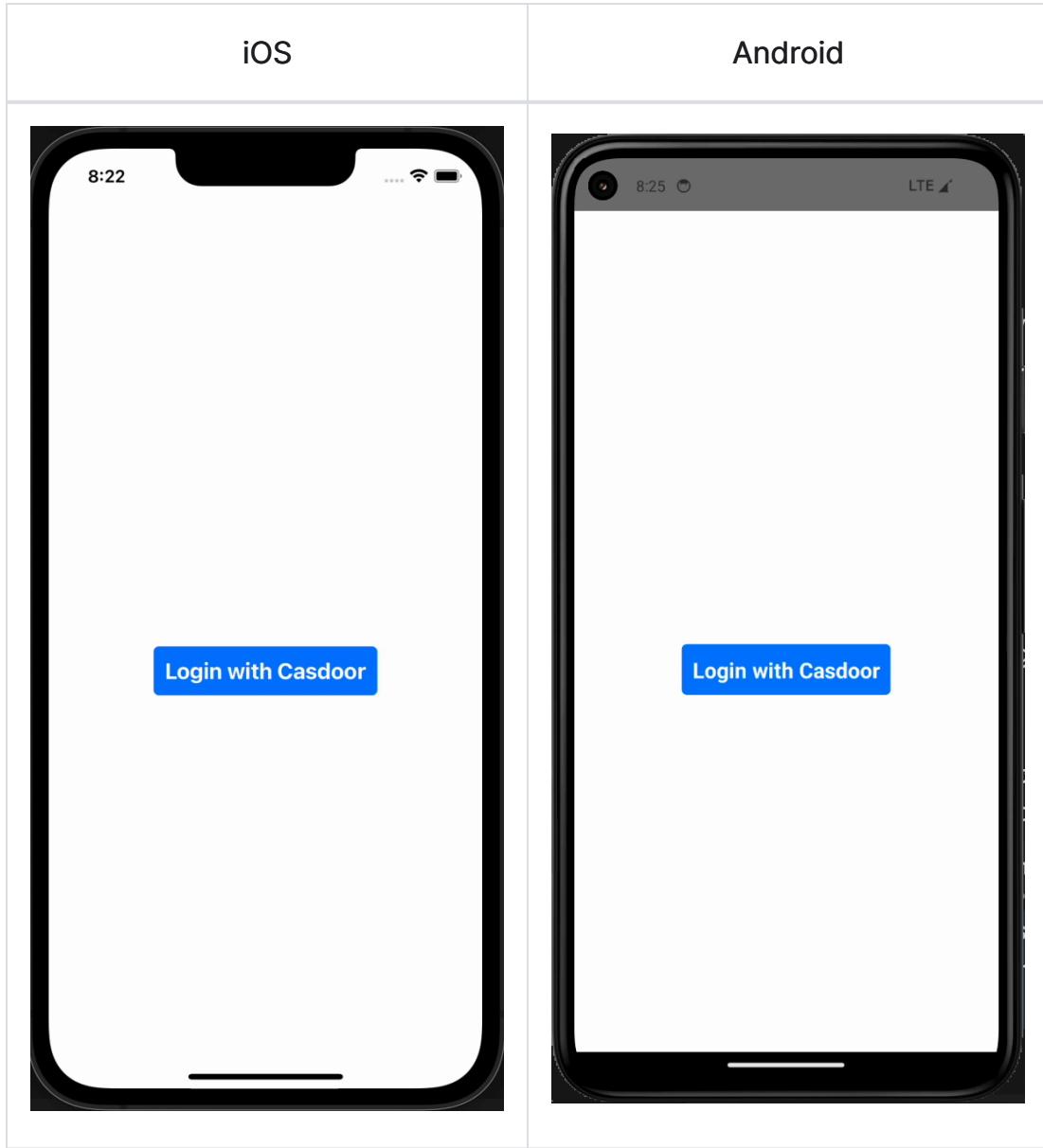
If you click the `Login with Casdoor` button, the Casdoor login window will appear on the screen.



After a successful login, a user profile window will appear on your screen displaying your user information.



You can preview the entire process in the following GIF image.



## How to Integrate

The above example uses [casdoor-react-native-sdk](#), you can also integrate this sdk in your own project.

The integration and use of the sdk is very simple, the following steps will show

you how to integrate and use:

## Step 1: Import SDK

```
# NPM  
npm i casdoor-react-native-sdk  
  
# Yarn  
yarn add casdoor-react-native-sdk
```

## Step 2: Initialize SDK

Initialization requires 7 parameters, which are all string type:

Name (in order)	Must	Description
serverUrl	Yes	your Casdoor server URL
clientId	Yes	the Client ID of your Casdoor application
appName	Yes	the name of your Casdoor application
organizationName	Yes	the name of the Casdoor organization connected with your Casdoor application
redirectPath	No	the path of the redirect URL for your Casdoor application, will be <code>/callback</code> if not provided
signinPath	No	the path of the signin URL for your Casdoor application

```
import SDK from 'casdoor-react-native-sdk'

const sdkConfig = {
  serverUrl: 'https://door.casdoor.com',
  clientId: 'b800a86702dd4d29ec4d',
  appName: 'app-example',
  organizationName: 'casbin',
  redirectPath: 'http://localhost:5000/callback',
  signinPath: '/api/signin',
};
const sdk = new SDK(sdkConfig)
```

## Step 3: Use SDK

Use the corresponding API interface of the sdk at the appropriate place.

The simplest casdoor authorization and authentication process can be realized by using the following three APIs:

```
// get the signin url
getSigninUrl()

// get Access Token
getAccessToken(redirectUrl); // http://localhost:5000/
callback?code=b75bc5c5ac65ffa516e5&state=gjmfqgf498

// decode jwt token to get user info
JwtDecode(jwtToken)
```

If you want to use other interfaces, please check [casdoor-react-native-sdk](#) for more help.

# Casdoor CLI

Casdoor CLI is the official command-line interface for [Casdoor](#), providing a powerful and intuitive way to manage your Casdoor identity and access management system directly from the terminal.

GitHub repository: <https://github.com/casdoor/casdoor-cli>

## Features

### OAuth2 Browser-Based Authentication

The CLI uses a secure browser-based OAuth2 flow for authentication, ensuring your credentials are protected through Casdoor's standard authentication mechanism.

### Secure Token Storage

Credentials are safely stored using your system's keyring interface (GNOME Keyring on Linux, Keychain on macOS), ensuring tokens never touch disk in plaintext.

### User Management

Create, update, and delete users with ease directly from the command line.

### Permission Management

Control user permissions through Casdoor's group feature with built-in roles:

- `lector`: Read-only access
- `editor`: Can create users, with limited modification rights
- `administrator`: Full control over user creation, modification, and deletion

## Group Management

Create, modify, and delete user groups to organize users and manage permissions efficiently.

## Installation

### Prerequisites

- Go 1.22.0 or higher
- macOS or Linux operating system
- GNOME Keyring (Linux) or Keychain (macOS) for secure credential storage

#### CAUTION

**Platform Support:** Currently supports macOS and Linux (tested on Debian 12 and macOS Sonoma). Windows support via WSL is not available as the CLI requires GNOME's Secret Service DBus interface (GNOME Keyring) for secure credential storage.

## macOS

```
make build TARGET_OS=darwin && make install TARGET_OS=darwin
```

# Linux

```
make build TARGET_OS=linux && make install TARGET_OS=linux
```

## Configure Your Shell

After installation, add `casdoor-cli` to your `PATH`:

For Bash users:

```
echo 'export PATH="/usr/local/bin:$PATH"' >> ~/.bashrc
source ~/.bashrc
```

For Zsh users:

```
echo 'export PATH="/usr/local/bin:$PATH"' >> ~/.zshrc
source ~/.zshrc
```

Verify the installation:

```
casdoor --help
```

# Configuration

## Casdoor Server Setup

To use the CLI, you need a configured Casdoor application. You have two options:

1. Using the provided bootstrap data: An `init_data.json` file is included in the repository to quickly bootstrap Casdoor's configuration. Refer to the [Data Initialization documentation](#) for initialization instructions.
2. Manual configuration: Create an application directly in your Casdoor admin panel and configure it according to your requirements.

## CLI Configuration

On first launch, `casdoor-cli` will prompt you to provide a `config.yaml` file containing your Casdoor connection details. See the included `config.yaml.example` file in the repository for reference.

Required configuration fields:

```
application_name: your-app-name
casdoor_endpoint: https://your-casdoor-instance.com
certificate: |
  -----BEGIN CERTIFICATE-----
  Your certificate content here
  -----END CERTIFICATE-----
client_id: your-client-id
client_secret: your-client-secret
organization_name: your-organization
redirect_uri: http://localhost:9000/callback
```

Your configuration will be securely stored in `~/.casdoor-cli/config.yaml` (base64 encoded) for subsequent use.

# Usage

## Available Commands

Usage:

```
casdoor [command]
```

Available Commands:

```
completion  Generate the autocompletion script for the specified shell
```

<b>groups</b>	Manage Casdoor permissions
<b>help</b>	Help about any command
<b>login</b>	Login to your Casdoor account
<b>logout</b>	Logout from your Casdoor account
<b>users</b>	Manage Casdoor <b>users</b>

Flags:

<b>-d, --debug</b>	verbose logging
<b>-h, --help</b>	help <b>for</b> casdoor

## Login

To authenticate with your Casdoor instance:

```
casdoor login
```

This will open your default browser for OAuth2 authentication.

## Managing Users

```
# List users
casdoor users list

# Create a user
casdoor users create

# Update a user
casdoor users update

# Delete a user
casdoor users delete
```

## Managing Groups

```
# List groups
casdoor groups list

# Create a group
casdoor groups create

# Update a group
casdoor groups update

# Delete a group
casdoor groups delete
```

## Logout

To logout from your Casdoor account:

```
casdoor logout
```

# Development

## Local Development Environment

A Docker Compose environment is provided in the repository for local testing and development:

```
docker compose up -d
```

 NOTE

Allow a few moments for the Casdoor container to fully initialize. The container will restart multiple times as it sets up the database.

## Development Configuration

Create a `config.yaml` file from the provided `config.yaml.example` template at the repository root with your local development settings.

## Testing the CLI

Test the login functionality with the default development credentials provided in the repository documentation.

Run directly with Go:

```
go run main.go login
```

Or build and install first:

```
make build TARGET_OS=darwin && make install TARGET_OS=darwin  #
For macOS
# OR
make build TARGET_OS=linux && make install TARGET_OS=linux      #
For Linux

casdoor login
```

# Casdoor Plugin

Casdoor also provides plugins or middlewares for some very popular platforms, such as Java's Spring Boot, PHP's WordPress, and Python's Odoo, among others.

For command-line interface integration, see the [Casdoor CLI](#) documentation.

Casdoor plugin	Language	Source code
Spring Boot plugin	Java	<a href="https://github.com/casdoor/casdoor-spring-boot-starter">https://github.com/casdoor/casdoor-spring-boot-starter</a>
Spring Boot example	Java	<a href="https://github.com/casdoor/casdoor-spring-boot-example">https://github.com/casdoor/casdoor-spring-boot-example</a>
WordPress plugin	PHP	<a href="https://github.com/casdoor/wordpress-casdoor-plugin">https://github.com/casdoor/wordpress-casdoor-plugin</a>
Odoo plugin	Python	<a href="https://github.com/casdoor/odoo-casdoor-oauth">https://github.com/casdoor/odoo-casdoor-oauth</a>
Django plugin	Python	<a href="https://github.com/casdoor/django-casdoor-auth">https://github.com/casdoor/django-casdoor-auth</a>
Chrome extension	JavaScript	<a href="https://github.com/casdoor/casdoor-chrome-extension">https://github.com/casdoor/casdoor-chrome-extension</a>

For a complete list of the official Casdoor plugins, please visit the [Casdoor repositories](#).

# Chrome Extension

[casdoor-chrome-extension](#) is an example of how to integrate Casdoor in a Chrome browser extension. We will guide you through the steps below.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed.

You can refer to the Casdoor official documentation for the [Server Installation](#). Please deploy your Casdoor instance in production mode.

After a successful deployment, make sure the following:

- Open your favorite browser and visit <http://localhost:8000>. You will see the login page of Casdoor.
- Test the login functionality by entering `admin` as the username and `123` as the password.

After that, you can quickly implement a Casdoor-based login page in your Chrome extension using the following steps.

## Step 2: Configure Casdoor Application

Before using Casdoor for authentication in your Chrome extension, you need to configure a Casdoor application:

1. Go to your Casdoor instance and navigate to [Applications](#).
2. Create a new application or use an existing one.
3. Configure the application settings:
  - Set the **Redirect URLs** to include your Chrome extension URL. For example: `https://<extension-id>.chromiumapp.org/` or `http://localhost:3000/callback` for development.
  - Note down the **Client ID** and **Client Secret**.
  - Make sure the application has proper OAuth settings enabled.

## Step 3: Set Up Chrome Extension

### 1. Create Manifest File

Create a `manifest.json` file in your Chrome extension project with the necessary permissions:

```
{  
  "manifest_version": 3,  
  "name": "Casdoor Chrome Extension",  
  "version": "1.0.0",  
  "description": "Chrome extension integrated with Casdoor",  
  "permissions": [  
    "identity",  
    "storage"  
,  
  "host_permissions": [  
    "http://localhost:8000/*",  
    "https://door.casdoor.com/*"  
,  
  "action": {  
    "default_popup": "popup.html",  
    "default_icon": {  
      "16": "icons/icon16.png",  
      "48": "icons/icon48.png",  
      "128": "icons/icon128.png"  
    }  
  }  
}
```

## 2. Configure Extension Identity

In the `manifest.json`, you may need to add OAuth2 configuration if using Chrome's identity API:

```
{  
  "oauth2": {  
    "client_id": "your-client-id.apps.googleusercontent.com",  
    "scopes": ["openid", "profile", "email"]  
  }  
}
```

### ⚠ CAUTION

Replace the configuration values with your own Casdoor instance, especially the `client_id` and the host permissions URLs.

# Step 4: Implement Authentication Flow

## 1. Create Background Script

Create a `background.js` file to handle the authentication:

```
const CASDOOR_ENDPOINT = "http://localhost:8000";  
const CLIENT_ID = "your-client-id";  
const CLIENT_SECRET = "your-client-secret";  
const ORGANIZATION_NAME = "built-in";  
const APPLICATION_NAME = "app-built-in";  
const REDIRECT_URI = chrome.identity.getRedirectURL();  
  
// Generate the authorization URL  
function getAuthUrl() {  
  const state = Math.random().toString(36).substring(7);  
  const authUrl = `${CASDOOR_ENDPOINT}/login/oauth/  
authorize?client_id=${CLIENT_ID}&response_type=code&redirect_uri=${encodeURIComponent(REDIRECT_URI)}&scope=openid%20profile%20email&state=${state}`;  
  
  chrome.storage.local.set({ oauthState: state });  
  
  return authUrl;  
}  
  
// Handle OAuth callback  
async function handleOAuthCallback(redirectUrl) {  
  const url = new URL(redirectUrl);  
  const code = url.searchParams.get('code');  
  const state = url.searchParams.get('state');  
  
  // Verify state  
  const { oauthState } = await chrome.storage.local.get('oauthState');  
  if (state !== oauthState) {  
    throw new Error('Invalid state parameter');  
  }  
  
  // Exchange code for token  
  const tokenResponse = await fetch(` ${CASDOOR_ENDPOINT}/api/login/oauth/access_token`, {  
    method: 'POST',  
    headers: {  
      'Content-Type': 'application/json',  
    },  
    body: JSON.stringify({  
      grant_type: 'authorization_code',  
      client_id: CLIENT_ID,  
    }),  
  })  
  const { access_token } = tokenResponse.json();  
  const userResponse = await fetch(` ${CASDOOR_ENDPOINT}/api/user/me`, {  
    headers: {  
      Authorization: `Bearer ${access_token}`  
    },  
  })  
  const user = userResponse.json();  
  console.log(user);  
}  
  
handleOAuthCallback();
```

## 2. Create Popup HTML

Create a `popup.html` file for the extension popup:

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <title>Casdoor Login</title>
  <style>
    body {
      width: 300px;
      padding: 20px;
      font-family: Arial, sans-serif;
    }
    button {
      width: 100%;
      padding: 10px;
      margin: 5px 0;
      cursor: pointer;
      background-color: #4285f4;
      color: white;
      border: none;
      border-radius: 4px;
    }
    button:hover {
      background-color: #357ae8;
    }
    #user-info {
      margin-top: 20px;
    }
  </style>
</head>
<body>
  <div id="login-section">
    <h2>Casdoor Login</h2>
    <button id="login-btn">Login with Casdoor</button>
  </div>

  <div id="user-section" style="display: none;">
    <h2>Welcome!</h2>
    <div id="user-info"></div>
    <button id="logout-btn">Logout</button>
  </div>

  <script src="popup.js"></script>
</body>
</html>
```

## 3. Create Popup Script

Create a `popup.js` file to handle user interactions:

```
document.addEventListener('DOMContentLoaded', () => {
  const loginSection = document.getElementById('login-section');
  const userSection = document.getElementById('user-section');
  const loginBtn = document.getElementById('login-btn');
  const logoutBtn = document.getElementById('logout-btn');
  const userInfo = document.getElementById('user-info');

  // Check if user is already logged in
  chrome.runtime.sendMessage({ action: 'getUser' }, (response) => {
    if (response.user) {
```

## Step 5: Load and Test the Extension

1. Open Chrome and navigate to `chrome://extensions/`.
2. Enable **Developer mode** in the top right corner.
3. Click **Load unpacked** and select your extension directory.
4. Click on the extension icon in the Chrome toolbar.
5. Click the **Login with Casdoor** button to test the authentication flow.

## Step 6: Handle Token Storage and Refresh

To maintain user sessions, you should implement token refresh logic:

```
async function refreshToken(refreshToken) {  
  const response = await fetch(`[${CASDOOR_ENDPOINT}]/api/login/oauth/refresh_token`, {  
    method: 'POST',  
    headers: {  
      'Content-Type': 'application/json',  
    },  
    body: JSON.stringify({  
      grant_type: 'refresh_token',  
      refresh_token: refreshToken,  
      client_id: CLIENT_ID,  
      client_secret: CLIENT_SECRET,  
    }),  
  });  
  
  return await response.json();  
}  
  
// Check token validity and refresh if needed  
async function getValidAccessToken() {  
  const { user } = await chrome.storage.local.get('user');  
  
  if (!user || !user.access_token) {  
    return null;  
  }  
  
  // Check if token is expired (decode JWT)  
  try {  
    const payload = JSON.parse(atob(user.access_token.split('.')[1]));  
    const expiry = payload.exp * 1000; // Convert to milliseconds  
  
    if (Date.now() >= expiry) {  
      // Token expired, refresh it  
      if (user.refresh_token) {  
        const newTokens = await refreshToken(user.refresh_token);  
        await chrome.storage.local.set({ user: newTokens });  
        return newTokens.access_token;  
      }  
      return null;  
    }  
  
    return user.access_token;  
  } catch (error) {  
    console.error('Error checking token validity:', error);  
    return null;  
  }  
}
```

## What's More

You can explore the following projects/docs to learn more about integrating Casdoor with Chrome extensions:

- [casdoor-chrome-extension](#) - Official example repository
- [Casdoor OAuth Documentation](#)
- [Chrome Extension Identity API](#)
- [Casdoor JavaScript SDK](#)



# Next.js

[nextjs-auth](#) is an example of how to integrate casdoor in a next-js project. We will guide you through the steps below.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed.

You can refer to the Casdoor official documentation for the [Server Installation](#).

Please deploy your Casdoor instance in production mode.

After a successful deployment, make sure the following:

- Open your favorite browser and visit <http://localhost:8000>. You will see the login page of Casdoor.
- Test the login functionality by entering `admin` as the username and `123` as the password.

After that, you can quickly implement a Casdoor-based login page in your own app using the following steps.

## Step 2: Add Middleware

Middleware allows you to run code before a request is completed. Then, based on the incoming request, you can modify the response by rewriting, redirecting, modifying the request or response headers, or responding directly.

Use the file `middleware.ts` (or `.js`) in the root of your project to define Middleware. For example, at the same level as `pages` or `app`, or inside `src` if

applicable.

## Example

```
//define which paths Middleware will run on
const protectedRoutes = ["/profile"];

export default function middleware(req) {
  if (protectedRoutes.includes(req.nextUrl.pathname)) {
    //redirect the incoming request to a different URL
    return NextResponse.redirect(new URL("/login", req.url));
  }
}
```

See next.js official documentation [middleware](#) for more details.

## Step 3: Use Casdoor SDK

### 1. Install the SDK

First, install `casdoor-js-sdk` via NPM or Yarn:

```
npm install casdoor-js-sdk
```

Or:

```
yarn add casdoor-js-sdk
```

## 2.Initializing the SDK

Then initialization 6 string-type parameters in the following order:

Name	Required	Description
serverUrl	Yes	Casdoor Server URL, such as <code>http://localhost:8000</code>
clientId	Yes	Application client ID
clientSecret	Yes	Application client secret
organizationName	Yes	Application organization
appName	Yes	Application name
redirectPath	Yes	redirected URL

## Example

```
const sdkConfig = {
  serverUrl: "https://door.casdoor.com",
  clientId: "294b09fbc17f95daf2fe",
  clientSecret: "dd8982f7046ccba1bbd7851d5c1ece4e52bf039d",
  organizationName: "casbin",
  appName: "app-vue-python-example",
  redirectPath: "/callback",
};
```

### ⚠ CAUTION

Replace the configuration values with your own Casdoor instance, especially the `clientId`, `clientSecret`, and `serverUrl`.

## 3.Redirect to the Login Page

When you need to authenticate users who access your app, you can send the target URL and redirect to the login page provided by Casdoor.

Make sure you have added the callback URL (e.g. <http://localhost:8080/callback>) in the application configuration beforehand.

```
const CasdoorSDK = new Sdk(sdkConfig);
CasdoorSDK.signin_redirect();
```

## 4.Get Token and Storage

After the Casdoor verification is passed, it will redirect back to your application with token.

You can opt in to use cookie to storage the token.

```
CasdoorSDK.exchangeForAccessToken()
  .then((res) => {
    if (res && res.access_token) {
      //Get Token
      return CasdoorSDK.getUserInfo(res.access_token);
    }
  })
  .then((res) => {
    // Storage Token
```

You can refer to the Casdoor official documentation for the [How to use Casdoor SDK](#).

## Step 4: Add Middleware Authentication Function

when users attempt to access a protected route, Middleware Authentication function verifies their identity. If the user is not authenticated, they are redirected to a login page or denied access.

### Example

```
//protected route
const protectedRoutes = ["/profile"];
const casdoorUserCookie = req.cookies.get("casdoorUser");
const isAuthenticated = casdoorUserCookie ? true : false;

//Authentication Function
if (!isAuthenticated &&
protectedRoutes.includes(req.nextUrl.pathname)) {
  return NextResponse.redirect(new URL("/login", req.url));
}
```

# Nuxt

[nuxt-auth](#) is an example of how to integrate casdoor in a nuxt project. We will guide you through the steps below. Many steps are similar to nextjs-auth.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed.

You can refer to the Casdoor official documentation for the [Server Installation](#). Please deploy your Casdoor instance in production mode.

After a successful deployment, make sure the following:

- Open your favorite browser and visit <http://localhost:8000>. You will see the login page of Casdoor.
- Test the login functionality by entering `admin` as the username and `123` as the password.

After that, you can quickly implement a Casdoor-based login page in your own app using the following steps.

## Step 2: Add Middleware

Middleware allows you to run code before a request is completed. Then, based on the incoming request, you can modify the response by rewriting, redirecting, modifying the request or response headers, or responding directly.

Create `.js` or `.ts` files in `middleware` directory in the root of your project to define Middleware. And the filenames are identified as the names of middleware.

For example, in `nuxt-auth`, we create a file named `myMiddleware.js` in `middleware` directory, which can be referenced as `myMiddleware` in other places like `nuxt.config.js`.

## Example

```
//define which paths Middleware will run on
const protectedRoutes = ["/profile"];

export default function ({route, redirect}) {

  if (protectedRoutes.includes(route.path)) {
    //redirect the incoming request to a different URL
    redirect('/login');
  }
}
```

To make middleware work, you should add router in `nuxt.config.js`, like that:

```
export default {
  // other configurations

  // what to add
  router: {
    middleware: ['myMiddleware'] // replace to your middleware name
  },
}
```

See nuxt official documentation [middleware](#) for more details.

# Step 3: Use Casdoor SDK

## 1. Install the SDK

First, install `casdoor-js-sdk` via NPM or Yarn:

```
npm install casdoor-js-sdk
```

Or:

```
yarn add casdoor-js-sdk
```

## 2. Initializing the SDK

Then initialization 6 string-type parameters in the following order:

Name	Required	Description
serverUrl	Yes	Casdoor Server URL, such as <code>http://localhost:8000</code>
clientId	Yes	Application client ID
clientSecret	Yes	Application client secret
organizationName	Yes	Application organization

Name	Required	Description
appName	Yes	Application name
redirectPath	Yes	redirected URL

## Example

```
const sdkConfig = {  
    serverUrl: "https://door.casdoor.com",  
    clientId: "294b09fbc17f95daf2fe",  
    clientSecret: "dd8982f7046ccba1bbd7851d5c1ece4e52bf039d",  
    organizationName: "casbin",  
    appName: "app-vue-python-example",  
    redirectPath: "/callback",  
};
```

### ⚠ CAUTION

Replace the configuration values with your own Casdoor instance, especially the `clientId`, `clientSecret`, and `serverUrl`.

## 3.Redirect to the Login Page

When you need to authenticate users who access your app, you can send the target URL and redirect to the login page provided by Casdoor.

Make sure you have added the callback URL (e.g. <http://localhost:8080/callback>) in the application configuration beforehand.

```
const CasdoorSDK = new Sdk(sdkConfig);
CasdoorSDK.signin_redirect();
```

## 4.Get Token and Storage

After the Casdoor verification is passed, it will redirect back to your application with token.

You can opt in to use cookie to storage the token.

```
CasdoorSDK.exchangeForAccessToken()
  .then((res) => {
    if (res && res.access_token) {
      //Get Token
      return CasdoorSDK.getUserInfo(res.access_token);
    }
  })
  .then((res) => {
    // Storage Token
    Cookies.set("casdoorUser", JSON.stringify(res));
  });
}
```

You can refer to the Casdoor official documentation for the [How to use Casdoor SDK](#).

## Step 4: Add Middleware Authentication Function

when users attempt to access a protected route, Middleware Authentication function verifies their identity. If the user is not authenticated, they are redirected to a login page or denied access.

## Example

```
import Cookies from "js-cookie";

const protectedRoutes = ["/profile"];

export default function ({route, redirect}) {
  const casdoorUserCookie = Cookies.get('casdoorUser');
  const isAuthenticated = !!casdoorUserCookie;

  if (!isAuthenticated && protectedRoutes.includes(route.path)) {
    redirect('/login');
  }
}
```

# OAuth 2.0

## Introduction

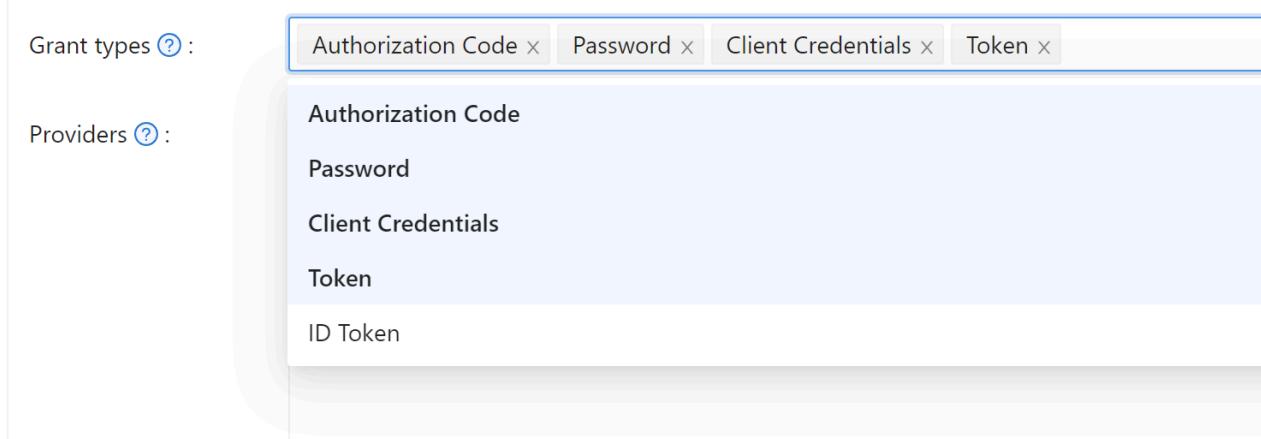
Casdoor supports using Access Token to authenticate clients. In this section, we will show you how to obtain an Access Token, how to verify an Access Token, and how to use an Access Token.

## How to Get an Access Token

There are two ways to obtain an Access Token: you can use the [Casdoor SDKs](#). For detailed information, please refer to the SDK documentation. Here, we will mainly show you how to use the API to get the Access Token.

Casdoor supports four OAuth grant types: [Authorization Code Grant](#), [Implicit Grant](#), [Resource Owner Password Credentials Grant](#), and [Client Credentials Grant](#).

For security reasons, the Casdoor app has the authorization code mode turned on by default. If you need to use other modes, please go to the appropriate app to set it.



### Authorization Code Grant

First, redirect your users to:

```
https://<CASDOOR_HOST>/login/oauth/authorize?  
client_id=CLIENT_ID&  
redirect_uri=REDIRECT_URI&  
response_type=code&  
scope=openid&  
state=STATE
```

## Available scopes

Name	Description
openid (no scope)	sub (user's id), iss (issuer), and aud (audience)
profile	user profile info, including name, displayName, and avatar
email	user's email address
address	user's address
phone	user's phone number

### INFO

Your OAuth Application can request the scopes in the initial redirection. You can specify multiple scopes by separating them with a space using %20:

```
https://<CASDOOR_HOST>/login/oauth/authorize?  
client_id=...&  
scope=openid%20email
```

For more details, please see the [OIDC standard](#)

After your user has authenticated with Casdoor, Casdoor will redirect them to:

```
https://REDIRECT_URI?code=CODE&state=STATE
```

Now that you have obtained the authorization code, make a POST request to:

```
https://<CASDOOR_HOST>/api/login/oauth/access_token
```

in your backend application:

```
{  
  "grant_type": "authorization_code",  
  "client_id": ClientId,  
  "client_secret": ClientSecret,  
  "code": Code,  
}
```

You will get the following response:

```
{  
    "access_token": "eyJhb...","  
    "id_token": "eyJhb...","  
    "refresh_token": "eyJhb...","  
    "token_type": "Bearer",  
    "expires_in": 10080,  
    "scope": "openid"  
}
```

#### NOTE

Casdoor also supports the [PKCE](#) feature. When getting the authorization code, you can add two parameters to enable PKCE:

```
&code_challenge_method=S256&code_challenge=YOUR_CHANNELLENCE
```

When getting the token, you need to pass the `code_verifier` parameter to verify PKCE. It is worth mentioning that with PKCE enabled, `Client_Secret` is not required, but if you pass it, it must be the correct value.

## Implicit Grant

Maybe your application doesn't have a backend, and you need to use Implicit Grant. First, you need to make sure you have Implicit Grant enabled, then redirect your users to:

```
https://<CASDOOR_HOST>/login/oauth/  
authorize?client_id=CLIENT_ID&redirect_uri=REDIRECT_URI&response_type=token&scope=openid&state=STATE
```

After your user has authenticated with Casdoor, Casdoor will redirect them to:

```
https://REDIRECT_URI/#access_token=ACCESS_TOKEN
```

Casdoor also supports the `id_token` as `response_type`, which is a feature of OpenID.

## Device Grant

Maybe your devices have limited input capabilities or lack a suitable browser, and you need to use Device Grant. First, you need to make sure you have Device Grant enabled, the request `device_authorization_endpoint` in OIDC discover, then use QR code or text to show `verification_uri` and lead user to enter login page.

Second, you should request `token endpoint` to get Access Token with parameter define in [rfc8628](#).

## Resource Owner Password Credentials Grant

If your application doesn't have a frontend that redirects users to Casdoor, then you may need this.

First, you need to make sure you have Password Credentials Grant enabled and send a POST request to:

```
https://<CASDOOR_HOST>/api/login/oauth/access_token
```

```
{
  "grant_type": "password",
  "client_id": ClientId,
  "client_secret": ClientSecret,
  "username": Username,
  "password": Password,
}
```

You will get the following response:

```
{
  "access_token": "eyJhb...",
  "id_token": "eyJhb...",
  "refresh_token": "eyJhb...",
  "token_type": "Bearer",
  "expires_in": 10080,
  "scope": "openid"
}
```

## Client Credentials Grant

You can also use Client Credentials Grant when your application does not have a frontend.

First, you need to make sure you have Client Credentials Grant enabled and send a POST request to

```
https://<CASDOOR_HOST>/api/login/oauth/access_token:
```

```
{
  "grant_type": "client_credentials",
  "client_id": ClientId,
  "client_secret": ClientSecret,
}
```

You will get the following response:

```
{
  "access_token": "eyJhb...",
  "id_token": "eyJhb...",
  "refresh_token": "eyJhb...",
  "token_type": "Bearer",
  "expires_in": 10080,
  "scope": "openid"
}
```

It is important to note that the AccessToken obtained in this way differs from the first three in that it corresponds to the

application rather than to the user.

## Refresh Token

Maybe you want to update your Access Token, then you can use the `refreshToken` you obtained above.

First, you need to set the expiration time of the Refresh Token in the application (default is 0 hours), and send a POST request to `https://<CASDOOR_HOST>/api/login/oauth/refresh_token`

```
{  
    "grant_type": "refresh_token",  
    "refresh_token": REFRESH_TOKEN,  
    "scope": SCOPE,  
    "client_id": ClientId,  
    "client_secret": ClientSecret,  
}
```

You will get a response like this:

```
{  
    "access_token": "eyJhb...".  
    "id_token": "eyJhb...".  
    "refresh_token": "eyJhb...".  
    "token_type": "Bearer",  
    "expires_in": 10080,  
    "scope": "openid"  
}
```

## How to Verify Access Token

Casdoor currently supports the `token introspection` endpoint. This endpoint is protected by Basic Authentication (ClientId:ClientSecret).

```
POST /api/login/oauth/introspect HTTP/1.1  
Host: CASDOOR_HOST  
Accept: application/json  
Content-Type: application/x-www-form-urlencoded  
Authorization: Basic Y2xpZW50X2lkOmNsawVudF9zzWNyZXQ=  
  
token=ACCESS_TOKEN&token_type_hint=access_token
```

You will receive the following response:

```
{  
    "active": true,  
    "client_id": "c58c...".  
    "username": "admin",  
    "token_type": "Bearer",
```

# How to Use AccessToken

You can use AccessToken to access Casdoor APIs that require authentication.

For example, there are two different ways to request `/api/userinfo`.

Type 1: Query parameter

```
https://<CASDOOR_HOST>/api/userinfo?accessToken=<your_access_token>
```

Type 2: HTTP Bearer token

```
https://<CASDOOR_HOST>/api/userinfo with the header: "Authorization: Bearer <your_access_token>"
```

Casdoor will parse the access\_token and return corresponding user information according to the `scope`. You will receive the same response, which looks like this:

```
{  
  "sub": "7a6b4a8a-b731-48da-bc44-36ae27338817",  
  "iss": "http://localhost:8000",  
  "aud": "c58c..."  
}
```

If you expect more user information, add `scope` when obtaining the AccessToken in step [Authorization Code Grant](#).

## Differences between the `userinfo` and `get-account` APIs

- `/api/userinfo`: This API returns user information as part of the OIDC protocol. It provides limited information, including only the basic information defined in OIDC standards. For a list of available scopes supported by Casdoor, please refer to the [available scopes](#) section.
- `/api/get-account`: This API retrieves the user object for the currently logged-in account. It is a Casdoor-specific API that allows you to obtain all the information of the `user` in Casdoor.

# Using Casdoor as a CAS Server

## Using Casdoor as a CAS Server

Casdoor can now be used as a CAS server. It currently supports CAS 3.0.

### Overview

The CAS endpoint prefix in Casdoor is `<Casdoor endpoint>/cas/<organization name>/<application name>`. Here is an example using the endpoint `https://door.casdoor.com` with an application named `cas-java-app` under the organization `casbin`:

- `/login` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/login`
- `/logout` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/logout`
- `/serviceValidate` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/serviceValidate`
- `/proxyValidate` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/proxyValidate`
- `/proxy` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/proxy`
- `/validate` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/validate`
- `/p3/serviceValidate` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/p3/serviceValidate`
- `/p3/proxyValidate` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/p3/proxyValidate`
- `/samlValidate` endpoint: `https://door.casdoor.com/cas/casbin/cas-java-app/samlValidate`

For more information about CAS, its different versions, and parameters for these endpoints, refer to the [CAS Protocol Specification](#).

### An Example

Here is an official example [GitHub Repository](#) that contains a web app and utilizes the official CAS Java client [GitHub Repository](#). By going through this example, you can learn how to connect to Casdoor via CAS.

 NOTE

Note: Currently, Casdoor only supports all three versions of CAS: CAS 1.0, 2.0, and 3.0.

The CAS configuration is located in `src/main/webapp/WEB-INF/web.yml`.

By default, this app uses CAS 3.0, which is specified by the following configurations:

```
<filter-name>CAS Validation Filter</filter-name>
<filter-
class>org.jasig.cas.client.validation.Cas30ProxyReceivingTicketValidationFilter</filter-
class>
```

If you want to protect this web app using CAS 2.0, change the CAS Validation Filter to the following:

```
<filter-name>CAS Validation Filter</filter-name>
<filter-
class>org.jasig.cas.client.validation.Cas20ProxyReceivingTicketValidationFilter</filter-
class>
```

For CAS 1.0, use the following:

```
<filter-name>CAS Validation Filter</filter-name>
<filter-class>org.jasig.cas.client.validation.Cas10TicketValidationFilter</filter-class>
```

For all instances of the `casServerUrlPrefix` parameter, change them to:

```
<param-name>casServerUrlPrefix</param-name>
<param-value>http://door.casdoor.com/cas/casbin/cas-java-app</param-value>
```

For all instances of the `casServerLoginUrl` parameter, change them to:

```
<param-name>casServerLoginUrl</param-name>
<param-value>http://door.casdoor.com/cas/casbin/cas-java-app/login</param-value>
```

If you need to customize more configurations, see the [Java CAS client GitHub Repository](#) for detailed information.

# SAML

## Overview

Using Casdoor as SAML IdP

## AWS Client VPN

Using Casdoor as a SAML IdP

## Keycloak

Using Casdoor as a SAML IdP

## Google Workspace

Using Casdoor as a SAML IdP

 **Appgate (POST)**

How to Use Casdoor as SAML IdP for Appgate

 **Tencent Cloud**

Using Casdoor as a SAML IdP

# Overview

Casdoor can now be used as a SAML IdP. Up to this point, Casdoor has supported the main features of SAML 2.0.

## Configuration in SP

In general, the SP requires three required fields: `Single Sign-On`, `Issuer`, and `Public Certificate`. Most SPs can obtain these fields by uploading the XML Metadata file or the XML Metadata URL for autocompletion.

The metadata of the SAML endpoint in Casdoor is `<Endpoint of casdoor>/api/saml/metadata?application=admin/<application name>`. Suppose the endpoint of Casdoor is `https://door.casdoor.com`, and it contains an application called `app-built-in`. The XML Metadata endpoint will be:

```
https://door.casdoor.com/api/saml/metadata?application=admin/app-built-in
```

You can also find the metadata in the application edit page. Click the button to copy the URL and paste it into the browser to download the XML Metadata.

```
SAML metadata ⓘ <EntityDescriptor xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns="urn:oasis:names:tc:SAML:2.0:metadata" xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata" entityID="https://door.casdoor.com">
  <IDPSSODescriptor xmlns="urn:oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol">
    <KeyDescriptor use="signing">
      <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
        <X509Data xmlns="http://www.w3.org/2000/09/xmldsig#">
          <X509Certificate xmlns="http://www.w3.org/2000/09/xmldsig#">MIIE+TCCAuGgAwIBAgIDAeJAMAOGCCqGSIB3DQEBCwUAMDYxHTAbBgNVBAoTPENhc2Rvb3IgT3JnYW5pemF0aW9uMRUxEYDVQQDEwxSYXNkb2...</X509Certificate>
        </X509Data>
      </KeyInfo>
    </KeyDescriptor>
    <NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress</NameIDFormat>
    <NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:persistent</NameIDFormat>
    <NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:transient</NameIDFormat>
  <SingleSignOnService Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location="https://door.casdoor.com/login/saml/authorize/admin/app-built-in"></SingleSignOnService>
</IDPSSODescriptor>
</EntityDescriptor>
```

Copy SAML metadata URL

## Configuration in Casdoor IdP

Casdoor supports both GET and POST `SAMLResponse`. Casdoor needs to know what types of requests the SP supports when Casdoor sends the `SAMLResponse` to the SP. You need to configure the application in Casdoor based on the `SAMLResponse` type supported by your SP.

### ⓘ INFO

If you fill in the `Reply URL`, Casdoor will send the `SAMLResponse` by POST Request. If the Reply URL is empty, Casdoor will use GET request. You might wonder how Casdoor knows the `Reply URL` of the SP if the `Reply URL` is empty. Actually, Casdoor can get the URL called `AssertionConsumerServiceURL` by parsing the `SAMLRequest` and send the request with `SAMLResponse` to `AssertionConsumerServiceURL`. The `Reply URL` will overwrite the `AssertionConsumerServiceURL` in `SAMLRequest`.

- `Reply URL`: Type in the URL of the ACS verifying the SAML response.

Grant types [?](#) : Authorization Code  Password

SAML Reply URL [?](#) : <https://mycontroller.mycompany.com/admin/saml>

Enable SAML compress [?](#) :

- Redirect URL: Type in a unique name. This may be called [Audience](#) or [Entity ID](#) in your SP. Make sure you fill the same [Redirect URL](#) here as in your SP.

Redirect URLs [?](#) :

Redirect URLs	Add
<a href="#">Redirect URL</a>	
<a href="#">appgate</a>	
<a href="#">https://git.casbin.com/user/oauth2/casdoor/callback</a>	
<a href="#">http://localhost:3000/callback</a>	

## SAML attributes

Some SP will require you to provide external attributes in SAML Response, you can add those in SAML attributes table. And you can insert user's field to it.

For example

Name	Name format	Value
<a href="https://www.aliyun.com/SAML-Role/Attributes/RoleSessionName">https://www.aliyun.com/SAML-Role/Attributes/RoleSessionName</a>	Unspecified	<code>\$user.name</code>
<a href="https://www.aliyun.com/SAML-Role/Attributes/Role">https://www.aliyun.com/SAML-Role/Attributes/Role</a>	Unspecified	<code>acs:ram::1879818006829152:role/\$user.roles,acs:ram::1879818006829152:saml-provider/testa</code>

will generate response with external [saml:Attribute](#)

```

<saml:Attribute Name="https://www.aliyun.com/SAML-Role/Attributes/RoleSessionName"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
  <saml:AttributeValue xsi:type="xs:string">admi122n@outlook.com</saml:AttributeValue>
</saml:Attribute>
<saml:Attribute Name="https://www.aliyun.com/SAML-Role/Attributes/Role"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
  <saml:AttributeValue xsi:type="xs:string"> acs:ram::1879818006829152:role/
role1,acs:ram::1879818006829152:saml-provider/testa</saml:AttributeValue>

```

### ⓘ INFO

We only support insert

`$user.owner`, `$user.name`, `$user.email`, `$user.id`, `$user.phone`, `$user.roles`, `$user.permissions`, `$user.groups`

## User profile

After successfully logging in, the user profile in the returned `SAMLResponse` from Casdoor has three fields. The attributes in the XML and the attributes of the user in Casdoor are mapped as follows:

XML Attribute Name	User field
Email	email
DisplayName	displayName
Name	name

See [https://en.wikipedia.org/wiki/SAML\\_2.0](https://en.wikipedia.org/wiki/SAML_2.0) for more information about SAML and its different versions.

## An example

`gosaml2` is a SAML 2.0 implementation for Service Providers based on etree and goxmldsig, a pure Go implementation of XML digital signatures. We use this library to test the SAML 2.0 in Casdoor as shown below.

Suppose you can access Casdoor through `http://localhost:7001/`, and your Casdoor contains an application called `app-built-in`, which belongs to an organization called `built-in`. The URLs, `http://localhost:6900/acs/example` and `http://localhost:6900/saml/acs/example`, should be added to the Redirect URLs in `app-built-in`.

```
import (
    "crypto/x509"
    "fmt"
    "net/http"

    "io/ioutil"

    "encoding/base64"
    "encoding/xml"

    saml2 "github.com/russellhaering/gosaml2"
    "github.com/russellhaering/gosaml2/types"
    dsig "github.com/russellhaering/goxmldsig"
)

func main() {
    res, err := http.Get("http://localhost:7001/api/saml/metadata?application=admin/app-built-in")
    if err != nil {
        panic(err)
    }

    rawMetadata, err := ioutil.ReadAll(res.Body)
    if err != nil {
        panic(err)
    }
}
```

Run the above code, and the console will display the following message.

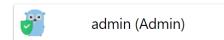
```
Visit this URL To Authenticate:  
http://localhost:7001/login/saml/authorize/admin/app-built-in?SAMLRequest=lFVbk6K8Fv0rFvNo2QR...  
Supply:  
SP ACS URL : http://localhost:6900/v1/_saml_callback
```

Click the URL to authenticate, and the login page of Casdoor will be displayed.

A screenshot of a web browser window. The address bar shows the URL: "localhost:7001/login/saml/authorize/admin/app-built-in?SAMLRequest=lFVbk6K8Fv0rFvNo2QR...". The page content is the Casdoor login interface.



Continue with :



Or sign in with another account :

Auto sign in      [Forgot password?](#)

[Sign In](#)

[Sign in with code](#)    [No account? sign up now](#)



After authenticating, you will receive the response messages as shown below.

```
← → ⌂ ⓘ localhost:6900/v1/_saml_callback?SAMLResponse=PHNhbwXwOIJc3BvbNIIHtbG5zOnNhbWxwPSJ1cm46b2FzaXM6bmFtZXMDGM6U0FNTDoyJ...  
NameID: admin@example.com  
Assertions:  
Email: [<XMLName: [Space:urn:oasis:names:tc:SAML:2.0:assertion Local:Attribute] FriendlyName: Name>Email NameFormat:urn:oasis:names:tc:SAML:2.0:attrname-format:basic Values:[ [<XMLName: [Space:urn:oasis:names:tc:SAML:2.0:assertion Local:AttributeValue] Type: Value:admin@example.com] ]</Assertion>]  
Name: [<XMLName: [Space:urn:oasis:names:tc:SAML:2.0:assertion Local:Attribute] FriendlyName: Name>Name NameFormat:urn:oasis:names:tc:SAML:2.0:attrname-format:basic Values:[ [<XMLName: [Space:urn:oasis:names:tc:SAML:2.0:assertion Local:AttributeValue] Type: Value:admin] ]</Assertion>]  
Display Name: [<XMLName: [Space:urn:oasis:names:tc:SAML:2.0:assertion Local:Attribute] FriendlyName: Name>DisplayName NameFormat:urn:oasis:names:tc:SAML:2.0:attrname-format:basic Values:[ [<XMLName: [Space:urn:oasis:names:tc:SAML:2.0:assertion Local:AttributeValue] Type: Value:Admin] ]</Assertion>]  
Warnings:  
&(OneTimeUse:false ProxyRestriction:nil) NotInAudience:false InvalidTime:false)
```





# AWS Client VPN

## Casdoor as a SAML IdP in AWS Client VPN

This guide will show you how to configure Casdoor and AWS Client VPN to add Casdoor as a SAML IdP in AWS Client VPN.

## Prerequisites

To complete this setup, you will need:

- An AWS Account with administrative rights to access configuration settings of the service provider.
- An Amazon VPC with an EC2 instance
  - [Setting up the VPC](#)
  - [Launching an EC2 instance](#)
    - In the instance Security Group, allow ICMP traffic from the VPC CIDR range - this is needed for testing.
- A private certificate imported into [AWS Certificate Manager \(ACM\)](#)
  - [Generating and importing a certificate to ACM](#)
- A Windows or Mac system running the latest AWS Client VPN software.
  - [Download the software](#)

# Configure SAML Application

- In the Casdoor Application, set the `Redirect URL` to `urn:amazon:webservices:clientvpn`.

Tags [?](#) :

Client ID [?](#) : 235aca38d69a868ae432

Client secret [?](#) : d8942f2181908041106f3b2b56c2f91fd2ad13de

Cert [?](#) : cert-built-in

Redirect URLs [?](#) :

Redirect URLs	Add
Redirect URL	
<code>urn:amazon:webservices:clientvpn</code>	

Token format [?](#) :

Token expire [?](#) : 168 Hours

Refresh token expire [?](#) : 0 Hours

Enable password  [?](#):

- Set the `SAML reply URL` to `http://127.0.0.1:35001`.

Signup HTML [?](#) :

Signin HTML [?](#) :

Grant types [?](#) : Authorization Code

SAML reply URL [?](#) : <http://127.0.0.1:35001>

Enable SAML compression [?](#) :

SAML metadata [?](#) :

```

<EntityDescriptor xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns="urn: oasis:names:tc:SAML:2.0:metadata" protocols="urn:oasis:names:tc:SAML:2.0:protocol">
  <IDPSSODescriptor xmlns="urn: oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn: oasis:names:tc:SAML:2.0:protocol">
    <KeyDescriptor use="signing">
      <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
        <x509Data xmlns="http://www.w3.org/2000/09/xmldsig#">
          ...
        </x509Data>
      </KeyInfo>
    </KeyDescriptor>
  </IDPSSODescriptor>
</EntityDescriptor>
```

- Save the content in the SAML metadata as an XML file.

SAML metadata [?](#) :

```

<EntityDescriptor xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns="urn: oasis:names:tc:SAML:2.0:metadata" xmlns:md="urn: oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn: oasis:names:tc:SAML:2.0:protocol">
  <IDPSSODescriptor xmlns="urn: oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn: oasis:names:tc:SAML:2.0:protocol">
    <KeyDescriptor use="signing">
      <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
        <x509Data xmlns="http://www.w3.org/2000/09/xmldsig#">
          <x509Certificate xmlns="http://www.w3.org/2000/09/xmldsig#">MIIE+TCCAUgIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgNVBAoTTFENhc2Rvb3IgT3JnYWYwDQYJKoZIhvcNAQEBBQADggEAMHkCz...</x509Certificate>
        </x509Data>
      </KeyInfo>
    </KeyDescriptor>
  <NameIDFormat>urn: oasis:names:tc:SAML:1.1:nameid-format:emailAddress</NameIDFormat>
  <NameIDFormat>urn: oasis:names:tc:SAML:2.0:nameid-format:persistent</NameIDFormat>
  <NameIDFormat>urn: oasis:names:tc:SAML:2.0:nameid-format:transient</NameIDFormat>
  <SingleSignOnService Binding="urn: oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location="https://test.v2tl.com/login/saml/authorize/admin/app">
    ...
  </SingleSignOnService>
</IDPSSODescriptor>
</EntityDescriptor>
```

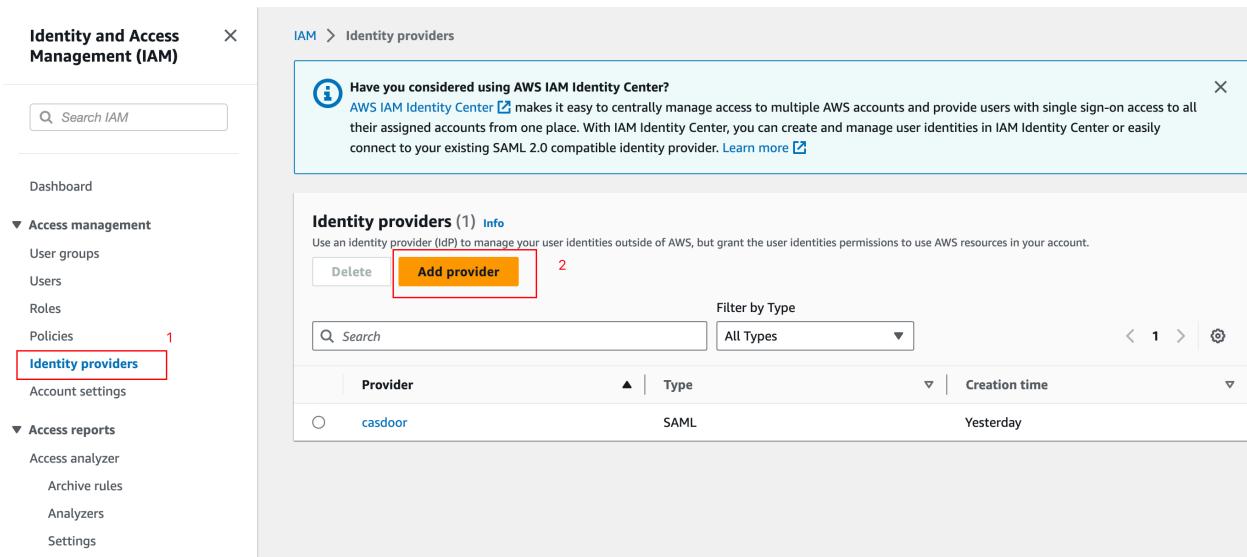
[Copy SAML metadata URL](#)

# Configure AWS

# Configure Casdoor as an AWS Identity Provider

1. Open the IAM console and select Identity providers from the navigation bar.
  2. Click Create a Provider.

3. Specify SAML for the Provider Type, add a unique name for this provider, and upload the metadata document - the same file you saved from the Casdoor Application in the previous section.
  
4. Click Next Step. On the next screen, click Create.



The screenshot shows the AWS IAM Identity providers page. On the left, there's a navigation sidebar with options like Dashboard, Access management (with Identity providers selected), and Access reports. The main area shows a single identity provider named 'casdoor' (Type: SAML, Created Yesterday). A prominent orange 'Add provider' button is highlighted with a red box and the number '2'. A tooltip at the top right encourages using AWS IAM Identity Center.

Provider	Type	Creation time
casdoor	SAML	Yesterday

## Add an Identity provider Info

### Configure provider

Provider type Info

**SAML**  
Establish trust between your AWS account and a SAML 2.0 compatible Identity Provider such as Shibboleth or Active Directory Federation Services.

**OpenID Connect**  
Establish trust between your AWS account and Identity Provider services, such as Google or Salesforce.

Provider name  
Enter a meaningful name to identify this provider  
  
Maximum 128 characters. Use alphanumeric or '-' characters.

Metadata document Info

3  
File needs to be a valid UTF-8 XML document.

## Create an AWS Client VPN Endpoint

1. Open the Amazon VPC console in an AWS Region of your choice.
2. On the left-hand side navigation, select Client VPN Endpoints under Virtual Private Network (VPN).
3. Click Create Client VPN Endpoint.
4. Enter the IP range for your remote users in the Client IPv4 CIDR field to allocate an IP range.
5. For Server Certificate ARN, select the certificate you created.
6. For Authentication Options, select Use user-based authentication, then Federated authentication.

7. For SAML provider ARN, select the identity provider you created.

8. Click Create Client VPN Endpoint.

The screenshot shows the AWS Client VPN endpoint creation process across two pages. The first page (steps 2-3) lists existing endpoints and allows creating a new one. The second page (steps 4-8) configures the new endpoint.

**Client VPN endpoints (1/1)**

- Client IPv4 CIDR**: 172.31.32.0/20
- Authentication information**
  - Server certificate ARN**: arn:aws:acm:ap-southeast-1:580652580210:certificate/f028f870-16ee-41b7-8...
  - Authentication options**:
    - Use mutual authentication
    - Use user-based authentication
  - User-based authentication options**:
    - Active directory authentication
    - Federated authentication
- SAML provider ARN**: arn:aws:iam::580652580210:saml-provider/casdoor
- Self-service SAML provider ARN - optional**: Select self-service SAML provider ARN

# Associate a Client VPN with a Target VPC

1. Select Target network associations in the Client VPN options, then click Associate target network.
2. From the drop-down menu, select the target VPC and subnet you want to associate your endpoint with.

The screenshot shows the AWS CloudFormation console interface. On the left, there's a navigation sidebar with various AWS services like Virtual private network (VPN), Customer gateways, Virtual private gateways, Site-to-Site VPN connections, Client VPN endpoints, Transit gateways, Traffic Mirroring, and others. The 'Client VPN endpoints' section is currently selected. The main area displays a table for 'Client VPN endpoints' with one item listed: 'cvpn-endpoint-06e947f15ddf5687c'. This endpoint is marked as 'Available' and has a 'Client CIDR' of '172.31.32.0/20'. Below this, a detailed view for the selected endpoint is shown. The 'Target network associations' tab is selected, and a red box highlights the 'Associate target network' button. Another red box highlights the 'cvpn-assoc-0bf639762212d5a04' row in the associated table, which shows it is 'Associated' with 'subnet-0596ebfd975cdd125' and 'sg-09d2a80e3c2795429'.

# Configure SAML Group-Specific Authorization

1. Choose the Authorization rules tab in your Client VPN options and click Add Authorize rule.
2. For Destination network to enable, specify the IP address of your EC2 instance created in the prerequisites. For example, `172.31.16.0/20`.
3. Under Grant access to, select Allow access to users in a specific access group. For example, `casdoor`.
4. Provide an optional description and click Add authorization rule.

## Add authorization rule Info

Add authorization rules to grant clients access to the networks.

Details	
Client VPN endpoint ID	<input type="checkbox"/> cvpn-endpoint-06e947f15ddf5687c
Destination network to enable access	The IP address, in CIDR notation, of the destination network. <input type="text" value="172.31.16.0/20"/> 2 <input type="button" value="X"/>
Grant access to:	<input type="radio"/> Allow access to all users <input checked="" type="radio"/> Allow access to users in a specific access group
Access group ID	Unique group identifier. It can be active directory SID or group name in IDP. <input type="text" value="casdoor"/> 3
Description - optional	A brief description of the authorization rule. <input type="text" value="description"/> 4
<input type="button" value="Cancel"/> <input type="button" value="Add authorization rule"/>	

# Connect to Client VPN

1. Select the Client VPN endpoint you just created. It should now be in the Available state.
2. Click Download Client Configuration to download the configuration profile to your desktop.
3. Open the AWS Client VPN desktop app on your machine.
4. In the top menu, select File and Manage Profiles.
5. Click Add Profile and point to the recently downloaded file.

6. You should now see the profile in the list on the AWS Client VPN software.

Select it and click Connect.

The screenshot shows the AWS VPC dashboard with the 'Virtual private cloud' section expanded. Under 'Client VPN endpoints', there is one endpoint listed:

Name	Client VPN endpoint ID	State	Client CIDR
-	cvpn-endpoint-06e947f15ddf5687c	Available	172.31.32.0/20

A red box highlights the 'Download client configuration' button. Below the table, a modal window titled 'cvpn-endpoint-06e947f15ddf5687c' displays the endpoint's details:

Details			
Client VPN endpoint ID	Server certificate ARN	Connection log	Transport protocol
cvpn-endpoint-06e947f15ddf5687c	arn:aws:acm:ap-southeast-1:580652580210:certificate/f028f870-16ee-41b7-8b4e-66a2a0ebfe33	false	udp
Description	Cloudwatch log group	Cloudwatch log group	Split-tunnel
-	-	-	Disabled

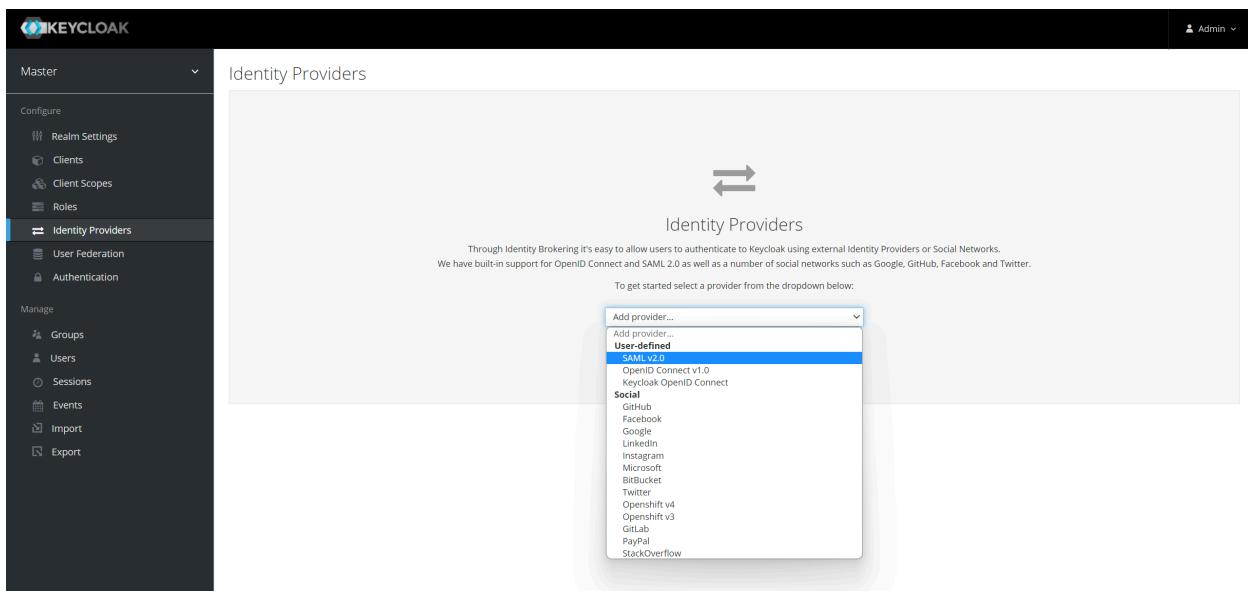
# Keycloak

## Casdoor as a SAML IdP in Keycloak

This guide will show you how to configure Casdoor and Keycloak to add Casdoor as a SAML IdP in Keycloak.

### Adding SAML IdP in Keycloak

Open the Keycloak admin page, click on **Identity Providers**, and select **SAML v2.0** from the list of providers.



#### INFO

You can visit the Keycloak SAML Identity Providers [documentation](#) to get more detailed information.

Enter the **Alias** and the **Import from URL** in the Keycloak IdP edit page. The

content of the Import from URL can be found on the Casdoor application edit page. Click Import and the SAML config will be filled automatically.

Import External IDP Config 

---

Import from URL 

**Import**

Import from file

**Save** **Cancel**

Remember the Service Provider Entity ID and save the configuration.

## Configuring the SAML application in Casdoor

In the application edit page, add a redirect URL which contains the Service Provider Entity ID from Keycloak. Also, make sure to enable SAML compress for Keycloak.

Enable SAML compress :

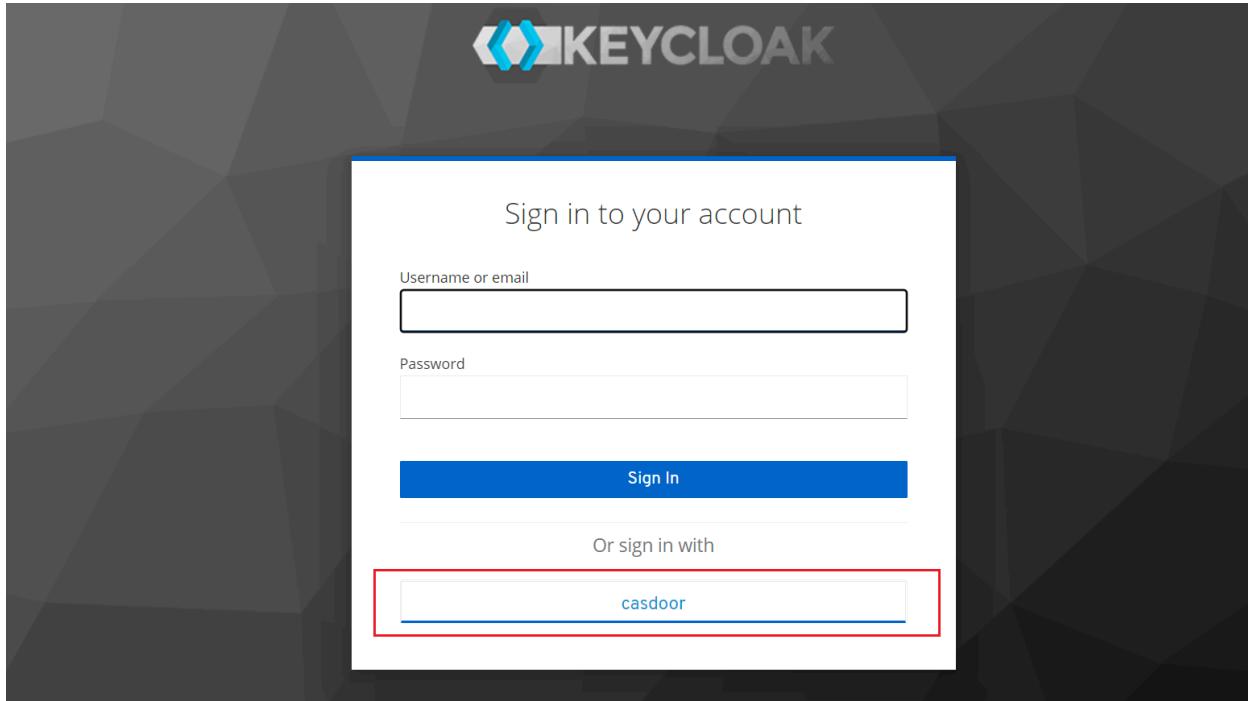
SAML metadata  :

```
<EntityDescriptor xmlns="http://www.w3.org/2000/09/xmldsig#" xmlns="urn:oasis:names:tc:SAML:2.0:metadata" xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata" entityID="http://localhost:8000">
  <IDPSSODescriptor xmlns="urn:oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol">
    <KeyDescriptor use="signing">
      <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
        <X509Data xmlns="http://www.w3.org/2000/09/xmldsig#">
          <X509Certificate xmlns="http://www.w3.org/2000/09/xmldsig#">MIIE+TCCAuGgAwIBAgIDAeJAMA0GCSqGStB3DQEBCwUAMDIxHTAbBgNVBAoTFEh2Rvb3IgT3JnYW5peF0aW9oMRUwEwYDVQQDEwxDTXNkb29yIElcnQwHhcNMjExMDExMDgxM
        </X509Data>
      </KeyInfo>
    </KeyDescriptor>
  </IDPSSODescriptor>
  <NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress</NameIDFormat>
  <NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:persistent</NameIDFormat>
  <NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:transient</NameIDFormat>
  <SingleSignOnService Bindings="urn:oasis:names:tc:SAML:2.0-bindings:HTTP-Redirect" location="http://localhost:7001/login/saml/authorize/admin/app-built-in"></SingleSignOnService>
```

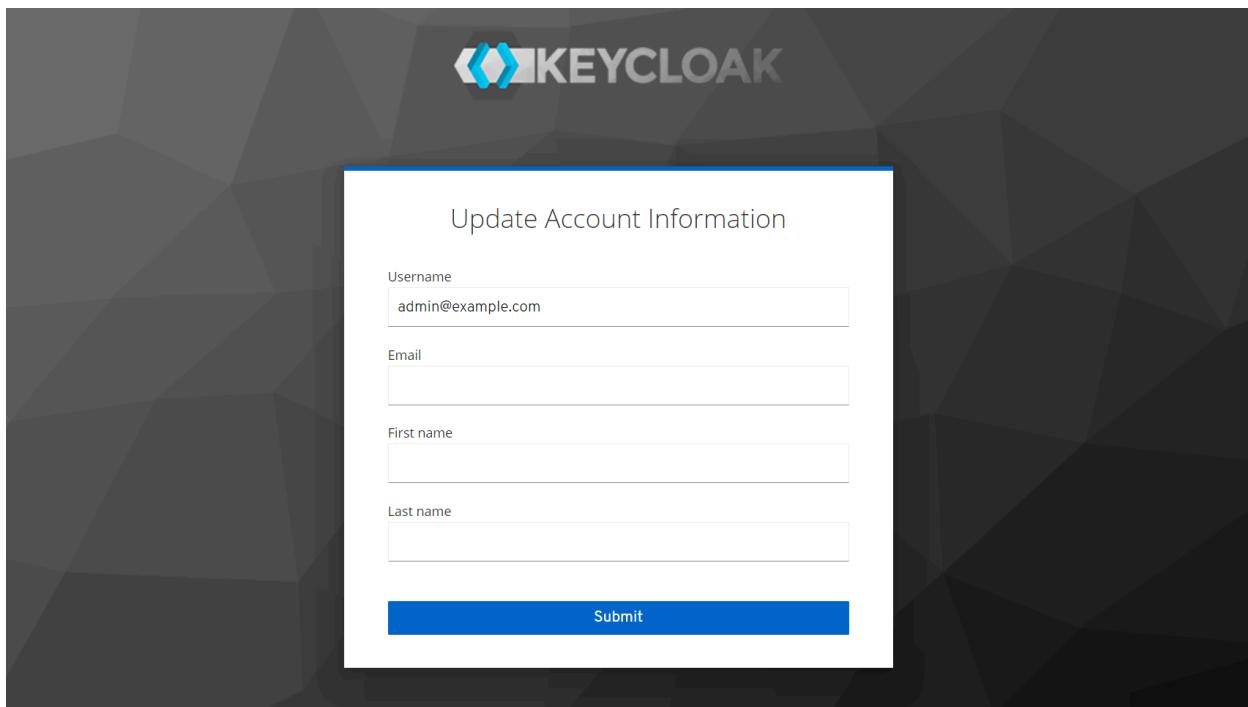
 [Copy SAML metadata URL](#)

## Logging in using Casdoor SAML

Open the Keycloak login page and you will find an additional button that allows you to log in to Keycloak using the Casdoor SAML provider.



Click on the button and you will be redirected to the Casdoor SAML provider for authentication. After successful authentication, you will be redirected back to Keycloak. Then you need to assign users to the application.



We also provide a demo video that demonstrates the entire process, which we hope will be helpful to you.

# Google Workspace

## Casdoor as a SAML IdP in Google Workspace

This guide will show you how to configure Casdoor and Google Workspace to add Casdoor as a SAML IdP in Google Workspace.

### Add Certificate

In Casdoor, add a certificate of type X.509 with RSA crypto algorithm and download it.

The screenshot shows the 'Edit Cert' page in Casdoor. The form fields are as follows:

- Organization: admin (Shared)
- Name: cert-built-in
- Display name: Built-in Cert
- Scope: JWT
- Type: x509 (highlighted with a red box)
- Crypto algorithm: RS256 (highlighted with a red box)
- Bit size: 4096
- Expire in years: 20
- Certificate: Copy certificate, Download certificate (the 'Download certificate' button is highlighted with a red box)
- Private key: Copy private key, Download private key
- Raw certificate content:

```
-----BEGIN CERTIFICATE-----  
MIIE+TCCAuGgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgN  
VBAoTFENh
```
- Raw private key content:

```
-----BEGIN PRIVATE KEY-----  
MIJKQIBAAKCAgEAslnpb5E1ym0f1RfSDSSE8IR7y+iw+RJi74e5ejrq4b8zM  
Y
```

### Configure SAML Application

On the application edit page, select the certificate you just created. Add the domain name of the Google application you will use in the **Redirect URLs**, such as google.com.

Cert ⓘ :	cert-built-in								
Redirect URLs ⓘ :	<table><tr><td>Redirect URLs</td><td>Add</td></tr><tr><td>Redirect URL</td><td><table><tr><td>🔗 google.com</td><td>▲ ▼ 🗑</td></tr><tr><td>🔗 gmail.com</td><td>▲ ▼ 🗑</td></tr></table></td></tr></table>	Redirect URLs	Add	Redirect URL	<table><tr><td>🔗 google.com</td><td>▲ ▼ 🗑</td></tr><tr><td>🔗 gmail.com</td><td>▲ ▼ 🗑</td></tr></table>	🔗 google.com	▲ ▼ 🗑	🔗 gmail.com	▲ ▼ 🗑
Redirect URLs	Add								
Redirect URL	<table><tr><td>🔗 google.com</td><td>▲ ▼ 🗑</td></tr><tr><td>🔗 gmail.com</td><td>▲ ▼ 🗑</td></tr></table>	🔗 google.com	▲ ▼ 🗑	🔗 gmail.com	▲ ▼ 🗑				
🔗 google.com	▲ ▼ 🗑								
🔗 gmail.com	▲ ▼ 🗑								

In the SAML reply URL field, enter `https://www.google.com/a/<your domain>/acs`, which is the ACS URL. You can find relevant information about ACS URL here: [SSO assertion requirements](#).

SAML reply URL	<a href="https://www.google.com/a/casbin.com/acs">https://www.google.com/a/casbin.com/acs</a>
Enable SAML compression	<input checked="" type="checkbox"/>
SAML metadata	<pre>&lt;EntityDescriptor xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns="urn:oasis:names:tc:SAML:2.0:metadata" xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata"&gt;     &lt;IDPSSODescriptor xmlns="urn:oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol"&gt;         &lt;KeyDescriptor use="signing"&gt;             &lt;KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#"&gt;                 &lt;X509Data xmlns="http://www.w3.org/2000/09/xmldsig#"&gt;                     &lt;X509Certificate xmlns="http://www.w3.org/2000/09/xmldsig#"&gt;MIIE+TCCAuGgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgNVBAotTFENhc2Rvb3IgT3JnYWYwDQYJKoZIhvcNAQELBQADggEAMHk...&lt;/X509Certificate&gt;                 &lt;/X509Data&gt;             &lt;/KeyInfo&gt;         &lt;/KeyDescriptor&gt;     &lt;/IDPSSODescriptor&gt; &lt;/EntityDescriptor&gt;</pre>
	<a href="#">Copy SAML metadata URL</a>

Copy the sign-in page URL. This will be used in the next step.

Providers [?](#)

Name	Category	Type	Can signup	Can signin	Can unlink	Prompted	Rule	Action

No data

Preview [?](#)

The screenshot shows the Casdoor provider configuration interface. At the top, there's a table with columns for Name, Category, Type, Can signup, Can signin, Can unlink, Prompted, Rule, and Action. A single row is present with empty fields and a copy icon in the Action column. Below this is a 'Preview' section with two side-by-side cards. The left card is titled 'Copy signup page URL' and shows a sign-up form with fields for Username, Display name, Password, and Confirm. The right card is titled 'Copy signin page URL' and shows a sign-in form with fields for username, password, and a 'Sign In' button.

## Add Third-Party SAML IdP for Google Workspace

In the Google Workspace Admin console, navigate to **Security** and then **Overview**. Look for the **SSO with third-party IdP** section. Click on "Add SSO profile" to access the editing page. Check the "Set up SSO with third-party identity provider" checkbox. Paste the copied sign-in page URL into the **Sign-in page URL** and **Sign-out page URL** fields. Upload the certificate downloaded in the previous step. Click "Save" to save the changes.

The screenshot shows the Google Workspace Admin console interface. On the left, there's a sidebar with navigation links like Home, Dashboard, Directory, Devices, Apps, Security, Overview (which is selected), Alert centre, Authentication, 2-step verification, Account recovery, Advanced Protection Programme, Login challenges, Passwordless (BETA), and Password management. The main content area has a header "Search for users, groups or settings" and a breadcrumb path "Security > SSO with third-party IDPs > Third-party SSO profile for your organisation". The main content is titled "Single Sign-On (SSO) with third-party Identity Providers (IDPs)". It includes a section for "Third-party identity provider" with a checked checkbox for "Set up SSO with third-party identity provider". Below this, there are fields for "Sign-in page URL" containing "https://localhost/login/oauth/authorize?client\_id=12" and "Sign-out page URL" containing "https://localhost/login/oauth/authorize?client\_id=12". A "Verification certificate" section shows a message "A certificate file has been uploaded" and a "REPLACE CERTIFICATE" button. A note at the bottom says "The certificate file must contain the public key for Google to verify sign-in requests." with a "Learn more" link.

## Add Users for Testing

In Google Workspace, create a user with the username "test" (you can customize the username, this is just an example).

Your new user can start using Google Workspace within 24 hours. In most cases, it should just take a few minutes.



test test

Username: test@casbin.com

[COPY PASSWORD](#) [PRINT](#)

## Send sign-in instructions

The email will provide a link to set the password and sign in to Google Workspace

## PREVIEW AND SEND



The user will be assigned licences based on your current subscriptions. [View billing](#)

## ADD ANOTHER USER

DONE

In Casdoor, add a user with the same username as set in Google Workspace. Make sure to select the appropriate organization and enter the user's email address.

Organization [?](#) : built-in

ID [?](#) : 4899cef3-8eeb-485a-8f6d-12b41df0d8d2

Name [?](#) : test

Display name [?](#) : test

Avatar [?](#) :

Preview:



Upload a photo...

User type [?](#) : normal-user

Password [?](#) : [Modify password...](#)

Email [?](#) : test@casbin.com

Phone [?](#) : +1 34086653696

As an example using "google.com," follow these steps:

1. Click on the login button on the Google.com page. Enter the user's email address to initiate the login process.
2. You will be redirected to the Casdoor page. On the Casdoor page, enter the corresponding email address and password.
3. If the login is successful, you will be redirected back to google.com.

Gmail Images ☰ Sign in



Google Search I'm Feeling Lucky

Google offered in: 日本語

Japan

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# Appgate (POST)

## Casdoor as a SAML IdP in Appgate

Appgate accepts the `SAMLResponse` sent by a POST request. If you use another Service Provider (SP) that also supports a POST request, you can refer to this document.

### Casdoor Configuration

Go to your Casdoor account and add a new application.

Enter basic SAML configuration in the application:

- Redirect URLs – Type in a unique name. This may be called `Audience` or `Entity ID` in your SP. See the table below.

Redirect URLs [?](#) :

Redirect URLs	Add
Redirect URL	
<a href="#">🔗 appgate</a>	
<a href="#">🔗 https://git.casbin.com/user/oauth2/casdoor/callback</a>	
<a href="#">🔗 http://localhost:3000/callback</a>	

- Reply URL – Type in the URL of the ACS (Assertion Consumer Service) that verifies the SAML response. Refer to the table below.

Grant types [?](#) :  Authorization Code  Password

SAML Reply URL [?](#) : <https://mycontroller.mycompany.com/admin/saml>

Enable SAML compress [?](#) :

Administrator Authentication	User Authentication
Redirect URL = "AppGate"	Redirect URL = "AppGate Client"
SAML Reply URL = <a href="https://mycontroller.your-site-url.com/admin/saml">https://mycontroller.your-site-url.com/admin/saml</a>	SAML Reply URL = <a href="https://redirectserver.your-site-url.com/saml">https://redirectserver.your-site-url.com/saml</a>

## Download the XML metadata file

You can copy the URL of the metadata and download the file from your browser.

Enable SAML compress [?](#) :

SAML metadata [?](#) :

```
<KeyDescriptor use="signing">
<KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#>
<X509Data xmlns="http://www.w3.org/2000/09/xmldsig#>
<X509Certificate xmlns="http://www.w3.org/2000/09/xmldsig#">MIIE+TCCAuGgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgNVBAoTFENhc2Rvb3IgT3JnYW5pemF0aW9uMRUwEwYDVQQDEwxSYXnkba...</X509Data>
</X509Data>
</KeyInfo>
</KeyDescriptor>
<NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress</NameIDFormat>
<NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:persistent</NameIDFormat>
<NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:transient</NameIDFormat>
<SingleSignOnService Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location="https://door.casdoor.com/login/saml/authorize/admin/app-gitea"><SingleSignOnService>
<Attribute Name="Email" NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic" FriendlyName="E-Mail" xmlns="urn:oasis:names:tc:SAML:2.0:assertion"></Attribute>
<Attribute Name="DisplayName" NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:basic" FriendlyName="displayName" xmlns="urn:oasis:names:tc:SAML:2.0:assertion"></Attribute>
```

# Add SAML IdP in Appgate

In your AppGate SDP console:

- Select System > Identity Providers.
- Create a new Identity Provider.
- Choose the type SAML.
- Start configuring your identity provider following the details in the tables below.

Administrator Authentication	
Name	Enter a unique name, e.g. "Casdoor SAML Admin".
Single Sign-on URL	See below
Issuer	See below
Audience	Type in the Redirect URL from the Casdoor application
Public Certificate	See below

- Upload the XML Metadata file to autocomplete the Single Sign-On, Issuer, and Public Certificate fields.
- Click Choose a file and select the metadata file that you previously downloaded - this will autocomplete the relevant fields.

## Map Attributes

Map the Name to username. Your completed form should look something like this:

The screenshot shows a user interface titled "Map Attributes to User Claims". At the top right is a blue button labeled "Add New" with a plus sign icon. Below the title, there is a single row in a table-like structure. The first column contains the text "Name mapped to claim username". The second column is empty. The entire row is highlighted with a light gray background.

## Test Integration

On your AppGate SDP Controller console:

- Log out of the admin UI.
- Log in using the following information:
  - Identity Provider – choose your Azure IdP from the drop-down list.
  - Click **Sign in with browser** to connect to your authenticator.
- You may see the following message: "You don't have any administration rights" – this confirms that the test user credentials have been successfully authenticated by your Identity Provider.

## Access Policy

You need to modify the access policy to allow administrators to log in to Appgate using the SAML IdP. Enter the Builtin Administrator Policy:

Your completed form should look something like this:

## Editing Policy - Admin

- Enabled  
 Disabled

Assignment - Active when custom logic is met ▾

 Add New

Custom Logic (1 OR 3) AND 2

- 1 Identity Provider is local
- 2 user.username is admin
- 3 Identity Provider is Casdoor SAML Admin



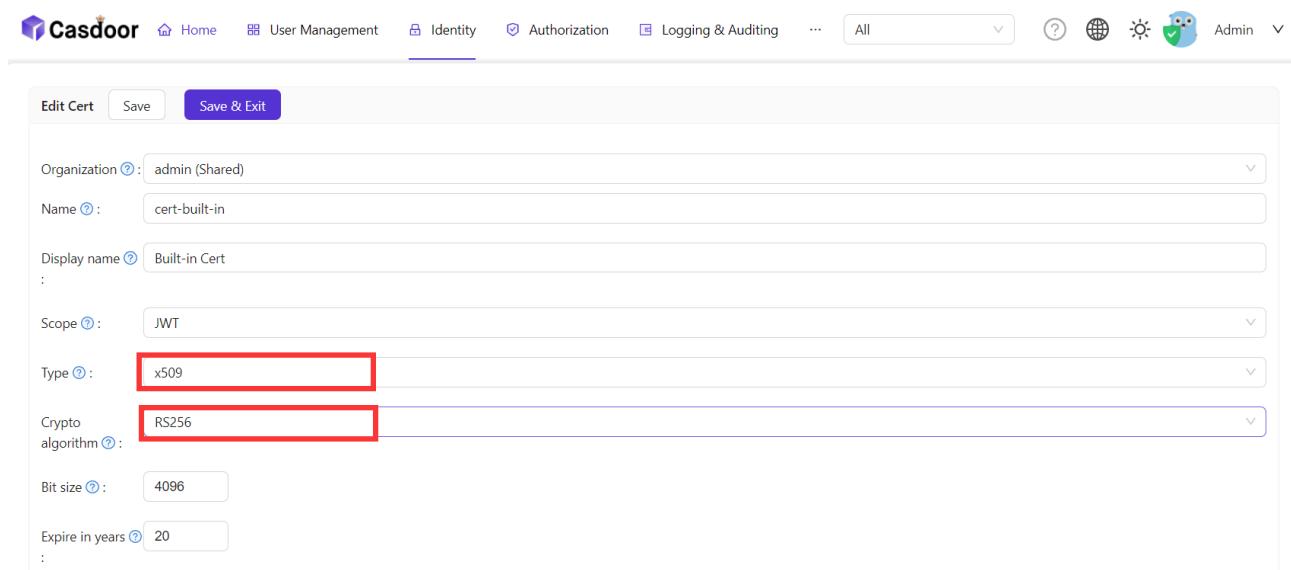
# Tencent Cloud

## Casdoor as a SAML IdP in Tencent Cloud

This guide will show you how to configure Casdoor and Tencent Cloud to add Casdoor as a SAML IdP in Tencent Cloud.

### Copy Saml MetaData

In Casdoor, add a certificate of type X.509 with RSA crypto algorithm.



The screenshot shows the Casdoor interface for managing certificates. The 'Type' field is set to 'x509' and the 'Crypto algorithm' field is set to 'RS256'. Both of these fields are highlighted with red boxes.

Then copy the SamlMetadata in Casdoor.



The screenshot shows the Saml metadata XML code copied from Casdoor. A large portion of the XML code is highlighted with a red box, starting with the EntityDescriptor tag and ending with the SingleSignOnService tag.

```
<EntityDescriptor xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns="urn:oasis:names:tc:SAML:2.0:metadata" xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata" entityID="http://localhost:7001/login/saml/authorize/admin/application_tencent_cloud">
    <IDPSSODescriptor xmlns="urn:oasis:names:tc:SAML:2.0:metadata" protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol">
        <KeyDescriptor use="signing">
            <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
                <X509Data xmlns="http://www.w3.org/2000/09/xmldsig#">
                    <X509Certificate xmlns="http://www.w3.org/2000/09/xmldsig#">MIIE+TCCAUgGwIBAgIDAeJAMAOGCSqGSib3DQEBCwUAMDIxHTAbBgNVBAoTFENhc2Rvb3IgT3JnYW5pemF0aW9uMRUwEwYDVQQDEwxDIYNkb2S...
                </X509Data>
            </KeyInfo>
        </KeyDescriptor>
        <NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress</NameIDFormat>
        <NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:persistent</NameIDFormat>
        <NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:transient</NameIDFormat>
    <SingleSignOnService Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location="http://localhost:7001/login/saml/authorize/admin/application_tencent_cloud"></SingleSignOnService>
</IDPSSODescriptor>
</EntityDescriptor>
```

[Copy SAML metadata URL](#)

Providers :

Providers [Add](#)

### Adding SAML IdP in Tencent Cloud

Log in to Tencent Cloud and enter the access management interface.

The screenshot shows the Tencent Cloud Account Center interface. On the left sidebar, under '账号中心' (Account Center), the '访问管理' (Access Management) option is selected. The main content area displays '账号信息' (Account Information) with fields like '账号昵称' (Account Nickname), '认证状态' (Authentication Status), and '所属行业' (Industry). Below this is the '登录方式' (Login Methods) section, which lists various authentication methods such as WeChat, QQ, Enterprise WeChat, Email, and WeChat Public Account, each with a status indicator (e.g., '支持微信扫码授权登录' (Supports WeChat QR code authorization login)). A red box highlights the '访问管理' (Access Management) button in the top right corner of the main content area.

Create a new Identity Providers and upload the previously copied saml metadata to Tencent Cloud.

The screenshot shows the Tencent Cloud Access Management interface. On the left sidebar, under '身份提供商' (Identity Provider), the '角色SSO' (Role SSO) option is selected. The main content area is titled '角色SSO' (Role SSO) and contains a '新建提供商' (Create Provider) button. A blue box highlights this button. The page also includes a detailed description of '身份提供商(IdP)使用背景' (Background of Identity Provider(IdP)) and a table for managing providers. The table has columns for '提供商名称' (Provider Name), '提供商类型' (Provider Type), '创建时间' (Creation Time), '最后更新时间' (Last Update Time), and '操作' (Operations). A red box highlights the '角色SSO' (Role SSO) option in the sidebar.

Then Create a new ROLE and select the previously Identity Providers as idp provider.

## Configuring the SAML application in Casdoor

On the application edit page, select the certificate you just created. Add the domain name of the Tencent Cloud application you will use in the Redirect URLs.

In the application edit page, enter the ACS URL and configure the Saml Attribute.

The configuration information for Saml Attribute is as follows:

Name	Name Format	Value
<code>https://cloud.tencent.com/SAML/Attributes/Role</code>	Unspecified	<code>qcs::cam::uin/{AccountID}:roleName/{RoleName1};qcs::cam::uin/{AccountID}:roleName/{RoleName2},qcs::cam::uin/provider/{ProviderName}</code>
<code>https://cloud.tencent.com/SAML/Attributes/RoleSessionName</code>	Unspecified	<code>casdoor</code>

#### ⓘ INFO

- In the Role source attribute, replace {AccountID}, {RoleName}, and {ProviderName} with the following content:
- Replace {AccountID} with your Tencent Cloud account ID, which can be viewed in the [Account Information - Console](#).
- Replace {RoleName} with the role name you created in Tencent Cloud, which can be viewed in the [Roles - Console](#).
- Replace {ProviderName} with the name of the SAML identity provider you created in Tencent Cloud, which can be viewed in the [Identity Providers - Console](#).

You can visit the Tencent Cloud SAML Identity Providers [documentation](#) to get more detailed information.

## Logging in using Casdoor SAML

The general login steps for SAML are as follows: User → Tencent Cloud (not logged in) → Redirect to Casdoor for login → Tencent Cloud (logged in). Now, use code externally to simulate the first two steps and generate a URL that redirects to Casdoor. Sample code:

```
func main() {
    res, err := http.Get("your casdoor application saml metadata url")
    if err != nil {
        panic(err)
    }

    rawMetadata, err := ioutil.ReadAll(res.Body)
    if err != nil {
        panic(err)
    }

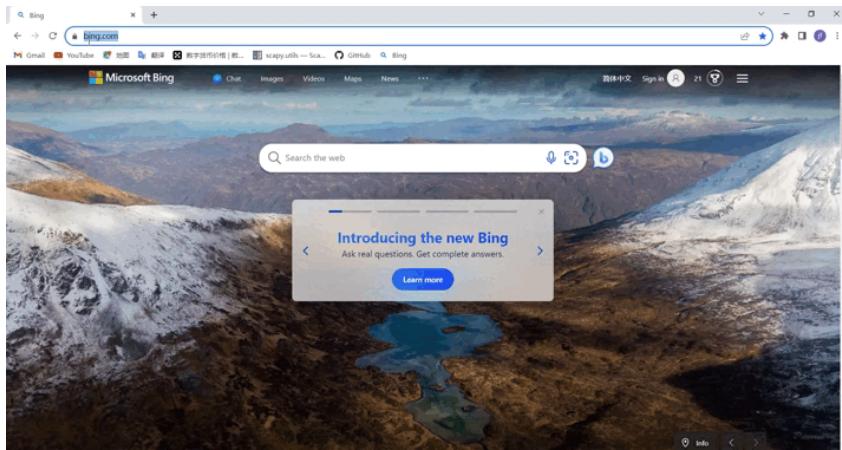
    metadata := &types.EntityDescriptor{}
    err = xml.Unmarshal(rawMetadata, metadata)
    if err != nil {
        panic(err)
    }

    certStore := dsig.MemoryX509CertificateStore{
        Roots: []*x509.Certificate{},
    }

    for _, kd := range metadata.IDPSSODescriptor.KeyDescriptors {
        for idx, xcert := range kd.KeyInfo.X509Data.X509Certificates {
            if xcert.Data == "" {
                panic(fmt.Errorf("metadata certificate(%d) must not be empty", idx))
            }
            certData, err := base64.StdEncoding.DecodeString(xcert.Data)
            if err != nil {
                panic(err)
            }

            idpCert, err := x509.ParseCertificate(certData)
            if err != nil {
                panic(err)
            }
        }
    }
}
```

Once we run the code and obtain the auth URL, clicking on the URL will allow us to test the login. we provide a demo this process.



# Face ID

## Overview

We've now incorporated Face ID login into Casdoor by leveraging face-api.js.

## Activation method

Add the Face ID option in the organization's Account items

User Management → Organizations → Choose an organization → Locate the Account items section and incorporate Face ID

The screenshot shows the 'Account items' configuration page in the Casdoor User Management interface. At the top left, there is a blue 'Add' button with a red arrow pointing to it. On the right side, there is a table with columns for 'Visible', 'Regex', 'View rule', 'Modify rule', and 'Action'. The 'Visible' column contains several checkboxes, one of which is highlighted with a red border. The 'Action' column shows icons for edit, delete, and other operations. At the bottom right of the list, there is another 'Visible' switch for the 'Face ID' item, which is also highlighted with a red border. The 'Face ID' item is listed under the 'Properties' category.

Afterwards, you'll find the Face ID option under User, where users can upload their facial data to be used for

# logging in

User Management → Users → Choose a user → Find Face IDs, and add facial data. You can add up to 5 facial data entries, and you can give each facial data a custom name.



**Third step: Incorporate Face ID as a login option under the Signin methods section of the application**

Identity → Applications → Choose an application → Go to the Signin methods section and incorporate Face ID as a login option.



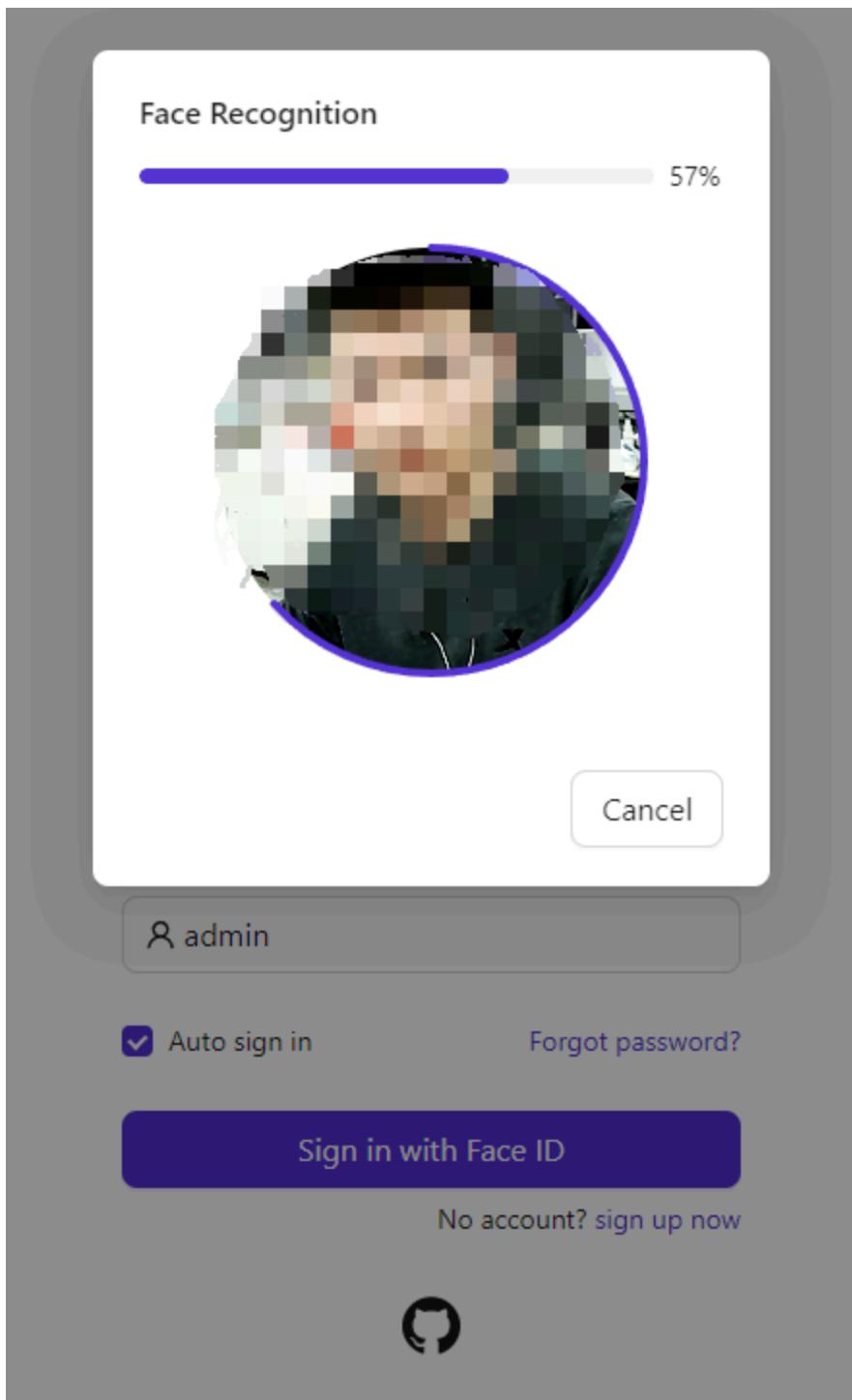
**Finally, you can log in using the Face ID method on the login page**

1. On the login page, select the Face ID login method.
2. Enter the username, click on Sign in with Face ID.
3. Once you grant permission to access your camera, you'll be able to log in using Face ID.



# Casdoor

[Password](#)[Email](#)[Face ID](#)[WebAuthn](#) admin Auto sign in[Forgot password?](#)[Sign in with Face ID](#)[No account? sign up now](#)



Here is a video demonstrating how to configure Face ID login:

# WebAuthn

## Overview

We are delighted to inform Casdoor's customers that Casdoor now supports logging in with WebAuthn. This means that you can log in using your biological identifications such as fingerprints or facial recognition, or even U-disks, provided that your device supports these cool authorization methods and WebAuthn.

### What is WebAuthn?

WebAuthn is the Web Authentication API, a specification written by the W3C and FIDO in collaboration with Google, Mozilla, Microsoft, Yubico, and others. This API allows servers to register and authenticate users using public key cryptography instead of a password. It enables servers to integrate with strong authenticators built into devices, such as Windows Hello or Apple's Touch ID.

To put it simply, WebAuthn requires users to generate a public key-private key pair and provide the public key to the website. When a user wants to log in to a website, the web generates a random number and asks the user to encrypt it with their private key and send the result back. Upon receiving the result, the website uses the public key to decrypt it. If the decrypted number matches the random number generated earlier, the user is considered a legitimate user and is granted access to log in. The combination of the public key and necessary information, like the username or information about the user's authorizer, is called the WebAuthn Credential, which is stored by the website.

The public key-private key pair is exclusively and uniquely associated with three pieces of information: the user's username, the user's authorizer, and the website's URL. This means that if the combination of (user's username, user's

authorizer, and the website's URL) is the same, the key pair should be identical, and vice versa.

For more detailed information about WebAuthn technology, you can visit <https://webauthn.guide/>.

## How to use WebAuthn in Casdoor?

On the login page, you may have already noticed the option to log in using WebAuthn. However, if you don't have a WebAuthn credential yet (which can be likened to a WebAuth password), this tutorial will show you how to create and manage a credential and then log in using it.

### Step 0: Modify the configurations and enable WebAuthn authentication

In the `conf/app.conf` file, you can find the following configuration:

```
origin = "http://localhost:8000"
```

Please ensure that this configuration exactly matches the URL of your website.

**Note:** Only HTTPS is supported for WebAuthn, unless you are using localhost.

Next, log in as the administrator and go to the edit page of your application. Turn on the "Enable WebAuthn signin" switch. By default, this feature is not enabled.

### Step 1: Go to "My Account" page

Navigate to the account page. On this page, you should see the "Add WebAuthn Credential" button and a list displaying all the WebAuthn credentials you have previously registered.

The screenshot shows the Casdoor application configuration interface. At the top, there's a field for "Signup application" with a placeholder "(empty)". Below it, a section for "3rd-party logins" shows a GitHub icon with the text "GitHub: (empty)" and a blue "Link" button. Under "WebAuthn credentials", there's a table with one row. The row has columns for "WebAuthn credentials" (containing "Add" and "WebAuthn credentials"), "Action" (containing a red "Delete" button), and the credential value "OAUzbyDy1SCxNyW3vkNJP1feXhwm/pHBDmMOszRRNvg=". Below the table, sections for "Roles" and "Permissions" are shown, each with several toggle switches. At the bottom are two buttons: "Save" and "Save & Exit".

Click the button and follow the instructions of your device to register a new credential in Casdoor. You can remove any credentials using the "delete" button in the list.

## Step 2: Log in using WebAuthn

Before starting this step, make sure you have logged out of Casdoor.

Go to the login page, select the WebAuthn login method, enter your username, and click the login button. Follow the instructions of your device.

(For example, if you are using fingerprint and Windows Hello, you should see something like this)



Windows Security

Making sure it's you

Please sign in as admin to .casdoor.com.

This request comes from Chrome, published by Google LLC.

Auto sign in      [Forgot password?](#)

[Sign in with WebAuthn](#)

[I forgot my PIN](#)

[Cancel](#)



You will then be logged in successfully.

# Developer Guide

## Frontend

Casdoor Frontend Development Guide

## Generating Swagger Files

Generating Swagger Files

# Frontend

The source code for Casdoor's frontend is located inside the `/web` folder:

<https://github.com/casdoor/casdoor/tree/master/web>

It is a [Create-React-App \(CRA\)](#) project, which follows the classic CRA folder structure as outlined below:

File/Directory	Description
public	The root HTML file for React
src	Source code
craco.config.js	The Craco configuration file. You can change the theme color (blue by default) here
crowdin.yml	Crowdin i18n configuration file
package.json	NPM/Yarn dependency file
yarn.lock	Yarn lock file

Inside the `/src` directory, you will find several important files and folders:

File/Directory	Description
account	The "My profile" page for logged-in users
auth	All code related to authentication, such as OAuth,

File/Directory	Description
	SAML, sign up page, sign in page, forget password page, etc.
backend	The SDK for calling the Go backend API. It contains all the <code>fetch()</code> calls
basic	The homepage (dashboard page) for Casdoor, which contains several card widgets
common	Shared UI widgets
locales	i18n translation files in JSON, synced with our Crowdin project: <a href="https://crowdin.com/project/casdoor-site">https://crowdin.com/project/casdoor-site</a>
App.js	The entry JS file containing all the routes
Setting.js	Utility functions used by other code
OrganizationListPage.js	The page for the organization list, similar to all other <code>XXXListPage.js</code> files
OrganizationEditPage.js	The page for editing one organization, similar to all other <code>XXXEditPage.js</code> files

# Generating Swagger Files

## Overview

As we know, the beego framework provides support for generating swagger files to clarify the API via the command line tool called "bee". Casdoor is also built based on beego. However, we found that the swagger files generated by bee failed to categorize the APIs with the "@Tag" label. So, we modified the original bee to implement this function.

## How to write the comment

Most rules are exactly identical to the original bee comment formats. The only discrepancy is that the API shall be divided into different groups according to the "@Tag" label. Therefore, developers are obliged to ensure that this tag is correctly added. Here is an example:

```
// @Title Login
// @Tag Login API
// @Description login
// @Param oAuthParams query string true "oAuth
parameters"
// @Param body body RequestForm true "Login
information"
// @Success 200 {object} controllers.api_controller.Response The
Response object
// @router /login [post]
func (c *ApiController) Login() {
```

APIs with the same "@Tag" labels will be put into the same group.

# How to generate the swagger file

0. Write comments for the API in the correct format.
1. Fetch this repository: <https://github.com/casbin/bee>.
2. Build the modified bee. For example, in the root directory of casbin/bee, run the following command:

```
go build -o mybee .
```

3. Copy mybee to the base directory of casdoor.
4. In that directory, run the following command:

```
mybee generate docs
```

5. (Optional) If you want to generate swagger document for specific tags or apis, here are some example commands:

```
mybee generate docs --tags "Adapter API"  
mybee generate docs --tags "Adapter API,Login API"  
mybee generate docs --apis "add-adapter"  
mybee generate docs --apis "add-adapter,delete-adapter"
```

Notably: We only accept a comma  as the separator when multiple tags/apis provided.

Then you will find that the new swagger files are generated.

# Organizations

## Overview

Casdoor basic unit — organization

## Organization Tree

User groups within an organization

## Password Complexity

Supporting different password complexity options.

## Password Obfuscator

Supporting different password obfuscator options.



## Account Customization

Customizing users' account items



## Customizing Themes

Learn how to customize themes for organizations and applications within an organization



## Manage Multi-Factor Authentication Items

Configure Multi-Factor Authentication Items in Organization

# Overview

An organization is the basic unit of Casdoor, which manages users and applications. If a user signs in to an organization, then they can access all applications belonging to the organization without signing in again.

In the configuration of [applications](#) and [providers](#), choosing an organization is important, as it determines whether a user can access the application using specific providers.

We can also set up LDAP in Casdoor. For more details, please see the [LDAP](#) documentation.

Casdoor provides multiple password storage algorithms that can be selected on the organization edit page.

Name	Algorithm	Description	Scenario
plain	-	The password will be stored in cleartext. (default)	-
salt	<a href="#">SHA-256</a>	<a href="#">SHA-256</a> is a patented cryptographic hash function that outputs a value that is 256 bits long.	-
md5-salt	<a href="#">MD5</a>	The <a href="#">MD5 message-digest algorithm</a> is a cryptographically broken but still widely used hash function producing a 128-bit hash value.	<a href="#">Discuz!</a>

Name	Algorithm	Description	Scenario
bcrypt	bcrypt	bcrypt is a password-hashing function and is used to hash and salt passwords securely.	Spring Boot, WordPress
pbkdf2-salt	SHA-256 and PBKDF2	PBKDF2 is a simple cryptographic key derivation function that is resistant to dictionary attacks and rainbow table attacks. It was originally implemented in Casdoor for the Keycloak syncer. Select this option if you are importing users using the Keycloak syncer.	Keycloak



TIP

In addition to logging into Casdoor via an application (which redirects to Casdoor for SSO), a Casdoor user can also choose to directly log into Casdoor via the organization's login page: `/login/<organization_name>`, e.g., <https://door.casdoor.com/login/casbin> in the demo site.

# Organization Tree

Groups are a collection of users within an organization. A user can belong to multiple groups.

## Group properties

- `Owner`: The organization that owns the group
- `Name`: Unique group name
- `displayName`
- `CreatedTime`
- `UpdatedTime`
- `Type`: Groups can be classified as either `Physical` or `Virtual`. A user can only belong to one `Physical` group but can be in multiple `Virtual` groups.
- `ParentGroup`: The parent group of a group (The parent group of the top-level groups in the organization is the organization itself)

## Managing groups

There are two ways to manage groups:

1. On the groups list page, you can view all the groups within the organization.

Name	Organization	Created time	Updated time	Display name	Type	Parent group	Action
casdoor_virtual	built-in	2023-06-12 12:37:44	2023-06-12 12:37:51	Casdoor Project Virtual Team	Virtual		<button>Edit</button> <button>Delete</button>
casbin_virtual	built-in	2023-06-12 12:37:18	2023-06-12 12:37:36	Casbin Project Virtual Team	Virtual		<button>Edit</button> <button>Delete</button>
dev_frontend	built-in	2023-06-12 09:43:18	2023-06-12 12:35:51	Dev (Frontend)	Physical		<button>Edit</button> <button>Delete</button>
dev_backend	built-in	2023-06-12 09:20:28	2023-06-12 12:35:58	Dev (Backend)	Physical		<button>Edit</button> <button>Delete</button>
dev	built-in	2023-06-09 18:19:06	2023-06-12 12:36:08	R & D	Physical		<button>Edit</button> <button>Delete</button>
sales	built-in	2023-06-09 01:27:19	2023-06-12 12:36:27	Sales	Physical		<button>Edit</button> <button>Delete</button>
marketing	built-in	2023-06-09 01:26:16	2023-06-12 12:36:32	Marketing	Physical		<button>Edit</button> <button>Delete</button>
hr	built-in	2023-06-09 01:25:46	2023-06-12 12:36:43	HR	Physical		<button>Edit</button> <button>Delete</button>
sales_and_marketing	built-in	2023-06-09 01:23:35	2023-06-12 12:36:57	Sales & Marketing	Physical		<button>Edit</button> <button>Delete</button>

9 in total < 1 > 10 / page

## 2. Click the Groups button on the organization list page.

Name	Created time	Display name	Favicon	Website URL	Password type	Password salt	Default	Action
saas	2023-05-31 00:05:42	SaaS Users		<a href="https://saas.casbin.com">https://saas.casbin.com</a>	plain			<button>Groups</button> <button>Users</button> <button>Edit</button> <button>Delete</button>
gsoc	2021-02-11 23:26:20	GSoC Community		<a href="https://gsoc.com.cn">https://gsoc.com.cn</a>	plain			<button>Groups</button> <button>Users</button> <button>Edit</button> <button>Delete</button>
casbin	2021-02-11 23:26:20	Casbin Organization		<a href="https://forum.casbin.com">https://forum.casbin.com</a>	plain			<button>Groups</button> <button>Users</button> <button>Edit</button> <button>Delete</button>
built-in	2021-02-10 00:37:06	Built-in Organization		<a href="https://door.casdoor.com">https://door.casdoor.com</a>	plain			<button>Groups</button> <button>Users</button> <button>Edit</button> <button>Delete</button>

4 in total < 1 > 10 / page

This will display the tree structure of the groups within the organization.

The screenshot shows the Casdoor interface for managing organizations. On the left, there is a sidebar with a tree view of groups:

- Root node: Casdoor Project Virtual Team
- Child node: Casbin Project Virtual Team
- Child node: R & D
  - Child node: Dev (Frontend)
  - Child node: Dev (Backend)
- Child node: HR
- Child node: Sales & Marketing
  - Child node: Sales
  - Child node: Marketing

A red box highlights the R & D group and its children.

To the right of the sidebar is a table listing users:

Organization	Application	Name	Created time	Display name
built-in	app-built-in	牛头	2023-06-16 16:16:35	牛头
built-in	app-built-in	喝咖啡就大蒜	2023-06-15 10:58:48	喝咖啡就大蒜
built-in	app-built-in	danceshow	2023-06-15 10:53:48	街舞show
built-in	app-built-in	TT珍惜	2023-06-15 10:36:46	TT珍惜
built-in	app-built-in	hashjoin	2023-06-15 01:01:17	hashjoin
built-in	app-built-in	zhangyaphet@gmail.com	2023-06-14 15:50:23	pengwei zhang

Here is a video that shows how to manage groups:

The screenshot shows the Casdoor interface for managing groups. The URL in the address bar is `localhost:8000/groups`.

The page displays a list of groups:

Name	Organization	Created time	Updated time	Display name	Type	Parent group	Action
group_smf8bi	built-in	2023-06-13 23:25:31	2023-06-13 23:25:36	总部	Virtual	built-in	<button>Edit</button> <button>Delete</button>
group_zxak7d	built-in	2023-06-11 23:28:45	2023-06-13 23:24:36	New Group - zxak7d	Virtual	New Group - nahuap	<button>Edit</button> <button>Delete</button>
group_1t8lrr	built-in	2023-06-09 09:39:44	2023-06-13 23:24:46	美工	Virtual	研发子部门	<button>Edit</button> <button>Delete</button>
group_nahuap	built-in	2023-06-09 09:27:47	2023-06-12 09:36:45	New Group - nahuap	Virtual		<button>Edit</button> <button>Delete</button>
group_38ii7o	built-in	2023-06-07 21:48:49	2023-06-11 09:49:13	研发子部门	Virtual		<button>Edit</button> <button>Delete</button>
group_gnrtip9	built-in	2023-06-07 20:59:10	2023-06-13 23:24:51	实体组3	Physical	built-in	<button>Edit</button> <button>Delete</button>
group_Sacaox	forum	2023-06-06 08:24:33	2023-06-13 23:25:12	实体组2	Physical	forum	<button>Edit</button> <button>Delete</button>
group_3tt9wf	forum	2023-06-06 08:20:14	2023-06-13 23:25:06	顶级2	Virtual	forum	<button>Edit</button> <button>Delete</button>
group_azpdif	forum	2023-06-06 08:19:32	2023-06-09 10:50:25	顶级1	Virtual		<button>Edit</button> <button>Delete</button>
group_r89hga	built-in	2023-06-05 14:41:41	2023-06-12 09:38:28	研发部1	Virtual		<button>Edit</button> <button>Delete</button>

Groups can also be edited in a user's profile.

Title <a href="#">?</a> :	1122
Homepage <a href="#">?</a> :	
Bio <a href="#">?</a> :	
Tag <a href="#">?</a> :	222
Karma <a href="#">?</a> :	333
Signup application <a href="#">?</a> :	app-built-in
Groups <a href="#">?</a> :	 Dev (Frontend)   Casdoor Project Virtual Team 
Roles <a href="#">?</a> :	
Permissions <a href="#">?</a> :	

# Password Complexity

Casdoor supports customizing password complexity options for user passwords in each organization.

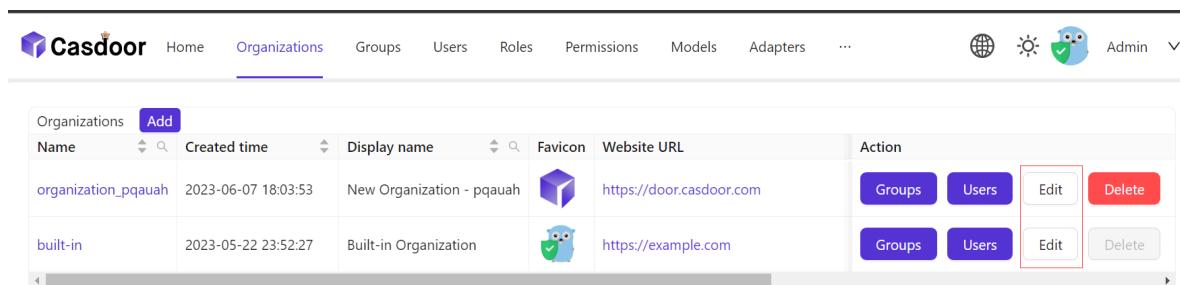
## Supported Complexity Options

We currently support five options:

- `AtLeast6`: The password must have at least six characters.
- `AtLeast8`: The password must have at least eight characters.
- `Aa123`: The password must contain at least one uppercase letter, one lowercase letter, and one digit.
- `SpecialChar`: The password must contain at least one special character.
- `NoRepeat`: The password must not contain any repeated characters.

If you want to use multiple options, you can select them on the organization edit page:

1. Click the `Edit` button on the organization list page.



Name	Created time	Display name	Favicon	Website URL	Action
organization_pqauah	2023-06-07 18:03:53	New Organization - pqauah		<a href="https://door.casdoor.com">https://door.casdoor.com</a>	<button>Groups</button> <button>Users</button> <button>Edit</button> <button>Delete</button>
built-in	2023-05-22 23:52:27	Built-in Organization		<a href="https://example.com">https://example.com</a>	<button>Groups</button> <button>Users</button> <button>Edit</button> <button>Delete</button>

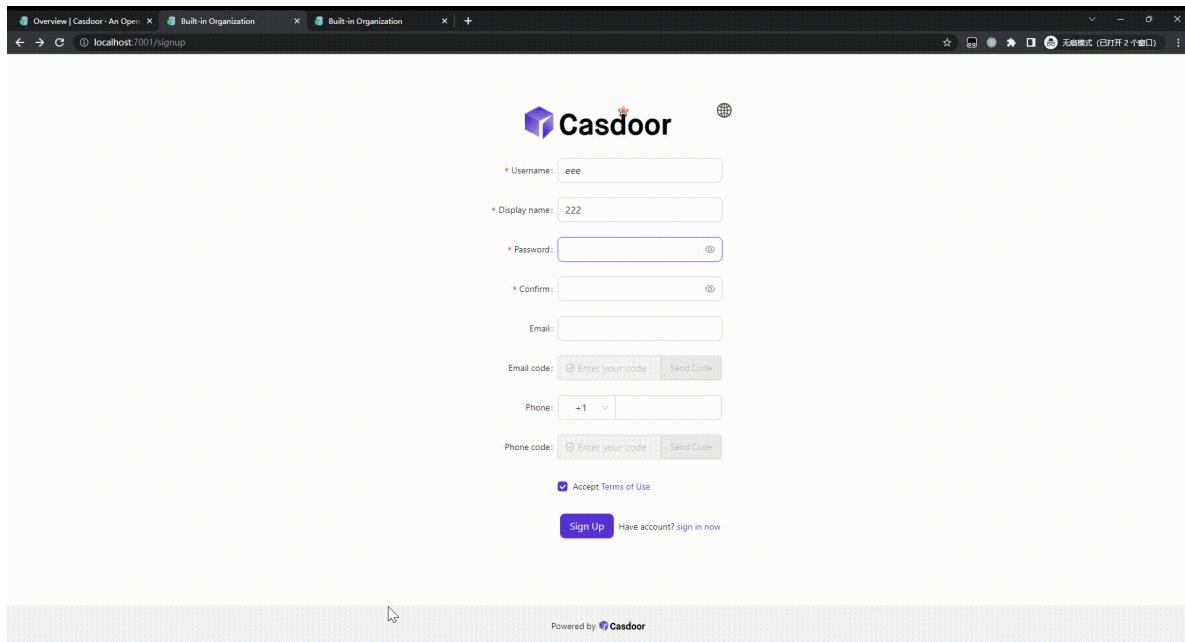
2. Then select the option you need in the `Password complexity options` column.

The screenshot shows the Casdoor web application's 'Edit Organization' page. The organization is named 'built-in' with a display name 'Built-in Organization'. The favicon is a blue owl icon. The website URL is set to 'https://example.com'. The password type is 'plain'. The password salt field is empty. Under 'Password complexity options', there are several validation rules listed in a modal: 'The password must have at least 8 characters', 'The password must contain at least one special character', 'The password must not contain any repeated characters', 'The password must contain at least one uppercase letter, one lowercase letter and one digit', 'The password must have at least 6 characters', 'The password must contain at least one uppercase letter, one lowercase letter and one digit', 'The password must contain at least one special character', and 'The password must not contain any repeated characters'. In the 'Supported country codes' section, a dropdown menu lists 'Germany +49', 'United Kingdom +44', and 'India +91'. The 'Languages' section is also visible.

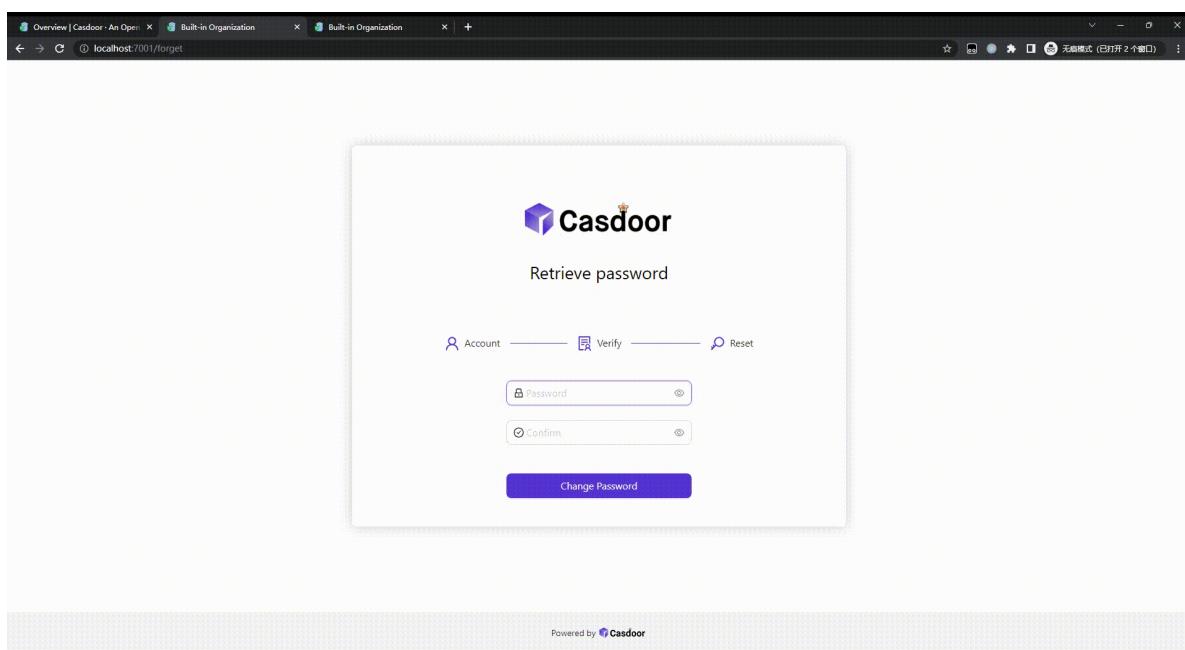
# Password Complexity Validation

We support password complexity validation on the following pages:

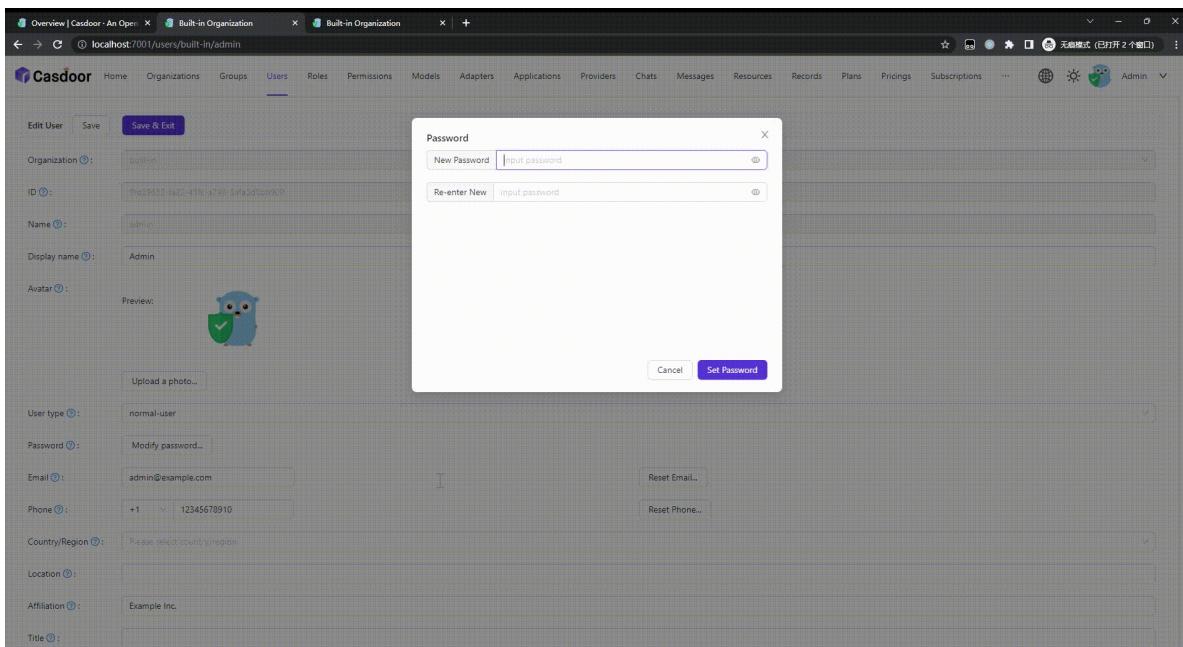
1. Sign up page.



## 2. Forget password page.



## 3. User edit page.



# Password Obfuscator

Here, we will show you how to enable the option to specify the password obfuscator for password parameters in the login and set-password APIs.

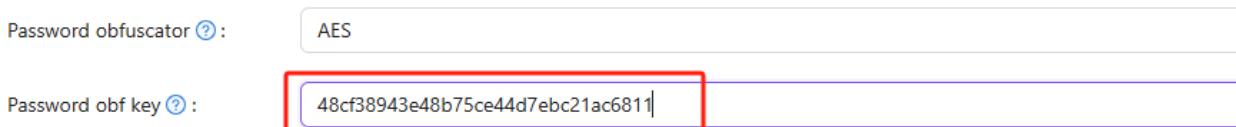
## Configuration

On the organization edit page, you can find the `Password obfuscator` configuration option. You can select the encryption algorithm from the dropdown list.



- Plain: Password parameters will be transmitted directly in plain text.
- AES: Password parameters will first be encrypted using the AES algorithm and then transmitted in ciphertext form.
- DES: Password parameters will first be encrypted using the DES algorithm and then transmitted in ciphertext form.

Each time you update the encryption algorithm other than Plain, Casdoor will randomly generate an encryption key for you and populate it into the `Password obf key` configuration option. If you want to specify the encryption key for the encryption algorithm, you can modify the key in `Password obf key` configuration option:



### NOTE

If your key does not meet the encryption algorithm requirements, Casdoor will prompt you with the regular expression that the key should meet in the error message.

## API Support

Password obfuscation is supported by the following APIs:

- **Login API** (`/api/login`): Encrypts the password field during authentication
- **Set Password API** (`/api/set-password`): Encrypts both `oldPassword` and `newPassword` fields when changing passwords

When password obfuscation is enabled, Casdoor's frontend automatically encrypts password values before sending them to the server. The backend decrypts these values using the configured key and algorithm, then processes them normally.

## Backward Compatibility

The set-password API maintains full backward compatibility. If obfuscation is not configured or decryption fails, the API automatically falls back to accepting plaintext passwords. This ensures compatibility with:

- Casdoor SDKs that may not support obfuscation yet
- Direct HTTP API calls using plaintext passwords
- Legacy integrations

Here is a demo video that shows how to use password obfuscator:



# Account Customization

## Introduction

In an organization, you can customize users' account items. This includes whether each item is **visible** and its **view rule** and **modify rule**.

When you customize account items in an organization, this configuration takes effect on the home page of all members of that organization.

## How to Customize?

Account items have four attributes:

Column Name	Selectable Value	Description
Name	-	Account item name.
Visible	<input type="checkbox"/> True / <input type="checkbox"/> False	Select whether this account item is visible on the user home page.
ViewRule	Rule Items	Select a rule to use when viewing the account item. Controls who can <b>view</b> this field.
ModifyRule	Rule Items	Select a rule to use when modifying the account item. Controls who can <b>edit</b> this field.

# Understanding View Rule and Modify Rule

View rule and Modify rule provide field-level permission control for user account items:

- **View rule:** Determines who can see the value of this account field (e.g., email, phone number, address)
- **Modify rule:** Determines who can change the value of this account field

This is different from the broader [Permission](#) feature, which controls access to applications and resources. View rule and Modify rule specifically control access to individual user profile fields.

## Configuration Steps

To customize account items, follow these steps:

1. Navigate to Organizations in the Casdoor sidebar
2. Click on your organization to open the Edit Organization page
3. Scroll down to the Account items section

Name	visible	viewRule	modifyRule	Action
Organization	<input checked="" type="checkbox"/>	Public	Admin	  
ID	<input checked="" type="checkbox"/>	Public	Immutable	  
Name	<input checked="" type="checkbox"/>	Public	Admin	  
Display name	<input checked="" type="checkbox"/>	Public	Self	  
Avatar	<input checked="" type="checkbox"/>	Public	Self	  
User type	<input checked="" type="checkbox"/>	Public	Admin	  
Password	<input checked="" type="checkbox"/>	Self	Self	  
Email	<input checked="" type="checkbox"/>	Public	Self	  
Phone	<input checked="" type="checkbox"/>	Public	Self	  
Country/Region	<input checked="" type="checkbox"/>	Public	Self	  
Location	<input checked="" type="checkbox"/>	Public	Self	  
Affiliation	<input checked="" type="checkbox"/>	Public	Self	  
Title	<input checked="" type="checkbox"/>	Public	Self	  
Homepage	<input checked="" type="checkbox"/>	Public	Self	  
Bio	<input checked="" type="checkbox"/>	Public	Self	  
Tag	<input checked="" type="checkbox"/>	Public	Admin	  
Signup application	<input checked="" type="checkbox"/>	Public	Admin	  
3rd-party logins	<input checked="" type="checkbox"/>	Self	Self	  

## 4. Casdoor provides simple operations to configure account items:

### a. Set item visibility

Control whether this account item is shown on the user home page:

Name	visible	viewRule	modifyRule
Organization	<input checked="" type="checkbox"/>	Public	Admin
ID	<input type="checkbox"/>		
Name	<input checked="" type="checkbox"/>	Public	Admin
Display name	<input checked="" type="checkbox"/>	Public	Self
Avatar	<input checked="" type="checkbox"/>	Public	Self
User type	<input checked="" type="checkbox"/>	Public	Admin

### b. Set viewing and modifying rules

Configure who can view and modify each field:

visible	viewRule	modifyRule	Action
<input checked="" type="checkbox"/>	Public	Admin	<input type="button" value="^"/> <input type="button" value="v"/> <input type="button" value="Delete"/>
<input type="checkbox"/>	Public		<input type="button" value="^"/> <input type="button" value="v"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Self	Admin	<input type="button" value="^"/> <input type="button" value="v"/> <input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Admin	Self	<input type="button" value="^"/> <input type="button" value="v"/> <input type="button" value="Delete"/>

## Available Rules

There are 3 rules available for both View rule and Modify rule:

- Public: Everyone has permission. Any user can view/modify this field for any user.
- Self: Each user has their own permission. Users can only view/modify their own field values.
- Admin: The administrator has permission. Only organization administrators can view/modify this field for users.

## Example Use Cases

Here are some common configuration patterns:

Field	View Rule	Modify Rule	Use Case
Name	Public	Self	Everyone can see names, but users can only change their own

Field	View Rule	Modify Rule	Use Case
Email	Self	Self	Users can only see and change their own email
Phone	Admin	Admin	Only admins can see and change phone numbers (for privacy)
Display name	Public	Self	Public profile name visible to all
Password	Self	Self	Users can only change their own password

 **TIP**

Use Admin rules for sensitive fields like phone numbers, addresses, or internal identifiers that should only be managed by administrators.

 **NOTE**

These field-level permissions work in conjunction with the broader [Permission system](#) in Casdoor. The Permission system controls access to applications and API resources, while View rule and Modify rule control access to specific user profile fields within the [Edit Organization](#) page configuration.

# Account Table

Below are all the fields in the account item. For descriptions, you can refer to [user](#).

- Organization
- ID
- Name
- Display name
- Avatar
- User type
- Password
- Email
- Phone
- Country/Region
- Location
- Affiliation
- Title
- Homepage
- Bio
- Tag
- Signup application
- 3rd-party logins
- Properties
- Is admin
- Is global admin
- Is forbidden
- Is deleted

# Customizing Themes

Casdoor allows you to customize themes to meet the UI diversity requirements of businesses or brands, including primary color and border radius.

Within Casdoor, themes can be customized at the global, organization, and application levels.

1. Global scope: This is the default theme of Casdoor and is applied to any organization that chooses to follow the global theme. Modifications can only be made in the Casdoor source code and cannot be modified in the web UI.
2. Organization scope: The theme for an organization can be customized on the organization edit page. This theme applies to all Casdoor after-login pages for users within the organization, as well as the entry pages (signup, signin, forget password, etc.) of applications that follow the organization theme.
3. Application scope: The theme for an application can be customized on the application edit page. This theme applies to the entry pages (signup, signin, forget password, etc.) of the specific application.

## Customizing the Organization Theme

We provide a demo to demonstrate how to configure the theme for an organization:

The screenshot shows the Casdoor application theme editor and LDAP configuration interface. The theme editor on the left lists various organization properties with toggle switches and dropdown menus for setting permissions (Public, Immutable, Admin, Self) and actions (Edit, Delete). The LDAP configuration on the right shows a table for managing LDAP servers, with one entry for 'BuildIn LDAP Server' (Server Name: example.com:389, Base DN: ou=BuildIn,dc=example,dc=com) in a disabled state. Buttons for Save, Save & Exit, Sync, Edit, and Delete are visible at the bottom.

### !(INFO)

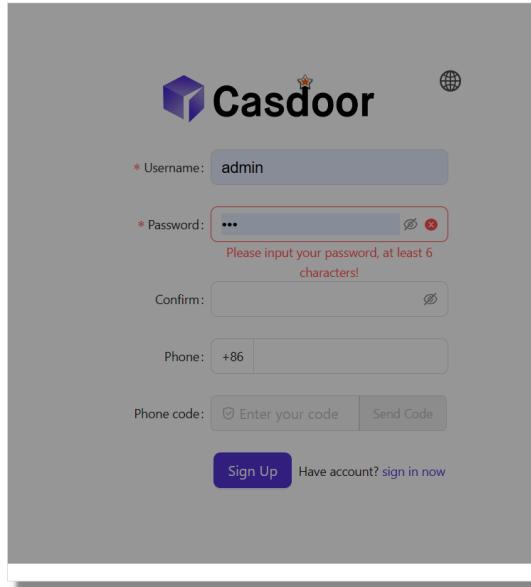
If your account organization is the same as the organization you are editing, the configuration changes will take effect immediately as shown in the video above. However, if they are different, you will need to log in to the organization to see the changes.

## Customizing the Application Theme

Applications can customize themes using the same theme editor as the organization. Additionally, you can preview the theme conveniently in the preview panel.

Preview ⓘ:

 Copy signup page URL

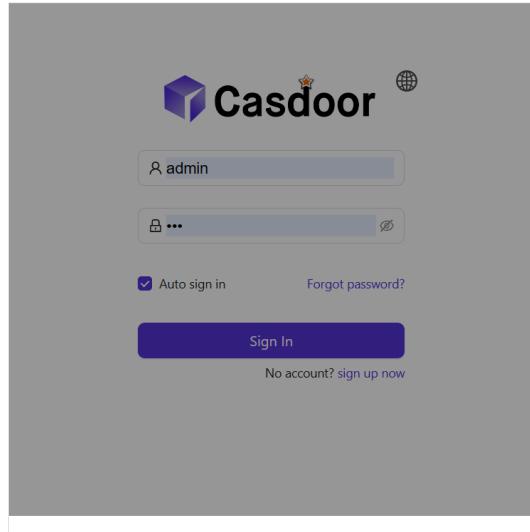


The screenshot shows the Casdoor Signup page. At the top center is the Casdoor logo. Below it is a form with the following fields:

- \* Username: admin
- \* Password:  (The password field is highlighted with a red border.)  
Please input your password, at least 6 characters!
- Confirm:
- Phone: +86
- Phone code:  Enter your code

At the bottom left is a blue "Sign Up" button, and at the bottom right is the text "Have account? sign in now".

 Copy signin page URL



The screenshot shows the Casdoor Signin page. At the top center is the Casdoor logo. Below it is a form with the following fields:

- admin
- 

Below the password field is a link "Forgot password?". To the left of the password field is a checkbox labeled "Auto sign in". At the bottom right is a large blue "Sign In" button, and below it is the text "No account? sign up now".

Background URL:

# Manage Multi-Factor Authentication Items

## Add Multi-Factor Authentication Item in Organization

In the organization, admins can add Multi-Factor Authentication items to the account settings. This allows users to configure Multi-Factor Authentication on their own profile pages.

The screenshot shows the Casdoor organization settings page at <https://door.casdoor.com/organizations/built-in>. The page includes fields for Master password, Languages (English, 中文, Español, Français, Deutsch, Indonesia, 日本語, 한국어, Русский, Tiếng Việt), Init score (0), Soft deletion (disabled), and Is profile public (disabled). Below these are sections for Account items and Global items. The Account items section has a table with columns: Name, Visible, View rule, Modify rule, and Action. A new row for "Multi-factor authentication" is being added, indicated by a red border around its row. The "Visible" column for this row contains a switch that is currently off. The "View rule" dropdown is set to "Public". The "Modify rule" dropdown is set to "Admin". The "Action" column contains icons for edit and delete.

Name	Visible	View rule	Modify rule	Action
Organization	<input checked="" type="checkbox"/>	Public	Admin	<span>edit</span> <span>delete</span>
ID	<input checked="" type="checkbox"/>	Public	Immutable	<span>edit</span> <span>delete</span>
Name	<input checked="" type="checkbox"/>	Public	Admin	<span>edit</span> <span>delete</span>
Display name	<input checked="" type="checkbox"/>	Public	Self	<span>edit</span> <span>delete</span>
Avatar	<input checked="" type="checkbox"/>	Public	Self	<span>edit</span> <span>delete</span>
User type	<input checked="" type="checkbox"/>	Public	Admin	<span>edit</span> <span>delete</span>
Password	<input checked="" type="checkbox"/>	Self	Self	<span>edit</span> <span>delete</span>
Multi-factor authentication	<input type="checkbox"/>	Self	Self	<span>edit</span> <span>delete</span>
Email	<input checked="" type="checkbox"/>	Public	Self	<span>edit</span> <span>delete</span>
Phone	<input checked="" type="checkbox"/>	Public	Self	<span>edit</span> <span>delete</span>

# Manage Multi-Factor Authentication Items

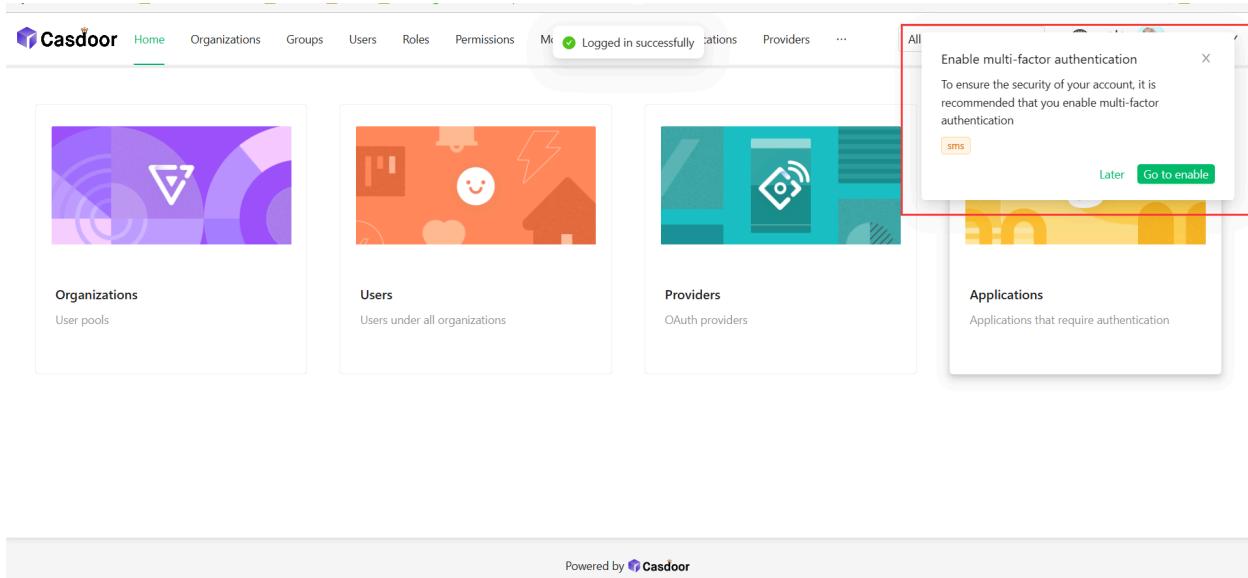
You can manage Multi-Factor Authentication to determine which methods are available to users.

There are two rules for managing Multi-Factor Authentication items:

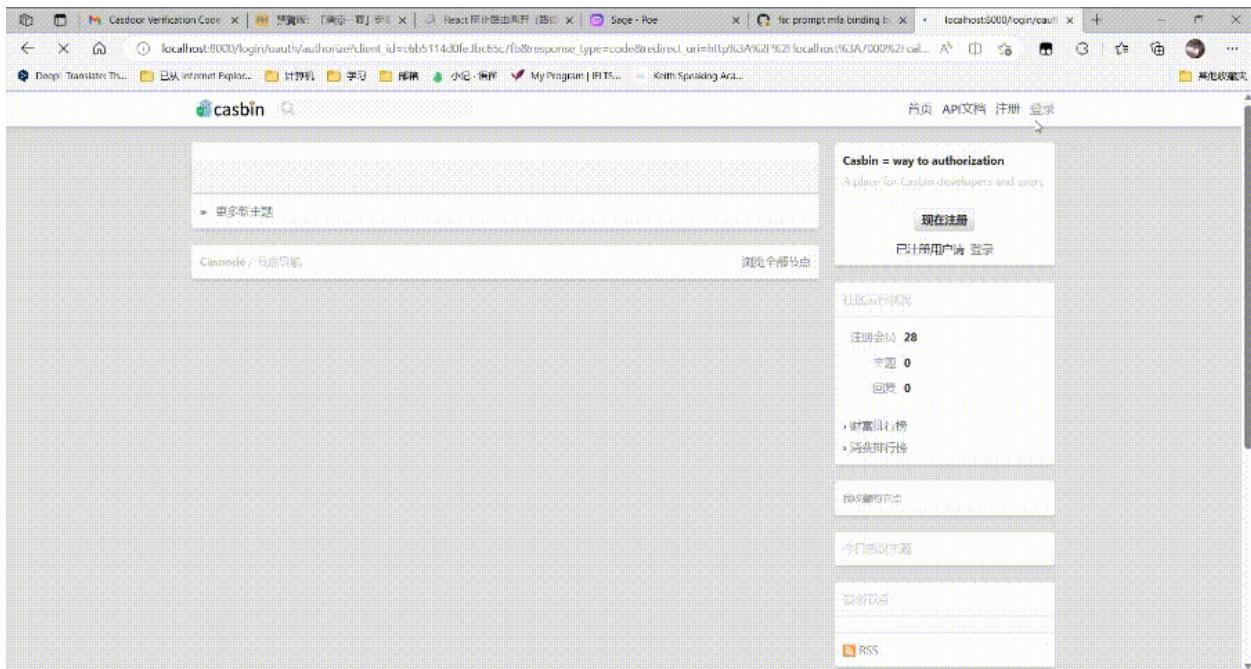
- Optional: Users can choose whether to enable this type of Multi-Factor Authentication.
- Prompt: If the user does not enable this Multi-Factor Authentication mode, they will be prompted to enable it after logging in to Casdoor.
- Required: Users must enable this Multi-Factor Authentication method.

MFA items		Add	
Name	Rule	Action	
Phone	Prompt	  	
Email	Optional	  	
App	Required	  	

The image below shows the notification that prompts users to enable Multi-Factor Authentication.



This video demonstrates that when the Multi-Factor Authentication method is set to required, users need to enable Multi-Factor Authentication before they can complete the login process.



# Remember Multi-Factor Authentication

When logging in to Casdoor, users can choose to have the Multi-Factor Authentication for this account remembered for a specific period. This means they won't be prompted to perform Multi-Factor Authentication for the account again during that time.

---

## Multi-factor authentication

You have enabled Multi-Factor Authentication,  
please enter the TOTP code



Remember this account for 12 hours

Next Step

Have problems? [Use a recovery code](#)

Powered by  Casdoor

You can set the duration for which Multi-Factor Authentication is remembered for an account in the organization settings. As shown, there is an "MFA remember time" option where you can specify the time (e.g., set it to 12 hours as in the example).

MFA remember time  Hours

# Applications

## Overview

Casdoor Application Overview

## Terminology Reference

Terminology reference

## Application Config

Configure your application's authentication

## Providers

Configure different providers



## Signin Methods

Configure the login method and the display order of the login methods



## Exclusive Signin

Configure exclusive signin to allow only one active session per user



## Signup Items Table

Configure the signup items table to create a custom registration page



## Signin Items Table

Configure the signin items table to create a custom signin page



## Login UI Customization

Customize the login page UI for your application



## Specify Login Organization

Specify the login organization on the login page



## Tags

Configure your application tags



## Application Invitation Code

Restrict application sign up with invitation codes



## Shared Application

Shared application across organizations

# Overview

Every application in Casdoor is called an "application". They are not related and do not affect each other, which means you can deploy or stop any application separately, as long as you like.

If you want to use Casdoor to provide login service for your web apps, you can add them as Casdoor applications.

Users can access all applications in their organizations without logging in twice.

The application configuration is very flexible and simple. You can set whether to allow password login or third-party login, configure the third-party applications you want users to log in to, and you can even customize the signup items of the application, etc.

In this chapter, you will learn how to start your own application from scratch.

Let's explore together!

# Terminology Reference

- `Name`: The name of the created app.
- `CreatedTime`: The time when the application is created.
- `DisplayName`: The name which the application displays to the public.
- `Logo`: Application logos will be displayed on the login and sign up pages.
- `HomepageUrl`: The URL of the application's homepage.
- `Description`: Describes the application.
- `Tags`: Only users with tags listed in the application tags can login.
- `Organization`: The organization that the app belongs to.
- `EnableSignUp`: If users can sign up. If not, accounts of the application.
- `SigninMethods`: Configuration of Sign-in Methods
- `SignupItems`: Fields that need to be filled in when users register.
- `Providers`: Provide all kinds of services for the applications (such as OAuth, Email, SMS service).
- `ClientId`: OAuth client ID.
- `ClientSecret`: OAuth client secret.
- `RedirectUris`: Casdoor will navigate to one of the URIs if the user logged in successfully.
- `TokenFormat`: The format of the generated token. It can be in the following formats: `JWT` (containing all `User` fields), `JWT-Empty` (containing all non-empty values) or `JWT-Custom` customizing `User` fields inside access token.
- `ExpireInHours`: Login will expire after hours.
- `SigninUrl`:
- `SignupUrl`: If you provide a sign-up service independently outside of Casdoor, please fill in the URL here.
- `ForgotUrl`: Same as `SignupUrl`.

- `AffiliationUrl`:

# Application Config

After you deploy Casdoor on your server and set up your organization, you can now deploy your applications!

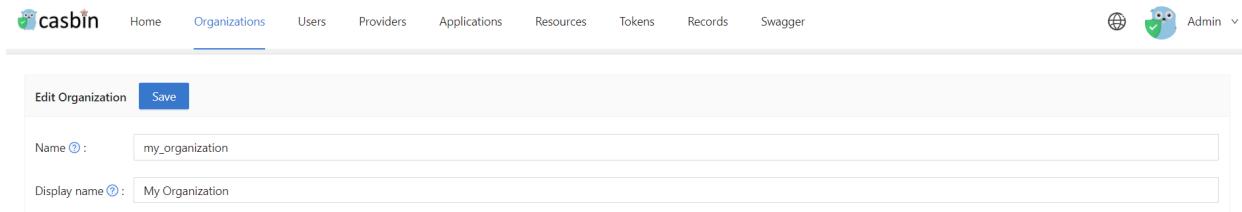
Let's see how to configure your application's authentication using Casdoor!

 NOTE

For example, I want to set up my Forum using [Casnode](#).

I create my application and fill in some necessary configurations.

Select the organization I created so that users in this organization can use this application.



The screenshot shows the Casbin web interface. At the top, there is a navigation bar with links: Home, Organizations (which is highlighted in blue), Users, Providers, Applications, Resources, Tokens, Records, and Swagger. On the far right, there is a user profile icon and the text "Admin". Below the navigation bar, the main content area has a title "Edit Organization" and a "Save" button. There are two input fields: "Name" with the value "my\_organization" and "Display name" with the value "My Organization". A dropdown menu is open, showing "my\_organization" as the selected option.

Since this organization is named `my_organization`, I choose it from the drop-down menu.

Edit Application Save

Name ? : my\_forum

Display name ? : My Forum

Logo ? : URL: [https://cdn.casbin.com/logo/logo\\_1024x256.png](https://cdn.casbin.com/logo/logo_1024x256.png)

Preview: 

Home ? :

Description ? :

Organization ? : built-in

Client ID ? : my\_organization  
built-in

Next, I want my users to be able to use Casdoor for authentication when they sign up. So, I fill in the redirect URL here as <https://your-site-url.com/callback>.

### ⚠ CAUTION

Please note that the `callback URL` in the provider application should be Casdoor's callback URL, and the `Redirect URL` in Casdoor should be your website's callback URL.

### Further Understanding

To make the authentication process work, the detailed steps are as follows:

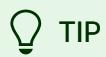
1. Users send a request to Casdoor.
2. Casdoor uses the `Client ID` and `Client Secret` to authenticate with GitHub, Google, or other providers.
3. If the authentication is successful, GitHub calls back to Casdoor to notify Casdoor about the successful authentication. Therefore, the GitHub authorization callback URL should be your Casdoor's callback URL, which is <http://your-casdoor-url.com/callback>.
4. Casdoor then informs the application about the authentication success. This means that the Casdoor callback URL should be your application's callback URL, which is <http://your-site-url.com/callback>.

You need to enable JavaScript to run this app.

## Verification Code Settings

You can configure the **Code resend timeout** to control how long users must wait before requesting another verification code via email or SMS. Set the value in

seconds (default is 60). This setting determines the countdown timer duration shown to users on the login page. A value of 0 uses the global default.



If you want to do more personalized configuration of the application's sign-in methods, such as disabling a certain sign-in method or turning off a certain sign-in method, you can refer to the [Signin Methods](#)

# Providers

You can also add third-party apps for sign up by adding providers and setting their properties.

Name	Category	Type	Country/Region	Can signup	Can signin	Can unlink	Prompted	Signup group	Rule
provider_casbin_email	Email	M	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_tencent_sms	SMS	Cloud	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_storage_aliyun_oss	Storage	Cloud	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_casdoor_github	OAuth	Github	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_casdoor_google	OAuth	Google	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		One Tap
provider_casdoor_facebook	OAuth	Facebook	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_casdoor_qq	OAuth	QQ	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_casdoor_wechat	OAuth	WeChat	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
provider_casdoor_dingtalk	OAuth	DingTalk	All ×	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Our provider can differentiate between different scenarios, and you can choose different providers for different functionalities by choosing rules. For a detailed explanation of each rule item, please refer to the table below.

Rule	Description
Signup	For the registration scenario, you can choose the "signup" rule for the provider to send the corresponding SMS or Email template.
Login	For the login scenario, you can choose the "login" rule for the provider.
Forget Password	When selecting a provider for the "Forget Password" scenario in your application, you can choose the "Forget Password" rule.
Reset	When selecting a provider for the "Reset Password" scenario in

Rule	Description
Password	your application, you can choose the "Reset Password" rule.
Set MFA	For MFA Setup Verification scenario, you can choose the "Set MFA" rule.
MFA Auth	For MFA Auth Verification scenario, you can choose the "MFA Auth" rule. For more information about mfa, you can refer to the <a href="#">MFA</a>
all	If you want to use a single provider for all functionalities, you can choose the "all" rule. This means that the same provider will be used for all scenarios mentioned above in your application.

Providers :

Name	Category	Type	Can signup	Can signin	Can unlink	Prompted	Signup group	Rule	Action
provider_captcha_default	Captcha							Signup	All
provider_xz5v54	SMS							Signup	Signup
provider_clftfc	SMS							Signup	Login

Preview :

A dropdown menu is open over the "Action" column, listing the following options:

- All
- Signup
- Login
- Forgot Pa...
- Reset Pas...
- Set MFA
- MFA Auth

Providers :

Name	Category	Type	Country/Region	Can signup	Can signin	Can unlink	Prompted	Signup group	Rule	Action
provider_captcha_default	Captcha		+81 × +33 × +34 ×						All	All
forjp	SMS		+33 × +86 ×						All	All
forcn	SMS		+33 × +86 ×						All	All
forus	SMS		+34 ×						All	All
provider_01nwpa	SMS		All ×						All	All

# Signin Methods

On the Application Configuration page, we can configure the sign-in item table. We can add and remove sign-in items from the table.

Signin methods		Add			
Name	Display name	Rule	Action		
Password	Password	All			
Verification code	Email	All			
LDAP	LDAP				
WebAuthn	WebAuthn				

For a detailed explanation of each sign-in item, please refer to the table below. Currently, only `Password`, `verification code`, `WebAuthn` and `LDAP` login methods are available.

Column Name	Selectable Value	Description
Name	-	The name of the sign-in method.
DisplayName	-	The name which the sign-in method displays to the public.
Rule		Select a rule to customize this sign-in method. Detailed rules are described in the table below.
Action	-	Users can perform actions such as moving this sign-in method up, moving it down, or deleting it.

At present, configuration rules are only supported for the `Password` and `Verification code` sign-in methods.

Sign-in Method Name	Selectable Rules	Description
Password	<code>All(default)</code> / <code>Non-LDAP</code>	Select the sign-in methods available to the user. Choosing <code>All</code> , then LDAP users can also sign-in. Choosing <code>Non-LDAP</code> , then LDAP users are prohibited from sign-in.
Verification code	<code>All(default)</code> / <code>Email only</code> / <code>Phone only</code>	Select the sign-in methods available to the user. Choosing <code>All</code> , then both email and phone numbers can be verified for sign-in. Choosing <code>Email only</code> , then only email login is allowed. Choosing <code>Phone only</code> , then only the phone number is allowed to authenticate the login.

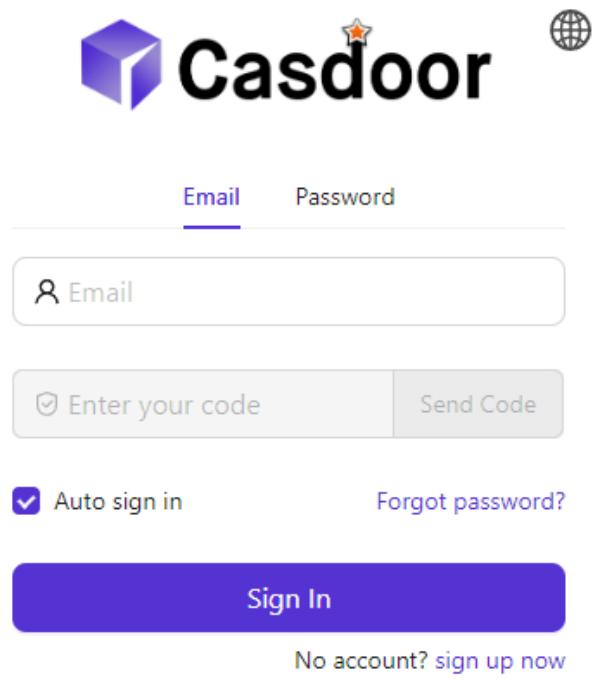
 NOTE

For example, we want users to prioritize logging in with their email, and then consider logging in with a password if they can't use their email.

First, we configure two login options, `Verification Code` and `Password`, and `Verification Code` is the first login option. Then we change the `verification code` rule to `Email only`, so that the user can only receive the login verification code by email.

Signin methods		Add			
Name	Display name	Rule	Action		
Verification code	Email	Email only			
Password	Password				

To make it easier for users to understand, we can change the display name of the `Verification code` login method so that users can easily understand that it is an email login.



### TIP

All login options, except for LDAP, are enabled by default. And it is required that at least one sign-in method be added.

Here is a video of how the sign-in method works:



# Exclusive Signin

Exclusive signin restricts users to maintaining only one active session at a time. When enabled, signing in from a new device or browser automatically terminates all previous sessions for that user.

## Configuration

Enable exclusive signin in the application settings:

1. Navigate to Applications in Casdoor
2. Select your application
3. Toggle Enable exclusive signin

Once enabled, the system enforces single-session access for all users of that application.

## Behavior

When a user with exclusive signin enabled signs in:

- Any existing active sessions are immediately terminated
- A new session is created for the current signin
- The user is logged out from all other devices or browsers

For example, if a user signs in on their laptop, then later signs in on their phone, the laptop session is automatically ended. Only the phone session remains active.

# Security Implications

Exclusive signin prevents concurrent session abuse where multiple parties could access the same account simultaneously. This is particularly useful when users forget to sign out from shared or public computers, as the next signin automatically invalidates the previous session.

The feature also helps manage server resources by limiting the number of concurrent sessions, though users working across multiple devices will need to re-authenticate when switching between them.

# Technical Implementation

When a user signs in with exclusive signin enabled:

1. Casdoor queries all existing sessions for that user and application
2. All found session IDs are destroyed in the backend
3. A new session is created and stored
4. Only the new session ID is maintained in the database

This per-application session management works independently for each application configured in Casdoor.

# Signup Items Table

On the application configuration page, we can configure the signup items table to create a customized registration page. We can add or delete any signup item on this signup items table.

Signup items :		Add	Visible	Required	Prompted	Rule	Action		
Name	ID	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Random			
	Username	<input checked="" type="checkbox"/>							
	Display name	<input checked="" type="checkbox"/>							
	Password	<input checked="" type="checkbox"/>							
	Confirm	<input checked="" type="checkbox"/>							
	Email	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Normal			
	Phone	<input checked="" type="checkbox"/>							
	Agreement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None			

For a detailed explanation of each signup item, please refer to the table below.

Column Name	Selectable Value	Description
Name	-	The name of the signup item.
Visible	True / False	Select whether this signup item is visible on the registration page.
Required	True / False	Select whether this signup item is mandatory.
Prompted	True / False	Select whether to prompt the user when they forget to fill in this signup item.

Column Name	Selectable Value	Description
Label	-	If this signup item start with <code>Text</code> , Label should be the html code for this field. If not it will replace the label of this signup item.
Custom CSS	-	CSS code for this signup item.
Rule	<code>Rule Items</code>	Select a rule to customize this signup item. Detailed rules are described in the table below.
Action	-	Users can perform actions such as moving this signup item up, moving it down, or deleting it.

Currently, the signup items that support configuration rules include `ID`, `Display name`, `Email`, and `Agreement`.

Item Name	Selectable Rules	Description
ID	<code>Random / Incremental</code>	Select whether the user ID should be randomly generated or incremented.
Display name	<code>None / Real name / First, last</code>	Choose how the display name should be presented. Choosing <code>None</code> will display <code>Display name</code> . Choosing <code>Real name</code> will display the user's actual name. Choosing

Item Name	Selectable Rules	Description
		<code>First, last</code> will display the first and last name separately.
Email	<code>Normal / No verification</code>	Select whether to verify the email address with a verification code. Choosing <code>Normal</code> will require email verification. Choosing <code>No verification</code> will allow signup without email verification.
Agreement	<code>None / Signin / Signin (Default True)</code>	Select whether the user needs to confirm the terms of use when logging in. Choosing <code>None</code> will not display any terms of use, allowing users to log in directly. Choosing <code>Signin</code> will require users to confirm the terms before logging in. Choosing <code>Signin (Default True)</code> will set the terms as confirmed by default, allowing users to log in directly.

 NOTE

For example, let's say I want to set up my registration page to include an email field, but without requiring email verification.

Firstly, I added some signup items necessary for registration, such as ID, Username, Password, and Email.

Signup items	Add						Action
Name		visible	required	prompted	rule	Action	
ID		✓	✓		Incremental	↑ ↓	trash
Username		✓	✓			↑ ↓	trash
Password		✓	✓			↑ ↓	trash
Email		✓	✓		No verification	↑ ↓	trash

Then, I selected the email row's rule item as `No verification`. As a result, the generated preview registration page will have the desired effect.



The image shows a screenshot of a Casdoor registration page. At the top, there is a purple cube icon followed by the text "Casdoor" with a small orange star above the letter "o". Below the logo, there are three input fields: "Username", "Password", and "Email", each with a red asterisk indicating it is required. To the right of the "Email" field is a password strength meter icon. At the bottom, there is a blue "Sign Up" button and a link "Have account? sign in now".

# Signin Items Table

On the application configuration page, we can configure the signin items table to create a customized registration page. We can add or delete any signin item on this signin items table.

Name	Visible	Label HTML	Custom CSS	Placeholder	Rule	Action
Back button	<input checked="" type="checkbox"/>		.back-button { top: 65; }			
Languages	<input checked="" type="checkbox"/>		.login-languages { top: 65; }			
Logo	<input checked="" type="checkbox"/>		.login-logo-box { }			
Signin methods	<input checked="" type="checkbox"/>		.signin-methods { }			
Username	<input checked="" type="checkbox"/>		.login-username { }			
Password	<input checked="" type="checkbox"/>		.login-password { }			
Agreement	<input checked="" type="checkbox"/>		.login-agreement { }			
Forgot password?	<input checked="" type="checkbox"/>		.login-forgot-password { }			
Signin button	<input checked="" type="checkbox"/>		.login-button-box { margin-top: 10px; }			
Signup link	<input checked="" type="checkbox"/>		.login-signup-link { margin-top: 10px; }			
Providers	<input checked="" type="checkbox"/>		.provider-img { width: 100%; }			

For a detailed explanation of each signin item, please refer to the table below.

Column Name	Selectable Value	Description
Name	-	The name of the signin item.
Visible	<input type="button" value="True"/> / <input type="button" value="False"/>	Select whether this signin item is visible on the registration page.
Label HTML	-	If this signin item is added as a custom item, Label should be the html code for this field.
Custom	-	CSS code for this signin item.

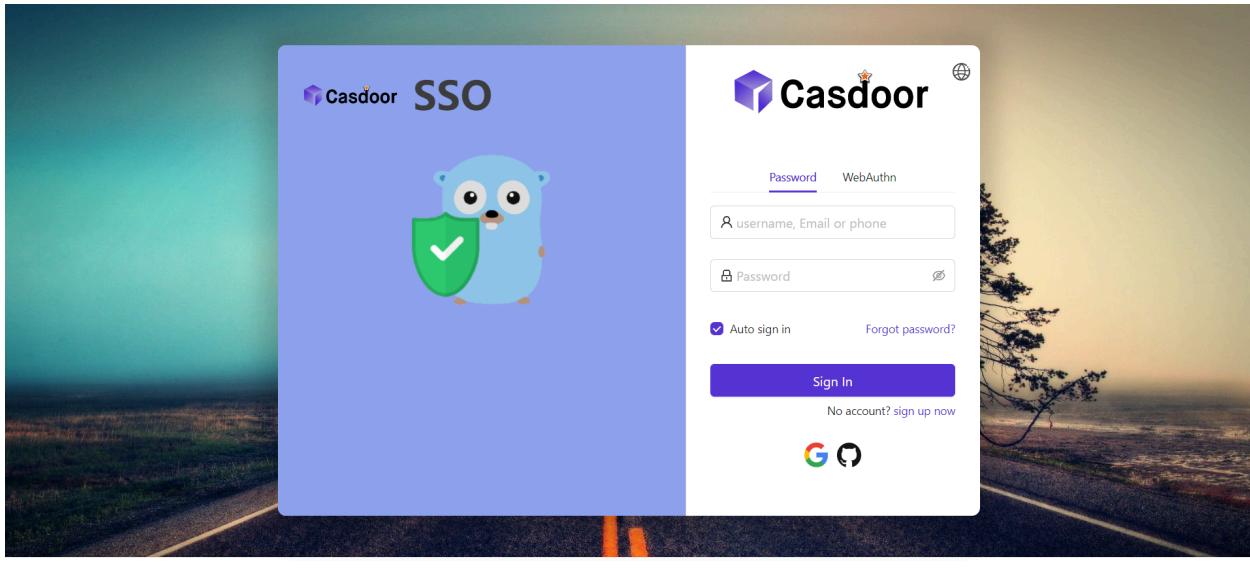
Column Name	Selectable Value	Description
CSS		
Placeholder	-	The placeholder of the signin item.
Rule	<input type="button" value="Rule"/> <input type="button" value="Items"/>	Select a rule to customize this signin item. Detailed rules are described in the table below.
Action	-	Users can perform actions such as moving this signin item up, moving it down, or deleting it.

The Captcha signin item supports configuration rules to control how verification is presented to users.

Item Name	Selectable Rules	Description
Captcha	<input type="button" value="Normal"/> / <input type="button" value="Inline"/>	Choose how captcha verification is displayed. <input type="button" value="Normal"/> shows a modal dialog when sending verification codes. <input type="button" value="Inline"/> displays the captcha directly on the signin page, streamlining the verification process.

# Login UI Customization

You have created the application. Now, let me show you how to customize the login page UI of your application. In this guide, we will create a customized login page for your application.



Let's get started!

## Part 1: Add a background image

First, let's add a background image. The default background is white, which looks very simple.



Password    WebAuthn

Auto sign in      [Forgot password?](#)

[Sign In](#)

No account? [sign up now](#)



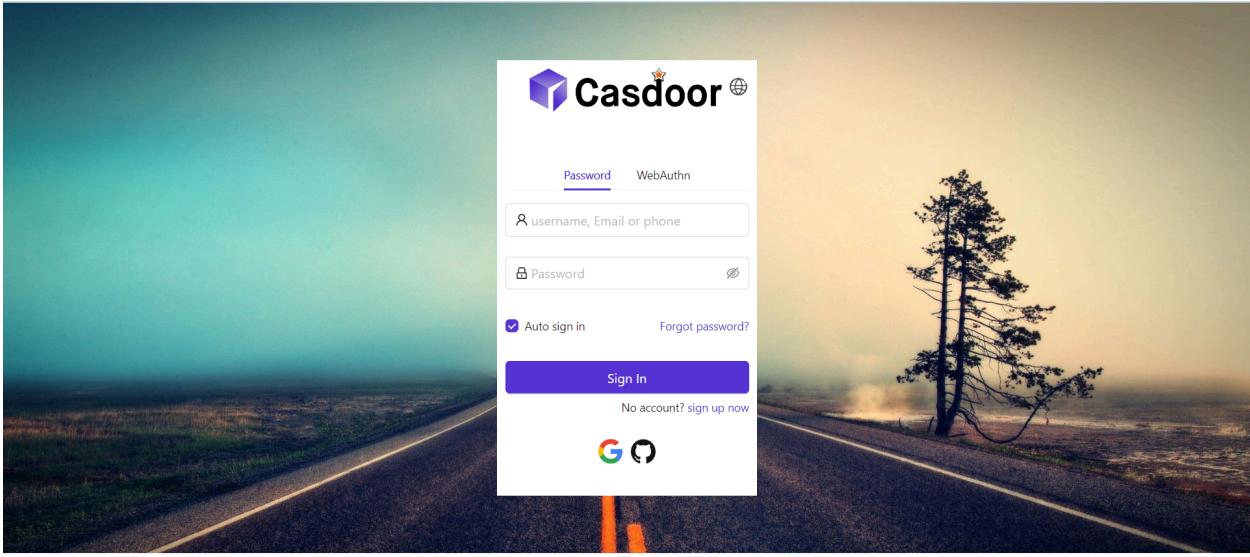
Powered by Casdoor

To add a background image, fill in the `Background URL` with the URL of the image you like. The preview area will display the image if the URL is valid.

Background URL ?:	URL ?: <input type="text" value=""/>
Preview:	
Form CSS ?:	<input type="text"/>
Form position ?:	<input type="button" value="Left"/> <input type="button" value="Center"/> <input type="button" value="Right"/> <input type="button" value="Enable side panel"/>

## Part 2: Customize the login panel

Here's where you were at the end of the first part:



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To make the panel look nice, you need to add some CSS code to it. Copy the code below and paste it into the `Form CSS` field.

```
<style>
.login-panel{
    padding: 40px 30px 0 30px;
    border-radius: 10px;
    background-color: #ffffff;
    box-shadow: 0 0 30px 20px rgba(0, 0, 0, 0.20);
}
</style>
```

Background URL  
URL : <https://static.runoob.com/images/demo/demo2.jpg>

Preview:



Form CSS :

Form position :

### TIP

When editing the `Form CSS`, if the value is empty, the editor will show the default value. However, you still need to copy the content and paste it into the field.

After filling the `Form CSS`, don't forget to save the configuration at the bottom.

Now, let's see the effect.



## Part 3: Select the panel position

Now, the login page looks much prettier than before. We also provide three buttons for you to decide the position of the panel.

Background URL

?

URL ? :



<https://static.runoob.com/images/demo/demo2.jpg>

Preview:



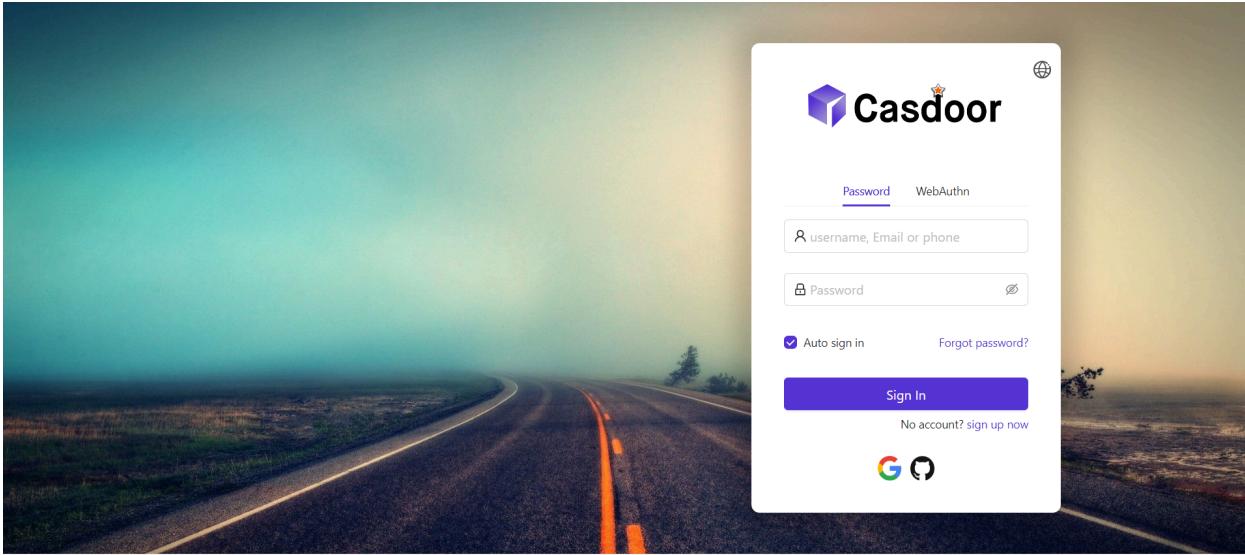
Form CSS ? :

```
<style>.login-panel{ padding: 40px 30px 0 30px; border-radius: 10px; }
```

Form position ? :

Left	Center	Right	Enable side panel
------	--------	-------	-------------------

For example, let's select the Right button:



## Part 4: Enable the side panel

Next, let's see how to enable a side panel and customize its style.

First, select the button. In the Enable Side Panel mode, the panel will be centered.

Form position [?](#) :

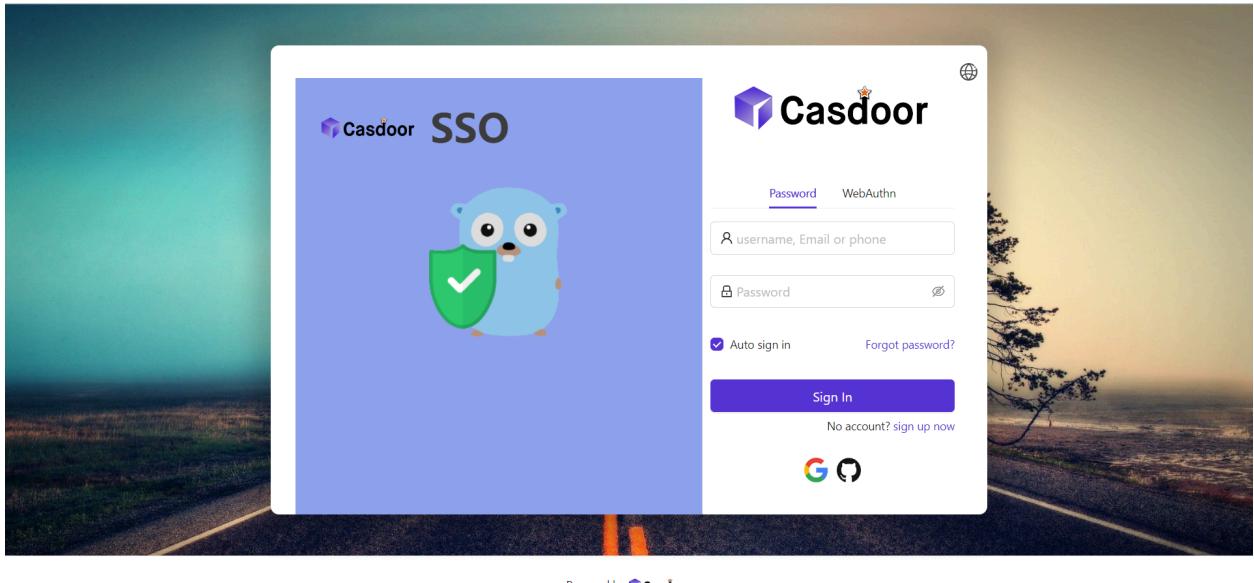
Left	Center	Right	Enable side panel
------	--------	-------	-------------------

Side panel HTML [?](#) :

Then, edit the `Side panel HTML`, which determines the content that will be shown in the side panel. We provide a default template, so you can simply copy and paste it.

```
<style>
    .left-model{
        text-align: center;
        padding: 30px;
        background-color: #8ca0ed;
        position: absolute;
        transform: none;
        width: 100%;
        height: 100%;
    }
    .side-logo{
        display: flex;
        align-items: center;
    }
    .side-logo span {
        font-family: Montserrat, sans-serif;
        font-weight: 900;
        font-size: 2.4rem;
        line-height: 1.3;
        margin-left: 16px;
        color: #404040;
    }
    .img{
        max-width: none;
        margin: 41px 0 13px;
    }
</style>
<div class="left-model">
    <span class="side-logo"> 
        <span>SSO</span>
    </span>
    <div class="img">
        
    </div>
</div>
```

Let's see the effect. The side panel with a logo and image is shown, but the result is not satisfactory.



To improve the look, you need to modify and add some CSS in the `Form CSS`.

Background URL  
② : URL ② :

Preview:

Form CSS ② :

Form position ② :

Side panel HTML ② :

Signup items ② :

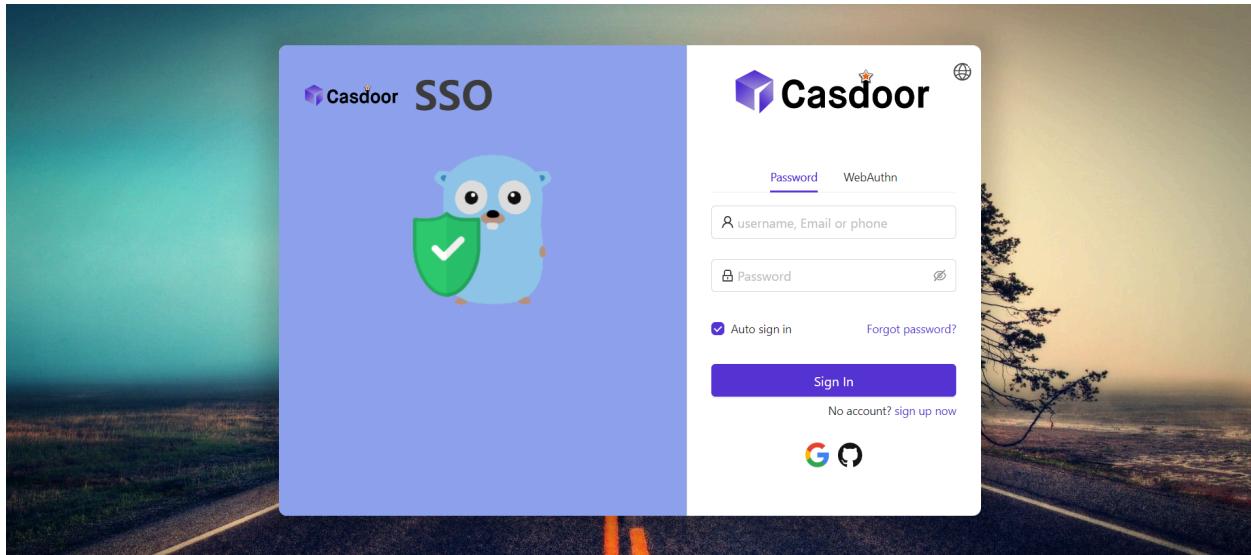
The final code is as follows.

```
<style>
.login-panel{
  border-radius: 10px;
  background-color: #ffffff;
  box-shadow: 0 0 30px 20px rgba(0, 0, 0, 0.20);
}
.login-form {
  padding: 30px;
}
</style>
```

### ⓘ INFO

.login-panel and .login-form are the class names of div elements. They correspond to different areas of the page. If you want to customize the login page further, you can write CSS code here, targeting these class names.

Finally, we have a beautiful login page!



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# Review

To summarize, we have added a background image, customized the login panel style, and enabled the side panel.

Here are some additional resources about application customization in Casdoor:

- [Customize Theme](#): Customize the theme, including the primary color and border radius.
- [Signup Items Table](#)
- [Application Config](#)

Thank you for reading!

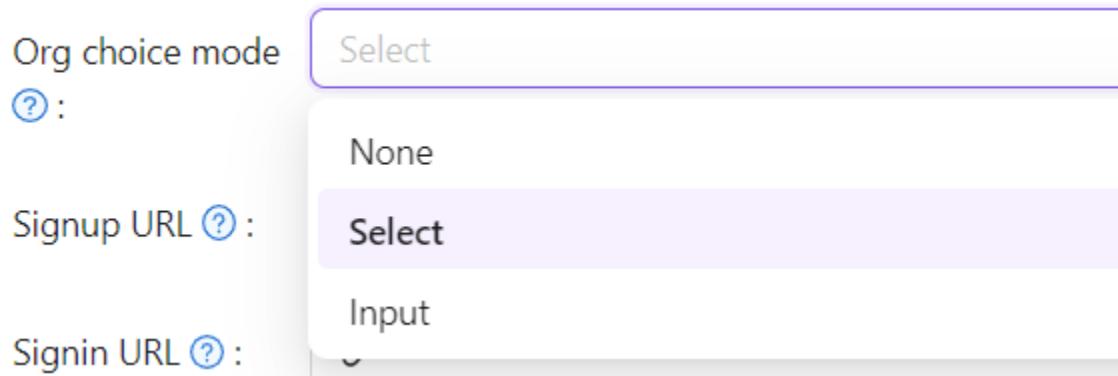
# Specify Login Organization

Here, we will show you how to enable the option to specify the login organization for the application.

For example, the endpoint `/login` is the default sign-in page for accounts belonging to the **built-in** organization. However, you can enable the option to specify the login organization on the **app-built-in** application that belongs to the **built-in** organization. This allows the user to select an organization when logging in. After the user selects the organization, they will be redirected to `/login/<organization>`.

## Configuration

On the application edit page, you can find the `Org select mode` configuration option. You can select the mode from the dropdown list.



- None: The organization select page will not be shown.
- Input: The user can input the organization name in the input box.
- Select: The user can select the organization from the dropdown list.



Please type an organization to sign in

built-in

Confirm



Please select an organization to sign  
in

built-in

forum

test

Star

INFO

The organization select page will only be shown when the route is `/login` or `<organization>/login`. This means that the application should be set as the default application in the organization or the app-built-in.

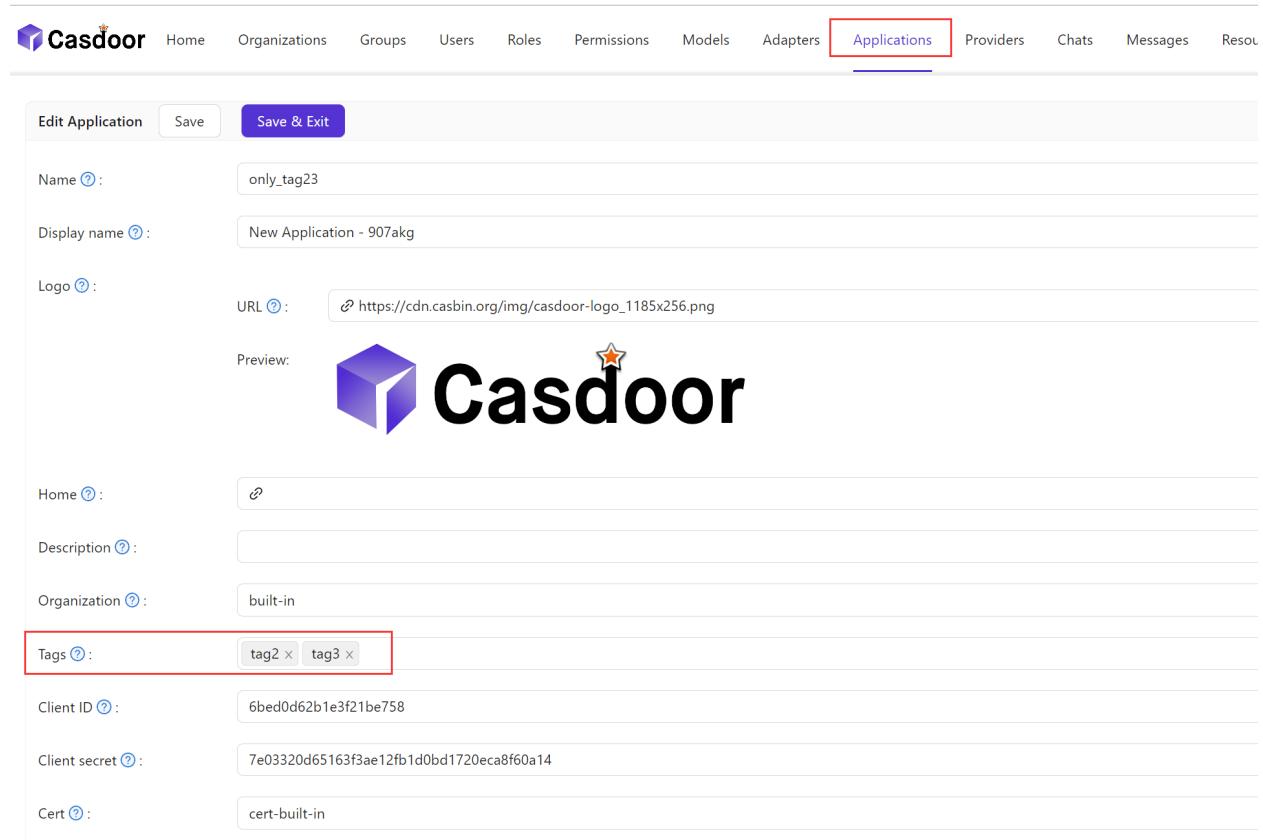


# Tags

The application tags are used to restrict user access to the application.

Specifically, only users with tags listed in the application tags are allowed to log in. For example, the application `dev_app` has tags `dev`, `prd`. Only users with the tag `dev` or `prd` can log in to `dev_app`. Please note that admin and global admin users are not affected by application tags.

On the application edit page, you can find the `Tags` configuration section where you can add tags.



The screenshot shows the Casdoor application edit page. The top navigation bar includes links for Home, Organizations, Groups, Users, Roles, Permissions, Models, Adapters, Applications (which is highlighted with a red box), Providers, Chats, Messages, and Resources. Below the navigation is a form for editing an application. The form fields include:

- Name**: only\_tag23
- Display name**: New Application - 907akg
- Logo**: URL: https://cdn.casbin.org/img/casdoor-logo\_1185x256.png
- Preview**: Shows the Casdoor logo with a star icon.
- Home**: (empty)
- Description**: (empty)
- Organization**: built-in
- Tags**: tag2 x tag3 x (This field is highlighted with a red box.)
- Client ID**: 6bed0d62b1e3f21be758
- Client secret**: 7e03320d65163f3ae12fb1d0bd1720eca8f60a14
- Cert**: cert-built-in

At the top of the form, there are buttons for **Edit Application**, **Save**, and **Save & Exit**.

Here is a video demonstrating how application tags work:

# Application Invitation Code

## Introduction

If you want to restrict application sign up, you can use invitation codes. An invitation code is a string that can be used to sign up for the application. It is generated by the administrator and can be used multiple times. An application can have multiple invitation codes.

## Configuration

1. First, add the "Invitation code" signup item to the signup item table.
2. Then, add the invitation code on the application configuration page.

The screenshot shows a table titled 'Signup items' with columns for Name, Visible, Required, Prompted, Rule, and Action. A new row for 'Invitation code' has been added, highlighted with a red box. The 'Visible' and 'Required' checkboxes are checked for this row. The 'Rule' dropdown is set to 'Random'. Below the table, there is a section for 'Invitation code' with an 'Add' button and a text input field containing 'rmy7ab'. There are also 'Copy' and 'Delete' buttons.

Name	Visible	Required	Prompted	Rule	Action
ID				Random	<span>▲</span> <span>▼</span> <span>trash</span>
Username	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<span>▲</span> <span>▼</span> <span>trash</span>
Display name	<input checked="" type="checkbox"/>			None	<span>▲</span> <span>▼</span> <span>trash</span>
Password	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<span>▲</span> <span>▼</span> <span>trash</span>
ID card	<input checked="" type="checkbox"/>				<span>▲</span> <span>▼</span> <span>trash</span>
Email	<input checked="" type="checkbox"/>			Normal	<span>▲</span> <span>▼</span> <span>trash</span>
Phone	<input checked="" type="checkbox"/>			None	<span>▲</span> <span>▼</span> <span>trash</span>
Affiliation	<input checked="" type="checkbox"/>				<span>▲</span> <span>▼</span> <span>trash</span>
Country/Region	<input checked="" type="checkbox"/>				<span>▲</span> <span>▼</span> <span>trash</span>
Invitation code	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<span>▲</span> <span>▼</span> <span>trash</span>

Invitation code : Add Copy Delete

rmy7ab



Once the application has invitation codes, users can only sign up for the application with a valid invitation code. Regardless of whether the "Invitation code" signup item is visible or not, users must provide the

invitation code during sign up. So, if you want to use invitation codes, you need to add the "Invitation code" signup item to the signup item table.

Here is a demo video that shows how to configure and use the invitation code:

The screenshot shows a web-based application configuration interface. At the top, the URL is `localhost:7001/applications/built-in/app-built-in`. Below the header, there's a toolbar with various icons. The main area is divided into two sections: "Signup Items" and "Invitation code".

**Signup Items:** This section contains a table with columns: Name, Visible, Required, Prompted, Rule, and Action. The rows represent different signup items:

Name	Visible	Required	Prompted	Rule	Action
ID	On	On	Off	Random	Up/Down/Trash
Username	On	On	Off	None	Up/Down/Trash
Display name	On	On	Off	None	Up/Down/Trash
Password	On	On	Off	Normal	Up/Down/Trash
ID card	On	Off	Off	None	Up/Down/Trash
Email	On	Off	Off	Normal	Up/Down/Trash
Phone	On	Off	Off	None	Up/Down/Trash
Affiliation	On	Off	Off	None	Up/Down/Trash
Country/Region	On	Off	Off	None	Up/Down/Trash

**Invitation code:** This section has a single "Add" button.

At the bottom center, there's a message: "No data" with an envelope icon.

# Shared Application

## Introduction

If you want to create an application that can be shared with other organizations, you can enable Is Shared field in application(for safety reasons, only built-in organization can create shared application). To specify the organization, you should add `-org-` and organization name after clientId / application name. For example, the clientId of application is `2dc94ccbec09612c04ac`, your organization name is `casbin`, the clientId for your organization is `2dc94ccbec09612c04ac-org-casbin` and the login url for oauth is `https://door.casdoor.com/login/oauth/authorize?client_id=2dc94ccbec09612c04ac-org-casbin&response_type=code&redirect_uri=http://localhost:9000&scope=read&state=casdoor`.

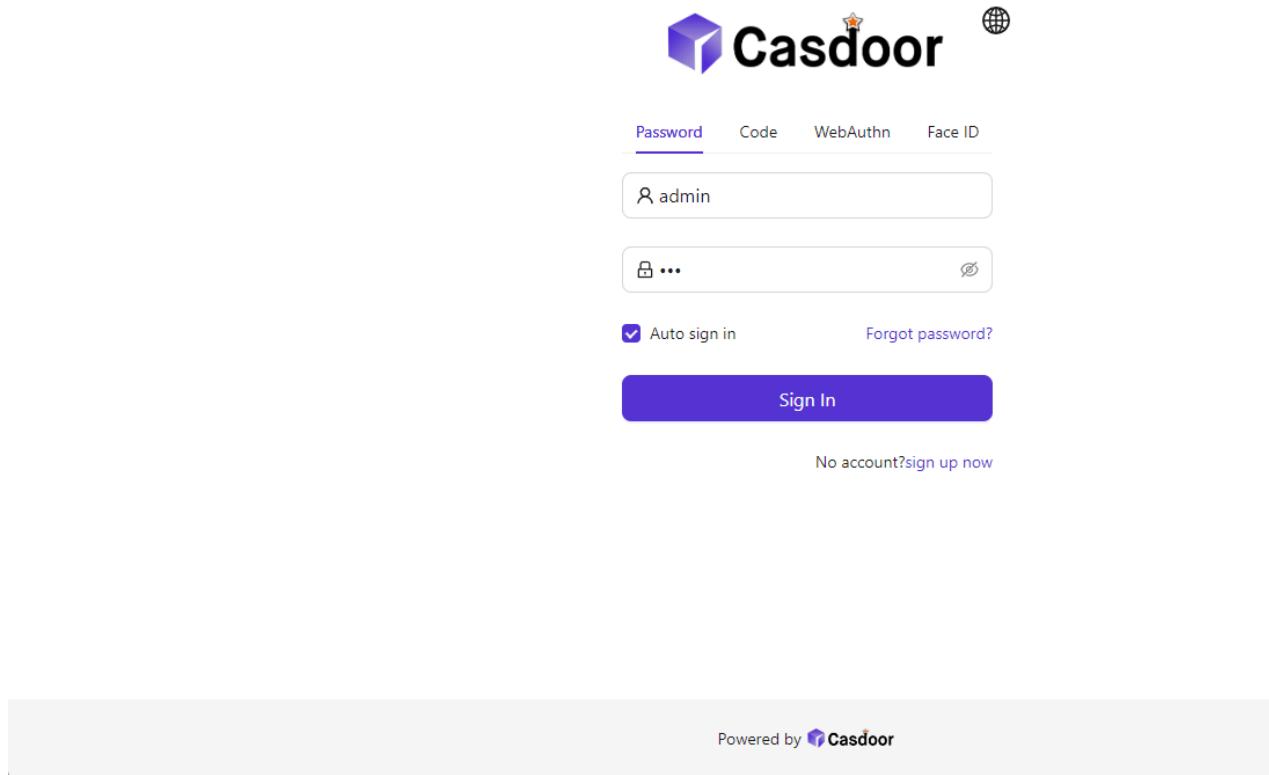
## Configuration

1. First create a new application.
2. Enable Is Shared field.
3. add `-org-` to split organization and clientId / application name.

The screenshot shows the Casdoor SaaS Hosting interface. At the top, there is a navigation bar with links: Home, SaaS Hosting (highlighted in purple), User Management, Identity, Authorization, and Logging & Auditing. Below the navigation bar, there is a form titled "New Application". The form contains the following fields:

- Name: application\_f4gtqp
- Display name: New Application - f4gtqp
- Is shared: A toggle switch that is turned on (blue).
- Logo: URL: https://cdn.casdoor.org/img/casdoor-logo\_1185x256.png
- Preview: Shows a logo consisting of a purple house-like shape followed by the word "Casdoor" in a stylized font with a small orange star above the letter "o".

At the top of the form, there are three buttons: "New Application" (disabled), "Save" (disabled), "Save & Exit" (highlighted in blue), and "Cancel".



#### CAUTION

Once you shared an application, it can be used by all organizations, and cannot be disabled for a particular organization.

Here is a demo video that shows how to use shared application:

# Permissions

## Overview

Using Casbin to manage user access rights in organizations

## Permission Configuration

Using exposed Casbin APIs to manage users' access rights in an organization

## Exposed Casbin APIs

Using exposed Casbin APIs to manage user access rights in organizations

## Adapter

Configure adapter and perform basic CRUD operations on policy

# Overview

## Introduction

All users associated with a single [Casdoor organization](#) share access to the organization's applications. However, there may be instances where you want to restrict user access to certain applications or specific resources within an application. In such cases, you can utilize the [Permission](#) feature provided by [Casbin](#).

## Understanding Casbin Concepts

Before delving deeper into the topic, it is important to have a basic understanding of how [Casbin](#) works and its related concepts:

- **Model:** Defines the structure of your permission policies and the criteria for matching requests against these policies and their outcomes. You can configure models in the [Models](#) page in Casdoor.
- **Policy:** Describes the specific permission rules (who can access what resources with what actions). You configure policies in the [Permissions](#) page in Casdoor.
- **Adapter:** An abstraction layer that shields Casbin's executor from the source of the Policy, allowing the storage of Policies in various locations like files or databases. Learn more about [Adapters](#).



### LEARN MORE ABOUT CASBIN

Visit the [Casbin documentation](#) to learn more about access control models and patterns. You can also use the [Casbin Online Editor](#) to create and test

Model and Policy files for your specific scenarios.

# Configuring Permissions in Casdoor

## Where to Configure

In the Casdoor Web UI, you'll work with two main pages:

1. **Models Page:** Navigate to Models in the sidebar to add or edit Models for your organization.

The screenshot shows the Casdoor Models page. At the top, there is a navigation bar with links: Home, Organizations, Users, Roles, Permissions, Models (which is highlighted), Providers, Applications, Resources, Tokens, Records, Webhooks, Syncers, Certs, and a three-dot menu. On the far right, there is a user icon and the word "Admin".

The main area is titled "Edit Model" and contains the following fields:

- Organization: built-in
- Name: model-built-in
- Display name: Built-in Model
- Model text:

```
[request_definition]
r = sub, obj, act

[policy_definition]
p = sub, obj, act

[policy_effect]
e = some(where {p.eft == allow})

[matchers]
m = r.sub == p.sub && r.obj == p.obj && r.act == p.act
```
- Is enabled:

At the bottom, there are "Save" and "Save & Exit" buttons.

Made with ❤ by Casdoor

2. **Permissions Page:** Navigate to Permissions in the sidebar to configure permission policies.

The screenshot shows the 'Edit Permission' page in the Casdoor Web UI. The form is filled with the following data:

- Organization: built-in
- Name: permission-built-in
- Display name: Built-in Permission
- Model: model-built-in
- Adapter: permission\_rule\_builtin
- Sub users: built-in/admin, built-in/seriouszyx, built-in/test
- Sub roles: (empty)
- Sub domains: (empty)
- Resource type: Application
- Resources: app-built-in
- Actions: Read, Write, Admin
- Effect: Allow
- Is enabled: checked
- Submitter: (empty)
- Approver: (empty)

At the top right, there are 'Save' and 'Save & Exit' buttons.

## How Permissions Work

Returning to the subject of permission configuration in Casdoor:

1. **Add a Model:** First, create a Model for your organization in the Models page within the Casdoor Web UI.
2. **Configure a Policy:** Then, add a Policy (permission rules) for your organization in the Permissions page.

The [Casbin Online Editor](#) can provide you with Model and Policy files tailored to your specific usage scenarios. You can effortlessly import the Model file into Casdoor through its Web UI for use by the built-in Casbin. For the Policy configuration (i.e., the Permissions page in the Casdoor Web UI), refer to the [Permission Configuration](#) guide for detailed instructions.

# Using Permissions with Your Application

Just as your application needs to enforce permission control through Casdoor's built-in Casbin, Casdoor itself utilizes its own Model and Policy to regulate access permissions for the API interfaces through Casbin. Though Casdoor can call Casbin from internal code, external applications cannot.

As a solution, Casdoor exposes an API for external applications to call the built-in Casbin. See the [Exposed Casbin APIs](#) documentation for definitions of these API interfaces and instructions on how to use them.

## Related Features

### Account Item Permissions

Casdoor also provides fine-grained permission control at the user account field level through the [Edit Organization](#) page:

- **View rule:** Control who can view specific user account fields
- **Modify rule:** Control who can modify specific user account fields

These rules can be set to:

- **Public:** Everyone has permission
- **Self:** Each user has their own permission
- **Admin:** Only administrators have permission

Learn more in the [Account Customization](#) documentation.

# Role-Based Access Control

Casdoor supports role-based permissions where you can assign [roles](#) to users and configure permission policies for these roles. This allows you to manage permissions at the role level rather than individual user level.

## Next Steps

- [Permission Configuration](#): Learn how to configure each field in the Permission page
- [Exposed Casbin APIs](#): Use Casbin APIs in your external applications
- [Adapters](#): Configure adapters for policy storage
- [Account Customization](#): Configure field-level permissions for user accounts

Let's get started!

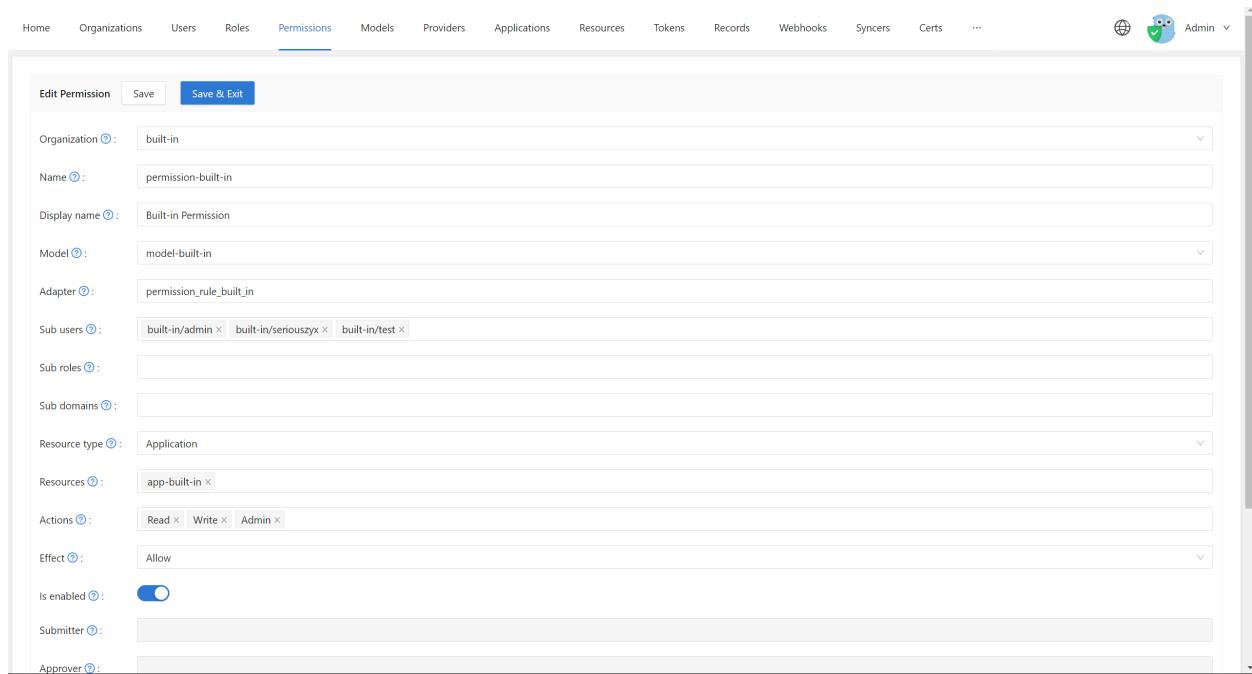
# Permission Configuration

This page explains each field in the Edit Permission page where you configure permission policies for your organization.

## Accessing the Permission Configuration

To access the permission configuration page:

1. Log in to your Casdoor instance
2. Navigate to Permissions in the sidebar
3. Click Add to create a new permission or click on an existing permission to edit it



The screenshot shows the 'Edit Permission' page in the Casdoor web interface. The top navigation bar includes links for Home, Organizations, Users, Roles, Permissions (which is highlighted), Models, Providers, Applications, Resources, Tokens, Records, Webhooks, Syncers, Certs, and more. On the far right, there's a user icon labeled 'Admin'.

The main form area has a title 'Edit Permission' with 'Save' and 'Save & Exit' buttons. The form fields are as follows:

- Organization: built-in
- Name: permission-built-in
- Display name: Built-in Permission
- Model: model-built-in
- Adapter: permission\_rule\_builtin
- Sub users: built-in/admin × built-in/seriouszyx × built-in/test ×
- Sub roles:
- Sub domains:
- Resource type: Application
- Resources: app-built-in
- Actions: Read × Write × Admin ×
- Effect: Allow
- Is enabled:
- Submitter:
- Approver:

# Configuration Fields

## Basic Information

### Organization

The name of the [organization](#) to which the policy belongs. An organization can have multiple permission policy files. You can select the organization from the dropdown menu in the [Edit Permission](#) page.

### Name

The globally unique name of the permission policy in the organization. It is used to identify the policy file.

- Must be unique within the organization
- Used as the identifier when calling [Casbin APIs](#)

### Display name

A user-friendly name for the permission policy. This is shown in the Casdoor Web UI for better readability.

## Model and Storage Configuration

### Model

The name of the model file that describes the structure and matching patterns of the permission policy. You can configure models in the [Edit Model](#) page.

Models define how permission checks are performed. For example:

- Simple ACL (Access Control List)
- RBAC (Role-Based Access Control)
- ABAC (Attribute-Based Access Control)

Learn more about models in the [Casbin documentation](#).



**TIP**  
Use the [Casbin Online Editor](#) to create and test your model before adding it to Casdoor.

## Adapter

**Attention!** In the current version, this field describes the name of the database table that stores the permission policy, rather than the name of the adapter configured in the [Adapters](#) page in the Casdoor Web UI.

Casdoor uses its own database to store configured permission policies:

- If this field is **empty**, the permission policy will be stored in the `permission_rule` table
- If **specified**, it will be stored in the specified database table
- If the specified table name does not exist in the database used by Casdoor, it will be created automatically



### IMPORTANT

We strongly recommend specifying different adapters (table names) for different models, as keeping all policies in the same table may cause conflicts.

Learn more about adapters in the [Adapter documentation](#).

# Subject Configuration

These fields define who the permission policy applies to.

## Sub users

Which **users** will the permission policy be applied to. You can select specific users from the Edit Permission page.

Examples:

- Select specific users like `alice`, `bob`
- Leave empty to not restrict by user

## Sub roles

If the RBAC (Role-Based Access Control) model is used, you can select which **roles** will be applied to the permission policy. You configure roles in the Edit Role page.

This will add permission policies such as `g`, `user`, `role` for every user in this role.

Examples:

- Select roles like `admin`, `editor`, `viewer`
- All users with these roles will inherit the permissions



### ROLE-BASED PERMISSIONS

Using roles is a powerful way to manage permissions at scale. Instead of assigning permissions to individual users, you assign them to roles, and

then assign roles to users.

## Sub domains

Which domains will the permission policy be applied to. This is useful for multi-tenant scenarios.

Examples:

- `domain1`, `domain2`
- Leave empty if not using domain-based access control

# Object and Action Configuration

These fields define what resources and what actions are controlled by the policy.

## Resource type

In the current version, Casdoor does not use this field for external applications that want to authenticate. You can ignore it for now or use it for your own categorization purposes.

## Resources

This field describes the resources for which you wish to enforce permission control.

### NOTE

Note that the resources here are not those configured in the Resources page of the Casdoor Web UI. You can add any string you want here, such

as:

- A URL: `/api/users`, `/admin/dashboard`
- A file name: `document.pdf`, `config.yaml`
- A resource identifier: `project:123`, `database:users`

You can add multiple resources, and Casdoor will create permission rules for each combination of resource and action.

## Actions

This field describes the actions to operate on resources. Similar to resources, it can be any string you want, such as:

- HTTP methods: `GET`, `POST`, `PUT`, `DELETE`
- CRUD operations: `read`, `write`, `update`, `delete`
- Custom actions: `view`, `edit`, `approve`, `publish`

### CAUTION

Please note that Casdoor will convert all these strings to lowercase before storing them. Additionally, Casdoor will apply all actions to each resource. You cannot specify that an action only takes effect on certain resources in this configuration page.

If you need fine-grained control over action-resource combinations, you should define this in your Model file.

# Effect Configuration

## Effect

This option takes effect for Casdoor itself to control application access.



### INFO

If you want an external application to enforce permission controls using the interface Casdoor exposes, this field won't do anything. You should describe the effect of pattern matching in the Model file using `allow` or `deny` rules.

# Example Configuration

As you can see, this configuration page is almost tailor-made for the `(sub, obj, act)` model, which is one of the most common permission models.

Here's an example configuration:

- Model: `rbac_model` (Role-Based Access Control)
- Sub roles: `admin`, `editor`
- Resources: `/api/users`, `/api/posts`
- Actions: `read`, `write`

This would allow users with the `admin` or `editor` role to perform `read` and `write` actions on the `/api/users` and `/api/posts` resources.

# Related Topics

- [Permission Overview](#): Understand the basics of permissions in Casdoor
- [Exposed Casbin APIs](#): Use permissions in your external applications
- [Adapters](#): Configure policy storage adapters
- [Account Customization](#): Configure View rule and Modify rule for user account fields
- [User Roles](#): Manage user roles in the Edit Role page

# Exposed Casbin APIs

## Introduction

Let's assume that your application's front-end has obtained the `access_token` of the logged-in user and now wants to authenticate the user for some access. You cannot simply place the `access_token` into the HTTP request header to use these APIs because Casdoor uses the `Authorization` field to check the access permission. Like any other APIs provided by Casdoor, the `Authorization` field consists of the application client id and secret, using the [Basic HTTP Authentication Scheme](#). It looks like `Authorization: Basic <Your_Application_ClientId> <Your_Application_ClientSecret>`. For this reason, Casbin APIs should be called by the application backend server. Here are the steps on how to do it.

Take the [app-vue-python-example](#) application in the demo site for example, the authorization header should be: `Authorization: Basic 294b09fbc17f95daf2fe dd8982f7046ccba1bbd7851d5c1ece4e52bf039d`.

1. The front-end passes the `access_token` to the backend server through the HTTP request header.
2. The backend server retrieves the user id from the `access_token`.

As a note in advance, these interfaces are also designed (for now) for the `(sub, obj, act)` model. The body is the request format defined by the Casbin model of the permission, usually representing `sub`, `obj` and `act` respectively.

In addition to the API interface for requesting enforcement of permission control, Casdoor also provides other interfaces that help external applications obtain permission policy information, which is also listed here.

# Enforce

The Enforce API supports multiple query parameters to specify which permission(s) to enforce against. Only one parameter should be provided at a time:

- `permissionId`: The identity of a specific permission policy (format: organization name/permission name)
- `modelId`: The identity of a permission model (format: organization name/model name) - enforces against all permissions using this model
- `resourceId`: The identity of a resource - enforces against all permissions for this resource
- `enforcerId`: The identity of a specific enforcer
- `owner`: The organization name - enforces against all permissions in this organization

Request using `permissionId`:

```
curl --location --request POST 'http://localhost:8000/api/enforce?permissionId=example-org/example-permission' \
--header 'Content-Type: application/json' \
--header 'Authorization: Basic <Your_Application_ClientId><Your_Application_ClientSecret>' \
--data-raw '["example-org/example-user", "example-resource", "example-action"]'
```

Request using `modelId`:

```
curl --location --request POST 'http://localhost:8000/api/enforce?modelId=example-org/example-model' \
```

Request using `resourceId`:

```
curl --location --request POST 'http://localhost:8000/api/enforce?resourceId=example-org/example-resource' \
--header 'Content-Type: application/json' \
--header 'Authorization: Basic <Your_Application_ClientId><Your_Application_ClientSecret>' \
--data-raw '[{"example-org/example-user", "example-resource", "example-action"}'
```

Response:

```
{
  "status": "ok",
  "msg": "",
  "sub": "",
  "name": "",
  "data": [
    true
  ],
  "data2": [
    "example-org/example-model/example-adapter"
  ]
}
```

Note: When using `modelId`, `resourceId`, `enforcerId`, or `owner` parameters, the response `data` array may contain multiple boolean values (one for each permission that was checked), and `data2` contains the corresponding model and adapter identifiers.

## BatchEnforce

The BatchEnforce API supports multiple query parameters to specify which

permission(s) to enforce against. Only one parameter should be provided at a time:

- `permissionId`: The identity of a specific permission policy (format: organization name/permission name)
- `modelId`: The identity of a permission model (format: organization name/model name) - enforces against all permissions using this model
- `enforcerId`: The identity of a specific enforcer
- `owner`: The organization name - enforces against all permissions in this organization

Request using `permissionId`:

```
curl --location --request POST 'http://localhost:8000/api/batch-enforce?permissionId=example-org/example-permission' \
--header 'Content-Type: application/json' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>' \
--data-raw '[[{"example-org/example-user", "example-resource",
"example-action"}, ["example-org/example-user2", "example-
resource", "example-action"], ["example-org/example-user3",
"example-resource", "example-action"]]]'
```

Request using `modelId`:

```
curl --location --request POST 'http://localhost:8000/api/batch-enforce?modelId=example-org/example-model' \
--header 'Content-Type: application/json' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>' \
--data-raw '[[{"example-org/example-user", "example-resource",
"example-action"}, ["example-org/example-user2", "example-
resource", "example-action"]]]'
```

Response:

```
{  
    "status": "ok",  
    "msg": "",  
    "sub": "",  
    "name": "",  
    "data": [  
        [  
            true,  
            true,  
            false  
        ]  
    ],  
    "data2": [  
        "example-org/example-model/example-adapter"  
    ]  
}
```

Note: When using `modelId`, `enforcerId`, or `owner` parameters, the response `data` array may contain multiple arrays of boolean values (one array for each permission that was checked), and `data2` contains the corresponding model and adapter identifiers.

## GetAllObjects

This API retrieves all objects (resources) that a user has access to. It accepts an optional `userId` parameter. If not provided, it uses the logged-in user's session.

Request with `userId` parameter:

```
curl --location --request GET 'http://localhost:8000/api/get-all-objects?userId=example-org/example-user' \
```

Request using session (userId determined from session):

```
curl --location --request GET 'http://localhost:8000/api/get-all-objects' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>'
```

Response:

```
{
  "status": "ok",
  "msg": "",
  "data": [
    "app-built-in",
    "example-resource"
  ]
}
```

## GetAllActions

This API retrieves all actions that a user can perform. It accepts an optional `userId` parameter. If not provided, it uses the logged-in user's session.

Request with `userId` parameter:

```
curl --location --request GET 'http://localhost:8000/api/get-all-actions?userId=example-org/example-user' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>'
```

Request using session (userId determined from session):

```
curl --location --request GET 'http://localhost:8000/api/get-all-actions' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>'
```

Response:

```
{  
  "status": "ok",  
  "msg": "",  
  "data": [  
    "read",  
    "write",  
    "admin"  
  ]  
}
```

## GetAllRoles

This API retrieves all roles assigned to a user. It accepts an optional `userId` parameter. If not provided, it uses the logged-in user's session.

Request with `userId` parameter:

```
curl --location --request GET 'http://localhost:8000/api/get-all-roles?userId=example-org/example-user' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>'
```

Request using session (userId determined from session):

```
curl --location --request GET 'http://localhost:8000/api/get-all-roles' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>'
```

Response:

```
{  
    "status": "ok",  
    "msg": "",  
    "data": [  
        "role_kcx66l"  
    ]  
}
```

## RunCasbinCommand

This API executes Casbin CLI commands and returns their output. It's designed for running language-specific Casbin command-line tools through Casdoor's backend, supporting languages like Java, Go, Node.js, Python, and others.

The API includes an in-memory cache that stores command results for 5 minutes. When the same command is executed with identical parameters, the cached result is returned immediately without re-executing the command, improving response times and reducing server load.

Request:

```
curl --location --request GET 'http://localhost:8000/api/run-casbin-command?language=go&args=["-v"]' \
--header 'Authorization: Basic <Your_Application_ClientId>
<Your_Application_ClientSecret>'
```

Parameters:

- `language`: The programming language for the Casbin CLI (e.g., `go`, `java`, `node`, `python`)
- `args`: A JSON-encoded array of command-line arguments (e.g., `["-v"]` for version, `["new"]` for creating new files). Note: URL-encode the JSON array when using it as a query parameter

Response:

```
{  
    "status": "ok",  
    "msg": "",  
    "data": "casbin version 2.x.x"  
}
```

The cache key is generated from the language and arguments, so different commands are cached independently. Expired entries are automatically cleaned up to prevent memory growth.

# Adapter

Casdoor supports using the UI to connect the adapter and manage policy rules. In Casbin, the storage of policy rules is implemented as an adapter, which acts as middleware for Casbin. A Casbin user can use an adapter to load policy rules from a storage or save policy rules to it.

## Adapter

- `type`: Adapter type. Currently supports database adapter.
- `Host`
- `Port`
- `User`
- `Password`
- `Database type`: Currently supports MySQL, PostgreSQL, SQL Server, Oracle, SQLite 3.
- `Database`: The name of the database.
- `Table`: The name of the table. If the table does not exist, it will be created.

Edit Adapter Save Save & Exit

Organization <small>②</small> :	built-in
Name <small>②</small> :	casdoor_adapter
Type <small>②</small> :	Database
Host <small>②</small> :	localhost
Port <small>②</small> :	3306
User <small>②</small> :	root
Password <small>②</small> :	123456
Database type <small>②</small> :	MySQL
Database <small>②</small> :	casdoor
Table <small>②</small> :	casbin_rule

### ❗ INFO

After filling in all the fields, please remember to **save** the configuration.  
 Then click the **sync** button to load the policy rules. The policy rules will be displayed in the table below.

Policies ②:

Rule Type	V0	V1	V2	V3	V4	V5	Option	
p	built-in	*	*	*	*	*		
p	app	*	*	*	*	*		
p	*	*	POST	/api/signup	*	*		
p	*	*	POST	/api/get-email-and-phone	*	*		
p	*	*	POST	/api/login	*	*		
p	*	*	GET	/api/get-app-login	*	*		
p	*	*	POST	/api/logout	*	*		
p	*	*	GET	/api/logout	*	*		
p	*	*	GET	/api/get-account	*	*		
p	*	*	GET	/api/userinfo	*	*		

< 1 2 3 4 5 >

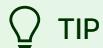
Is enabled ②:

# Basic CRUD Operations

If you have successfully connected the adapter, you can perform basic CRUD operations on the policy rules.

- Add

Policies ⓘ	Sync	Add	Rule Type	V0	V1	V2	V3	V4	V5	Option
p	built-in	↳	p	*	*	*	*	*	*	edit delete
p	*	*	p	*	*	POST	/api/signup	*	*	edit delete
p	*	*	p	*	*	POST	/api/get-email-and-phone	*	*	edit delete
p	*	*	p	*	*	POST	/api/login	*	*	edit delete
p	*	*	p	*	*	GET	/api/get-app-login	*	*	edit delete
p	*	*	p	*	*	POST	/api/logout	*	*	edit delete
p	*	*	p	*	*	GET	/api/logout	*	*	edit delete
p	*	*	p	*	*	GET	/api/get-account	*	*	edit delete
p	*	*	p	*	*	GET	/api/userinfo	*	*	edit delete
p	*	*	p	*	*	POST	/api/webhook	*	*	edit delete



You can only add one policy at a time. The newly added policy will appear as the first row in the table, but it will actually be saved in the last row. So, when you sync the policies next time, they will appear in the last row of the table.

- Edit

casbin_rule																																																																																								
Model :		casbin_rule																																																																																						
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- Delete

User :	root																								
Password :	123456																								
Database type :	MySQL																								
Database :	casdoor																								
Table :	casbin_rule																								
Model :	casbin_rule																								
Policies :	<input type="button" value="Sync"/> <input type="button" value="Add"/> <table border="1"> <thead> <tr> <th>Rule Type</th><th>V0</th><th>V1</th><th>V2</th><th>V3</th><th>V4</th><th>V5</th><th>Option</th></tr> </thead> <tbody> <tr> <td>p</td><td>*</td><td>*</td><td>GET</td><td>/api/get-default-application</td><td>*</td><td>*</td><td><input type="button" value="Sync"/> <input type="button" value="Delete"/></td></tr> <tr> <td>p</td><td>test</td><td>*</td><td>*</td><td>*</td><td>*</td><td>*</td><td><input type="button" value="Sync"/> <input type="button" value="Delete"/></td></tr> </tbody> </table>	Rule Type	V0	V1	V2	V3	V4	V5	Option	p	*	*	GET	/api/get-default-application	*	*	<input type="button" value="Sync"/> <input type="button" value="Delete"/>	p	test	*	*	*	*	*	<input type="button" value="Sync"/> <input type="button" value="Delete"/>
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# Providers



## Overview

Add third-party services to your application



## OAuth

24 items



## Email

6 items



## SMS

5 items



## Notification

8 items



## Storage

9 items



## SAML

4 items



## Payment

6 items



## Captcha

7 items



Web3

2 items



Face ID

2 items



MFA

2 items

# Overview

Casdoor utilizes providers to offer third-party services for the platform. In this chapter, you will learn how to add providers to Casdoor.

## What We Have

Currently, we have seven types of providers:

- OAuth Providers

Casdoor allows users to sign in through other OAuth applications. You can add GitHub, Google, QQ, and many other OAuth applications to Casdoor. For more details, please refer to the [OAuth](#) section.

- SMS Providers

Casdoor sends SMS to users when they want to verify their phone numbers. SMS providers are used to send SMS in Casdoor.

- Email Providers

Email providers are similar to SMS providers.

- Storage Providers

Casdoor allows users to store files using the local file system or cloud OSS services.

- Payment Providers

Casdoor can add payment providers, which will be used to add payment

methods to products on the product page. Currently, the supported payment providers include Alipay, WeChat Pay, PayPal, and GC.

- **Captcha Providers**

Casdoor supports configurable captcha in user flows. Currently, the supported captcha providers include Default Captcha, reCAPTCHA, hCaptcha, Alibaba Cloud Captcha, and Cloudflare Turnstile.

- **MFA Providers**

Casdoor supports external authentication servers for multi-factor authentication. Currently supports RADIUS servers for authenticating users as a second factor during login.

# How to Configure and Use

## Scope

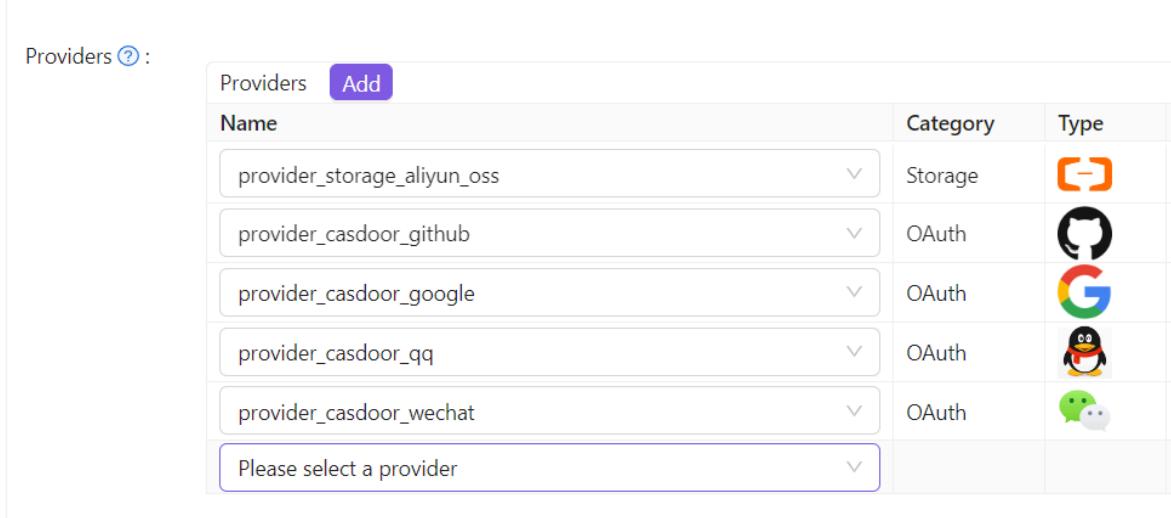
Providers have different scopes, which are determined by the creator. Only Administrators have the permission to add and configure providers. There are two types of Administrators in Casdoor:

- **Global Administrator:** All users under the `built-in` organization and the users who enable `IsGlobalAdmin`. The providers created by the Global Administrator can be used by all applications.
- **Organization Administrator:** Users who enable `IsAdmin`. The providers created by the Organization Administrator can only be used by the applications under the organization (under development...).

## Add to Application

Follow the steps below to add providers to your application. Note that you cannot use the provider in your application until you have added it.

1. Go to the application edit page and add a new provider row.



The screenshot shows a table titled 'Providers' with columns 'Name', 'Category', and 'Type'. There are five rows of data and one empty row at the bottom.

Name	Category	Type
provider_storage_aliyun_oss	Storage	
provider_casdoor_github	OAuth	
provider_casdoor_google	OAuth	
provider_casdoor_qq	OAuth	
provider_casdoor_wechat	OAuth	
Please select a provider		

2. Select a provider that you want to add to the application. You will see all the providers that the application can use.

Providers [?](#) :

Name	Category	Type	canSignUp
provider_storage_aliyun_oss	Storage		
provider_casdoor_github	OAuth		<input checked="" type="checkbox"/>
provider_casdoor_google	OAuth		<input checked="" type="checkbox"/>
provider_casdoor_qq	OAuth		<input checked="" type="checkbox"/>
provider_casdoor_wechat	OAuth		<input checked="" type="checkbox"/>
Please select a provider			

Preview [?](#) :

provider\_email\_submail

provider\_4olfdm

provider\_casdoor\_bilibili

provider\_casdoor\_okta

provider\_casdoor\_alipay

provider\_casdoor\_slack

provider\_casdoor\_steam

provider\_casdoor\_infoflow

3. For OAuth and Captcha providers, you can configure their usage. See [OAuth](#) and [Captcha](#) for more information.

Type	canSignUp	canSignIn	canUnlink	prompted	Rule
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Always <a href="#">▼</a>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Finally, **save** the configuration. You can now try using the provider in your application.

# OAuth

## Overview

Add OAuth providers to your application

## User Mapping

Map OAuth provider claims to Casdoor user fields

## Google

Add the Google OAuth provider to your application

## Google One Tap

Learn how to add Google One Tap support to your application

 GitHub

Add GitHub OAuth provider to your application

 LinkedIn

Add LinkedIn OAuth provider to your application

 Facebook

Add the Facebook OAuth provider to your application.

 Apple

Add the Apple Sign in OAuth provider to your application.

 AD FS

Add AD FS as a third-party service to complete authentication.

 **Azure AD**

Add Azure AD as a third-party service to complete authentication

 **Azure AD B2C**

Add Azure AD B2C as a third-party service to complete authentication

 **Custom OAuth**

Add your custom OAuth provider to Casdoor

 **Okta**

Add Okta OAuth provider to your application

 **Twitter**

Add Twitter OAuth provider to your application

 **Weibo**

Add Weibo OAuth provider to your application

 **WeChat**

Add WeChat OAuth provider to your application

 **WeCom**

Add WeCom OAuth provider to your application

 **Tencent QQ**

Add Tencent QQ OAuth provider to your application

 **DingTalk**

Add DingTalk OAuth provider to your application

 Steam

Add the Steam OAuth provider to your application

 Gitee

Add Gitee OAuth provider to your application

 Baidu

Add Baidu OAuth provider to your application

 Infoflow

Add Infoflow OAuth provider to your application

 Lark

Add Lark OAuth provider to your application

# Overview

Casdoor allows for the use of other OAuth applications as a sign-in method.

Currently, Casdoor supports multiple OAuth application providers. The icons of these providers will be displayed on the login and signup pages once they have been added to Casdoor. The following are the providers that Casdoor supports:

Provider	Logo	Provider	Logo	Provider	Logo	Provider	Logo
ADFS		Alipay		Amazon		Apple	
Auth0		Azure AD		Azure AD B2C		Baidu	
Bilibili		Bitbucket		Box		Casdoor	
Cloud Foundry		Dailymotion		Deezer		DigitalOcean	
DingTalk		Discord		Tiktok		Dropbox	
Eve Online		Facebook		Fitbit		Gitea	
Gitee		GitHub		GitLab		Google	
Heroku		InfluxCloud		Infoflow		Instagram	

Provider	Logo	Provider	Logo	Provider	Logo	Provider	Logo
Intercom		Kakao		Lark		Lastfm	
Line		LinkedIn		Mailru		Meetup	
Microsoft		Naver		Nextcloud		Okta	
OneDrive		Oura		Patreon		PayPal	
QQ		Salesforce		Shopify		Slack	
SoundCloud		Spotify		Steam		Strava	
Stripe		TikTok		Tumblr		Twitch	
Twitter		TypeTalk		Uber		VK	
WeChat		WeCom		Weibo		WePay	
Xero		Yahoo		Yammer		Yandex	
Zoom		Email		SMS		Battle.net	

We will show you how to apply for a third-party service and add it to Casdoor.

# Apply to become a developer

Before this, there are some general concepts you need to understand.

- **RedirectUrl**, Redirect address after authentication, fill in your application address, such as `https://forum.casbin.com/`
- **Scope**, Permission granted to you by the user, such as basic profile, Email address and posts and others.
- **ClientId/AppId, ClientKey/AppSecret**, This is the most important information, and it is what you need to get after you apply for a developer account. You can not share the key/secret with anyone.

## Add an OAuth provider

1. Go to your Casdoor index page.
2. Click on `Providers` in the top bar.
3. Click on `Add`, and you will see a new provider added to the list at the top.
4. Click on the new provider to make changes to it.
5. In the `Category` section, select `OAuth`.
6. Choose the specific OAuth provider that you require from the `Type` dropdown.
7. Fill in the necessary information, such as `Client ID` and `Client Secret`.

## User Field Mapping

OAuth providers often return additional user information beyond the standard profile fields. Casdoor's [User Mapping](#) feature allows you to automatically populate user profile fields from OAuth claims returned by your identity provider. This is particularly useful when integrating with enterprise identity providers like Okta, Azure AD, or other custom OAuth services that provide rich user metadata.

# Automatic Account Linking

When users authenticate via OAuth, Casdoor automatically attempts to link accounts using multiple strategies: existing OAuth links, email/phone matching (if enabled), and case-insensitive username matching. This is particularly useful for enterprises with existing users who want to enable OAuth authentication without requiring manual account linking.

## Application Setup

1. Click on `Application` in the top bar and select the desired application to edit.
2. Click on the provider add button and choose the newly added provider.
3. Modify the provider's permissions, such as enabling registration, login, and unbinding.
4. You're all set!

# User Mapping

When users sign in through OAuth providers, Casdoor automatically captures their basic profile information like username, email, and avatar. However, identity providers often return additional claims in their OAuth responses that contain valuable user data. The User Mapping feature allows you to map these extra claims to specific user profile fields in Casdoor.

## Supported Fields

You can map OAuth provider claims to the following user fields:

- **phone** - Phone number
- **countryCode** - Country calling code
- **firstName** - First name
- **lastName** - Last name
- **region** - Geographic region
- **location** - Full location or address
- **affiliation** - Organization or company affiliation
- **title** - Job title or position
- **homepage** - Personal website URL
- **bio** - Biography or description
- **tag** - Custom tag or category
- **language** - Preferred language
- **gender** - Gender identity
- **birthday** - Date of birth
- **education** - Educational background

- idCard - ID card number
- idCardType - Type of ID card

Standard fields (id, username, displayName, email, avatarUrl) are handled automatically and don't need mapping configuration.

## Configuration

To configure user mapping for an OAuth provider:

1. Navigate to Providers in the top menu
2. Select or create an OAuth provider (e.g., Okta, Azure AD B2C, Google)
3. Scroll to the User mapping section
4. Add mappings by specifying:
  - User field: The Casdoor user field you want to populate
  - Claim name: The exact claim name from your OAuth provider's response

For example, if your identity provider returns a claim named `given_name` and you want to map it to the user's first name in Casdoor:

- User field: `firstName`
- Claim name: `given_name`

## Provider-Specific Examples

### Okta

Okta returns claims like `given_name`, `family_name`, and `locale`. You might configure:

- `firstName` → `given_name`
- `lastName` → `family_name`
- `language` → `locale`

## Azure AD B2C

Azure AD B2C can return custom claims configured in your user flows. For instance:

- `phone` → `extension_PhoneNumber`
- `title` → `jobTitle`
- `location` → `city`

## Generic OAuth Providers

Most OAuth providers following standard protocols return claims in their userinfo endpoint. Check your provider's documentation to find available claim names.

## Behavior

The mapping works with these characteristics:

- **Non-destructive:** Existing user field values are preserved. Mapping only updates empty fields.
- **Automatic sync:** When users sign in via OAuth, the mapping is applied automatically.
- **Flexible:** Each provider can have its own unique mapping configuration.
- **Extra claims:** All claims from the provider are stored in the user's extra data, even if not explicitly mapped.

# Common Scenarios

## Enterprise SSO

When integrating with enterprise identity providers like Okta or Azure AD, you often want to sync organizational data:

```
title → jobTitle  
affiliation → companyName  
region → officeLocation
```

## Social Login Enhancement

Social providers like Google or Facebook provide basic profile data, but you can capture additional details:

```
location → location  
homepage → website  
bio → about_me
```

## Multi-Provider Setup

Different providers may use different claim names for the same data. Configure each provider independently:

Google OAuth:

- `firstName` → `given_name`
- `lastName` → `family_name`

GitHub OAuth:

- `location` → `location`
- `homepage` → `blog`
- `bio` → `bio`

## Technical Details

When a user authenticates through OAuth:

1. Casdoor receives the OAuth token and fetches user info from the provider
2. The provider response includes standard fields plus extra claims
3. Standard fields (username, email, etc.) are processed first
4. User mapping rules are applied to populate additional fields from extra claims
5. All raw claims are stored in the user's OAuth extra data for reference

This ensures that user profiles in Casdoor stay synchronized with your identity provider while maintaining flexibility in how data is structured.

# Google

To set up the Google OAuth provider, please go to the [Google API console](#) and log in using your Google account.

Project name \* -  ?

Project ID: my-casdoor. It cannot be changed later. [EDIT](#)

Location \* -  [BROWSE](#)

Parent organization or folder

[CREATE](#) [CANCEL](#)

Next, navigate to the OAuth consent screen tab to configure the OAuth consent screen.

**API** APIs & Services

## OAuth consent screen

 Dashboard

Choose how you want to configure and register your app, including your target users. You can only associate one app with your project.

 Library Credentials OAuth consent screen Domain verification Page usage agreements

## User Type

 Internal 

Only available to users within your organization. You will not need to submit your app for verification. [Learn more about user type](#)

 External 

Available to any test user with a Google Account. Your app will start in testing mode and will only be available to users you add to the list of test users. Once your app is ready to push to production, you may need to verify your app. [Learn more about user type](#)

**CREATE**

Register your Google app by following these steps:

## Edit app registration

1 OAuth consent screen — 2 Scopes — 3 Test users — 4 Summary

### App information

This shows in the consent screen, and helps end users know who you are and contact you

App name \*

The name of the app asking for consent

User support email \*

For users to contact you with questions about their consent

App logo

BROWSE

Upload an image, not larger than 1MB on the consent screen that will help users recognize your app. Allowed image formats are JPG, PNG, and BMP. Logos should be square and 120px by 120px for the best results.

### App domain

To protect you and your users, Google only allows apps using OAuth to use Authorized Domains. The following information will be shown to your users on the consent screen.

Application home page

Afterward, go to the Credential tab.

## Credentials

[+ CREATE CREDENTIALS](#) [DELETE](#)

Create credentials to access your enabled APIs. [Learn more](#)

### API Keys

<input type="checkbox"/>	Name	Creation date
No API keys to display		

### OAuth 2.0 Client IDs

<input type="checkbox"/>	Name	Creation date
No OAuth clients to display		

### Service Accounts

<input type="checkbox"/>	Email	Name
No service accounts to display		

Create a credential for your app:

[Create OAuth client ID](#)

A client ID is used to identify a single app to Google's OAuth servers. If your app runs on multiple platforms, each will need its own client ID. See [Setting up OAuth 2.0](#) for more information. [Learn more](#) about OAuth client types.

Application type \*



### **!** ENSURE THAT YOU SET THE AUTHORIZED REDIRECT URIS CORRECTLY

In the Google OAuth configuration, the `Authorized redirect URIs` must be set to your Casdoor's callback URL, while the `Redirect URL` in Casdoor should be set to your application's callback URL.

For more details, please refer to the [App configuration](#).

After creating the Client ID, you will obtain the `Client ID` and `Client Secret`.

## OAuth client created

The client ID and secret can always be accessed from Credentials in APIs & Services



OAuth access is restricted to the [test users](#) listed on your [OAuth consent screen](#)

Your Client ID

487708653175-11oih9gfqb2u3tvfp6684qaes5ujjdca.apps.googleusercontent.com



Your Client Secret

HbxoqxxkGSs1lCVRuMTVvK57



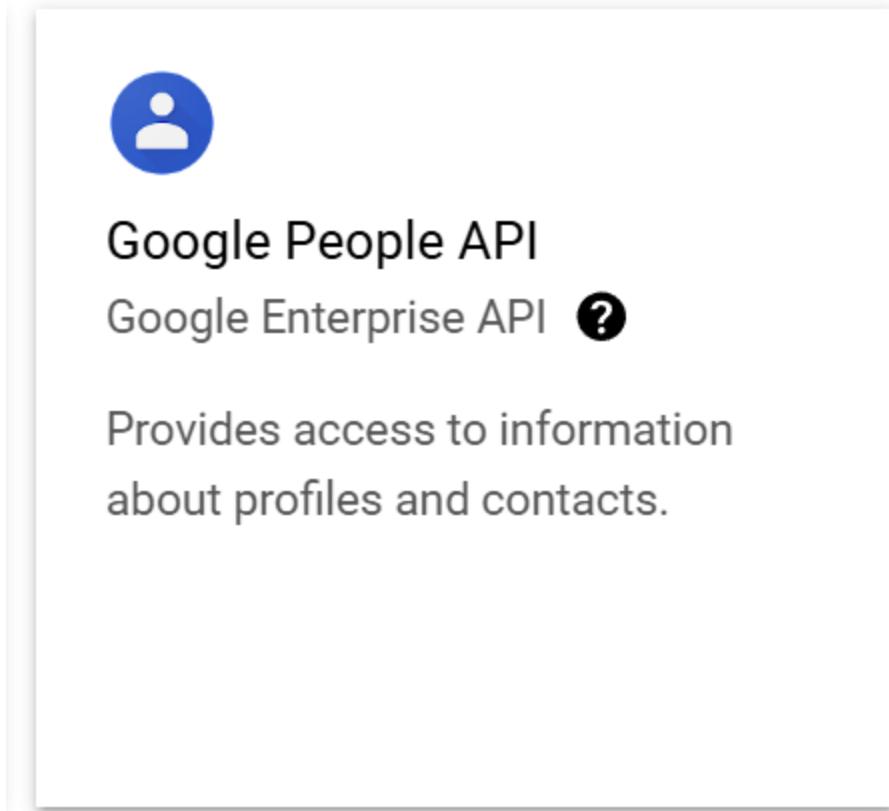
DOWNLOAD JSON

OK

Add the Google OAuth provider and enter the `Client ID` and `Client Secret` in your Casdoor.

Edit Provider	
Name <small>?</small> :	my_google_provider
Display name <small>?</small> :	Google provider
Category <small>?</small> :	OAuth
Type <small>?</small> :	Google
Client ID <small>?</small>	487708653175-11oih9gfqb2u3tvfp6684qaes5ujjdca.apps.googleusercontent.com
Client secret <small>?</small>	*****
Provider URL <small>?</small> :	<a href="https://console.cloud.google.com/apis/credentials/oauthclient/498643462012-46">https://console.cloud.google.com/apis/credentials/oauthclient/498643462012-46</a>

If Get password is enabled, you should enable google people api first and add scope `https://www.googleapis.com/auth/user.phonenumbers.read`



A screenshot of the Google Cloud Platform API library interface. On the left, there's a sidebar with "Enabled APIs &amp; services", "Library", "Credentials", and "OAuth consent screen" selected. The main area shows "Edit app registration" with steps: "OAuth consent screen" (selected), "Scopes", "Test users", and "Summary". A sub-section titled "Your non-sensitive scopes" lists several scopes with their descriptions and delete icons. To the right, a modal window titled "Update selected scopes" is open, showing a table with columns "API", "Scope", and "User-facing description". One row is selected with "https://www.googleapis.com/auth/user.phonenumbers.read". A note at the top of the modal says: "Only scopes for enabled APIs are listed below. To add a missing scope to this screen, find and enable the API in the Google API Library or use the Pasted Scopes text box below. Refresh the page to see any new APIs you enable from the Library." At the bottom of the modal, there's a "Manually add scopes" section with a text input field and a "UPDATE" button.

You can now use Google as a third-party service to complete authentication.

# Google One Tap

## Step 1: Configure Your Application

If you want to allow login through Google One Tap, you'll need to add Google OAuth Provider to your application. For information on how to do this, please refer to [Google's documentation](#).

Once you've added the Google OAuth Provider, navigate to the application edit page, add the Google OAuth Provider, and switch the **Rule** from **Default** to **One Tap**.

The screenshot shows the application edit page with the Google OAuth provider configured. The 'Providers' section lists several providers, including 'provider\_storage\_minio\_s3', 'provider\_oauth\_lark', 'provider\_email\_gq', 'provider\_web3\_metamask', and 'provider\_google\_oauth'. The 'provider\_google\_oauth' row is highlighted with a red border. In the 'Action' column for this row, there is a dropdown menu with two options: 'Default' and 'One Tap'. A red arrow points from the text 'switch the Rule from Default to One Tap.' to the 'One Tap' option in the dropdown menu.

## Step 2: Logging In with Google One Tap

With the setup completed, users can now log in with Google One Tap.

# GitHub

GitHub OAuth supports both the web application flow and device flow. Please continue reading to obtain OAuth credentials.

First, please visit the [GitHub developer settings](#) to register a new GitHub App.

## ⚠ CAUTION

**Tricks:** We recommend that you use GitHub Apps to replace OAuth Apps because GitHub Apps can add multiple redirect URLs, which can bring convenience when deploying test and production environments. The [GitHub official](#) also recommends using GitHub Apps instead of OAuth Apps.

## Settings / Developer settings

 GitHub Apps

 OAuth Apps

 Personal access tokens

Then fill in the GitHub App name, Homepage URL, description, and Callback URL.

GitHub App name \*

The name of your GitHub App.

Write Preview Markdown supported

A UI-first centralized authentication / Single-Sign-On (SSO) platform supporting OAuth 2.0, OIDC and SAML, integrated with Casbin RBAC and ABAC permission management

Homepage URL \*

The full URL to your GitHub App's website.

### Identifying and authorizing users

Add Callback URL

The full URL to redirect to after a user authorizes an installation.

#### Callback URL

Delete

#### Callback URL

Delete

#### ❗ SET THE AUTHORIZATION CALLBACK URL CORRECTLY

In the GitHub App config, the `Callback URL` must be your Casdoor's `callback URL`, and the `Redirect URL` in Casdoor should be your application's `callback URL`.

For more details, please read [App config](#).

After registering your GitHub App, you can now generate your Client Secret!

## About

Owned by: [REDACTED]

App ID: [REDACTED]

Client ID: lv1 [REDACTED] d2e

[Revoke all user tokens](#)

GitHub Apps can use OAuth credentials to identify users. Learn more about identifying users by reading our [integration developer documentation](#).

## Client secrets

[Generate a new client secret](#)



Client secret

\*\*\*\*\*dba81954

Added 5 minutes ago by [REDACTED]

Last used within the last week

[Delete](#)



Client secret

\*\*\*\*\*15822f89

Added on 15 Feb by [REDACTED]

Last used within the last week

[Delete](#)

Add a GitHub OAuth provider and fill in the Client ID and Client Secret in your Casdoor.

Edit Provider

Name <small>②</small>	provider_github_localhost
Display name <small>②</small>	provider_github_localhost
Category <small>②</small>	OAuth
Type <small>②</small>	GitHub
Client ID <small>②</small>	lv...2e
Client secret <small>②</small>	***
Provider URL <small>②</small>	<a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>

Now you can use GitHub as a third-party service to complete authentication.

# LinkedIn

To set up the LinkedIn OAuth provider, please go to the [LinkedIn Developer](#) page to create a new app.

 DEVELOPERS    Products    Docs and tools ▾    Resources ▾    My apps ▾

## Create an app

\* indicates required

**App name\***

**LinkedIn Page\***  
 ⓘ This action can't be undone once the app is saved.  
  
The LinkedIn Company Page you select will be associated with your app. Verification can be done by a Page Admin. Please note this cannot be a member profile page. [Learn more](#)

[+ Create a new LinkedIn Page ↗](#)

**Privacy policy URL**

**App logo\***  
This is the logo displayed to users when they authorize with your app  
  
 [Upload a logo](#)

After filling in the form above and creating your app, you'll need to verify the LinkedIn page associated with the app.



## Identity Cloud Login

Client ID: 860t47n8b4jh7w | Created: Sep 4, 2020

**Settings**

Auth

Products

Analytics

Team members

### App settings

[Delete app](#)

Company:



**Identity Cloud Documentation**

Computer Software; 1-10 employees

[Verify](#)



This app is not verified as being associated with this company.

[Learn more](#)



**NOTE**

Only the company page administrator can verify your app and grant permission to it.

Once your app is verified, you can continue:

 Identity Cloud Login  
Client ID: 860t47n8b4jh7w | Created: Sep 4, 2020

Settings Auth **Products** Analytics Team members

**Products**

Additional available products

 **Marketing Developer Platform**  
Build marketing experiences to reach the right audiences **Select**  
[View docs ↗](#)

 **Share on LinkedIn**  
Amplify your content by sharing it on LinkedIn **Select**  
[View docs ↗](#)

 **Sign In with LinkedIn**  
Let users easily sign in with their professional identity **Select**  
[View docs ↗](#)

Add authorized redirect URLs for your app as your Casdoor callback URL.

**Authorized redirect URLs for your app**

*No redirect URLs added*

**+ Add redirect URL**

**!** SET AUTHORIZED REDIRECT URLs CORRECTLY

In the LinkedIn OAuth configuration, the `authorized redirect URLs` must be your Casdoor's callback URL, and the `Redirect URL` in Casdoor should be your application's callback URL.

For more details, please read the [App Config](#) section.

You can then obtain your `Client ID` and `Client Secret`.

## Application credentials

### Authentication keys

#### Client ID:

860t47n8b4jh7w

#### Client Secret:

.....



Add a LinkedIn OAuth provider and fill in the `Client ID` and `Client Secret` in your Casdoor.

Edit Provider

Save

Name [?](#) : my\_linkedin\_provider

Display name [?](#) : Linkedin provider

Category [?](#) : OAuth

Type [?](#) : LinkedIn

Client ID [?](#) : 860t47n8b4jh7w

Client secret [?](#) : \*\*\*\*

Now you can use LinkedIn as a third-party service to complete authentication!

# Facebook

To set up the Facebook OAuth provider, please go to the [Facebook Developer](#) website and create a new app.

Select the type of app you are going to create.

## Select an app type

X

The app type can't be changed after your app is created.



Create or manage business assets like Pages, Events, Groups, Ads, Messenger and Instagram Graph API using the available business permissions, features and products.



### Consumer

Connect consumer products, and permissions, like Facebook Login and Instagram Basic Display to your app.



### Instant Games

Create an HTML5 game hosted on Facebook.



### Gaming

Connect an off-platform game to Facebook Login.



### Workplace

Create enterprise tools for Workplace from Facebook.



### None

Create an app with combinations of consumer and business permissions and products.

[Learn More About App Types](#)

Cancel

Continue

After entering your name and contact email, you will be taken to the Facebook Developer dashboard.

**FACEBOOK for Developers**

Docs Tools Support My Apps  ?

Casdoor App ID: 1231340483981478 In development

Dashboard Settings Roles Alerts App Review Products Add Product

Add a Product

**Facebook Login**  
The world's number one social login product.  
[Read Docs](#) [Set Up](#)

**Audience Network**  
Monetize your app and grow revenue with ads from Facebook advertisers.  
[Read Docs](#) [Set Up](#)

**App Events**  
Understand how people engage with your business across apps, devices, platforms and websites.  
[Read Docs](#) [Set Up](#)

**Messenger**  
Customize the way you interact with people on  
[Read Docs](#)

**Webhooks**  
Subscribe to changes and receive updates in real time.  
[Read Docs](#)

**Instant Games**  
Create a cross-platform HTML 5 game hosted on  
[Read Docs](#)

Next, set up Facebook login:



## Facebook Login

The world's number one social login product.

[Read Docs](#)

[Set Up](#)

Choose the Web platform for this app:

Use the Quickstart to add Facebook Login to your app. To get started, select the platform for this app.



iOS



Android



Web



Other

After filling in the website URL, go to **Facebook Login > Settings** and enter valid OAuth Redirect URIs.

#### Client OAuth Settings

Yes

##### Client OAuth Login

Enables the standard OAuth client token flow. Secure your application and prevent abuse by locking down which token redirect URIs are allowed with the options below. Disable globally if not used. [?]

Yes

##### Web OAuth Login

Enables web-based Client OAuth Login. [?]

Yes

##### Enforce HTTPS

Enforce the use of HTTPS for Redirect URIs and the JavaScript SDK. Strongly recommended. [?]

No

##### Force Web OAuth Reauthentication

When on, prompts people to enter their Facebook password in order to log in on the web. [?]

No

##### Embedded Browser OAuth Login

Enable webview Redirect URIs for Client OAuth Login. [?]

Yes

##### Use Strict Mode for Redirect URIs

Only allow redirects that exactly match the Valid OAuth Redirect URIs. Strongly recommended. [?]

#### Valid OAuth Redirect URIs

A manually specified redirect\_uri used with Login on the web must exactly match one of the URIs listed here. This list is also used by the JavaScript SDK for in-app browsers that suppress popups. [?]

Valid OAuth redirect URIs.

### ❗ SET AUTHORIZED REDIRECT URLs CORRECTLY

In the Facebook OAuth configuration, the `Valid OAuth Redirect URIs` must be your Casdoor's callback URL, and the `Redirect URL` in Casdoor should be your application's callback URL.

For more details, please read the [App Configuration](#) section.

The basic app configuration is almost complete!

Switch the mode from **In development** to **Live** in the top bar of the dashboard.



Now you can use your **App ID** and **App Secret** in Casdoor.

App ID	App Secret
<input type="text" value="1231340483981478"/>	<input type="text" value="*****"/> <a href="#">Show</a>

Add the Facebook OAuth provider and fill in the **Client ID** and **Client Secret** with the **App ID** and **App Secret** from your Casdoor.

修改提供商保存

名称 <small>②</small> :	<input type="text" value="my_facebook_provider"/>
显示名称 <small>②</small> :	<input type="text" value="Facebook provider"/>
分类 <small>②</small> :	<input type="text" value="OAuth"/>
类型 <small>②</small> :	<input type="text" value="Facebook"/>
Client ID <small>②</small>	<input type="text" value="1231340483981478"/>
Client secret <small>②</small>	<input type="text" value="*****"/>

You can now use Facebook as a third-party service for authentication!

# Apple

To set up the Apple Sign in provider, please go to the [Apple Developer](#) website. An active Apple Developer Program membership is required.

## Step 1: Configure App ID

Create a new App ID or configure an existing one, and ensure Sign in with Apple is enabled for it.

The screenshot shows a list of services under 'Edit your App ID Configuration'. The 'Sign In with Apple' service is highlighted with a red arrow pointing to its checkbox, which is checked. Another red arrow points to the 'Edit' button next to the service. A third red arrow points to the 'Enable as a primary App ID' link at the bottom right of the service row. The other services listed are Push to Talk, Sensitive Content Analysis, Shallow Depth and Pressure, Shared with You, Siri, and System Extension.

Edit your App ID Configuration	
<input type="checkbox"/>	Push to Talk ⓘ
<input type="checkbox"/>	Sensitive Content Analysis ⓘ
<input type="checkbox"/>	Shallow Depth and Pressure ⓘ
<input type="checkbox"/>	Shared with You ⓘ
<input checked="" type="checkbox"/>	Sign In with Apple ⓘ
<input type="checkbox"/>	Siri ⓘ
<input type="checkbox"/>	System Extension ⓘ

## Step 2: Create a Services ID

Next, create a new identifier, making sure to select the Services IDs type. (The **Identifier** you set here will be your Client ID in Casdoor).

[« All Identifiers](#)

## Register a new identifier

**App IDs**

Register an App ID to enable your app, app extensions, or App Clip to access available services and identify your app in a provisioning profile. You can enable app services when you create an App ID or modify these settings later.

**Services IDs**

For each website that uses Sign in with Apple, register a services identifier (Services ID), configure your domain and return URL, and create an associated private key.

**Pass Type IDs**

Register a pass type identifier (Pass Type ID) for each kind of pass you create (i.e. gift cards). Registering your Pass Type IDs lets you generate Apple-issued certificates which are used to digitally sign and send updates to your passes, and allow your passes to be recognized by Wallet.

**Order Type IDs**

Register an order type identifier (Order Type ID) to support signing and distributing order bundles with Wallet and Apple Pay. Registering your order type ID lets you generate certificates to digitally sign and send updates to your orders in Wallet.

**Website Push IDs**

Register a Website Push Identifier (Website Push ID). Registering your Website Push IDs lets you generate

Then, configure this Services ID. Enable Sign in with Apple and click Configure.

[« All Identifiers](#)

### Edit your Services ID Configuration

[Remove](#)

[Continue](#)

Description

Identifier

You cannot use special characters such as @, &, \*, "

ENABLED NAME

Sign In with Apple

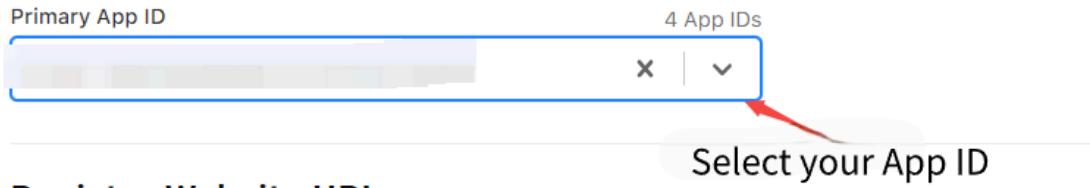
[Configure](#)

## Step 3: Configure Redirect URLs

In the configuration screen, set up the Return URLs (callback URLs). You need to enter the Redirect URL shown on the Casdoor provider page here.

## Web Authentication Configuration

Use Sign in with Apple to let your users sign in to your app's accompanying website with their Apple ID. To configure web authentication, group your website with the existing primary App ID that's enabled for Sign in with Apple.



### Register Website URLs

Provide your web domain and return URLs that will support Sign in with Apple. Your website must support TLS 1.2 or higher. All Return URLs must be registered with the https:// protocol included in the URI string. After registering new website URLs, confirm the list you'd like to add to this Services ID and click Done. To complete the process, click Continue, then click Save.

#### Domains and Subdomains

A screenshot of an input field labeled "Domains and Subdomains". Below the field is the placeholder text "Enter a comma delimited list of domains and subdomains.". To the right of the input field is a callout bubble containing the text "Your domain" with a red arrow pointing to it.

Enter a comma delimited list of domains and subdomains.

#### Return URLs

A screenshot of an input field labeled "Return URLs". Below the field is the placeholder text "Enter a comma delimited list of Return URLs.". To the right of the input field is a callout bubble containing the text "Full callback URL" with a red arrow pointing to it.

Enter a comma delimited list of Return URLs.

#### ⚠ SET RETURN URLs CORRECTLY

The `Return URLs` on Apple must exactly match the `Redirect URL` shown on your Casdoor Apple provider configuration page (e.g., `https://your-casdoor-domain.com/callback`).

## Step 4: Create a Key

After configuring the Services ID, create a Key. When creating the Key, enable Sign in with Apple and associate it with your App ID.

**Certificates, Identifiers & Profiles**

[« All Keys](#)

**Configure key**

[Continue](#)

Key Name

You cannot use special characters such as @, &, \*, %, -, .

ENABLE	NAME	DESCRIPTION
<input type="checkbox"/>	Apple Push Notifications service (APNs)	Establish connectivity between your notification server and the Apple Push Notification service. One key is used for all of your apps. <a href="#">Learn more</a>
<input type="checkbox"/>	DeviceCheck	Access the DeviceCheck and AppAttest APIs to get data that your associated server can use in its business logic to protect your business while maintaining user privacy. <a href="#">Learn more</a>
<input type="checkbox"/>	Media Services (MusicKit, ShazamKit)	Access the Apple Music catalog and make personalized requests for authorized users, and check audio signatures against the Shazam music catalog.
<input checked="" type="checkbox"/>	Sign in with Apple	<p>Enable your apps to allow users to authenticate in your application with their Apple ID. Configuration is required to enable this feature.</p> <p>Configure your apps and websites with Account &amp; Organizational Data Sharing to securely request access to your users' Apple ID account information.</p> <p>There are no Identifiers available that can be associated with the key.</p> <a href="#">Edit</a>
<input type="checkbox"/>	Account & Organizational Data Sharing	Configure your apps and websites with Account & Organizational Data Sharing to securely request access to your users' Apple ID account information.
<input type="checkbox"/>	ClassKit Catalog	Publish all of your ClassKit app activities to teachers creating Handouts in Apple Schoolwork. <a href="#">Learn more</a>

After registering the Key, note down the Key ID and download the **.p8** file immediately. (This file can only be downloaded once, save it securely!)

## Certificates, Identifiers & Profiles

[« All Keys](#)

**View Key Details**

[Download](#) [Revoke](#) [Edit](#)

Name: StudyXAppleLogin

Key ID: Y kid

Enabled Services

NAME	CONFIGURATION
Sign in with Apple	5R.com

teamId

**Important:** Find and note down your **Team ID** from the **Membership** page on the Apple Developer Portal.

## Step 5: Configure Casdoor Provider

1. Client ID: Enter the Apple Services ID **Identifier** you created earlier.
2. Team ID: Enter your Apple Team ID (found on the Membership page).
3. Key ID: Enter the Apple Key ID you noted down.
4. Key Text: Open the downloaded **.p8** file with a text editor. Copy its entire content (including the **-----BEGIN . . .** and **-----END . . .** lines) and paste it here.
5. Check Redirect URL: Verify that the **Redirect URL** shown here in Casdoor has been correctly added to the **Return URLs** in your Apple Services ID configuration.

The screenshot shows a form for configuring a Casdoor provider. It includes fields for Service ID identifier, Team ID, Key ID, Key text, and Provider URL. The Provider URL field contains a placeholder URL: https://github.com/organizations/xxx/settings/applications/1234567.

Service ID identifier ②:	<input type="text"/>
Team ID ②:	<input type="text"/>
Key ID ②:	<input type="text"/>
Key text ②:	<input type="text"/>
Provider URL ②:	<input type="text"/> ② https://github.com/organizations/xxx/settings/applications/1234567

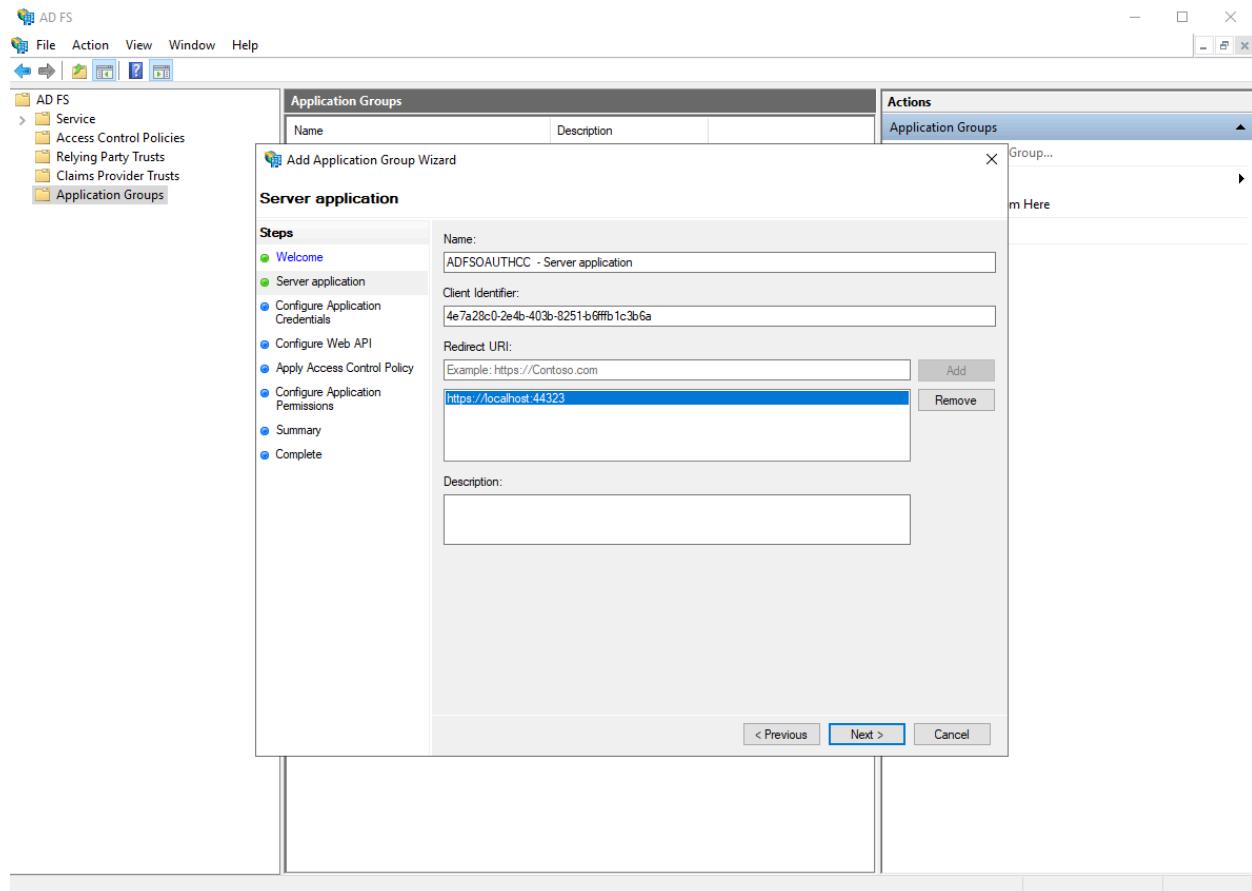
# AD FS

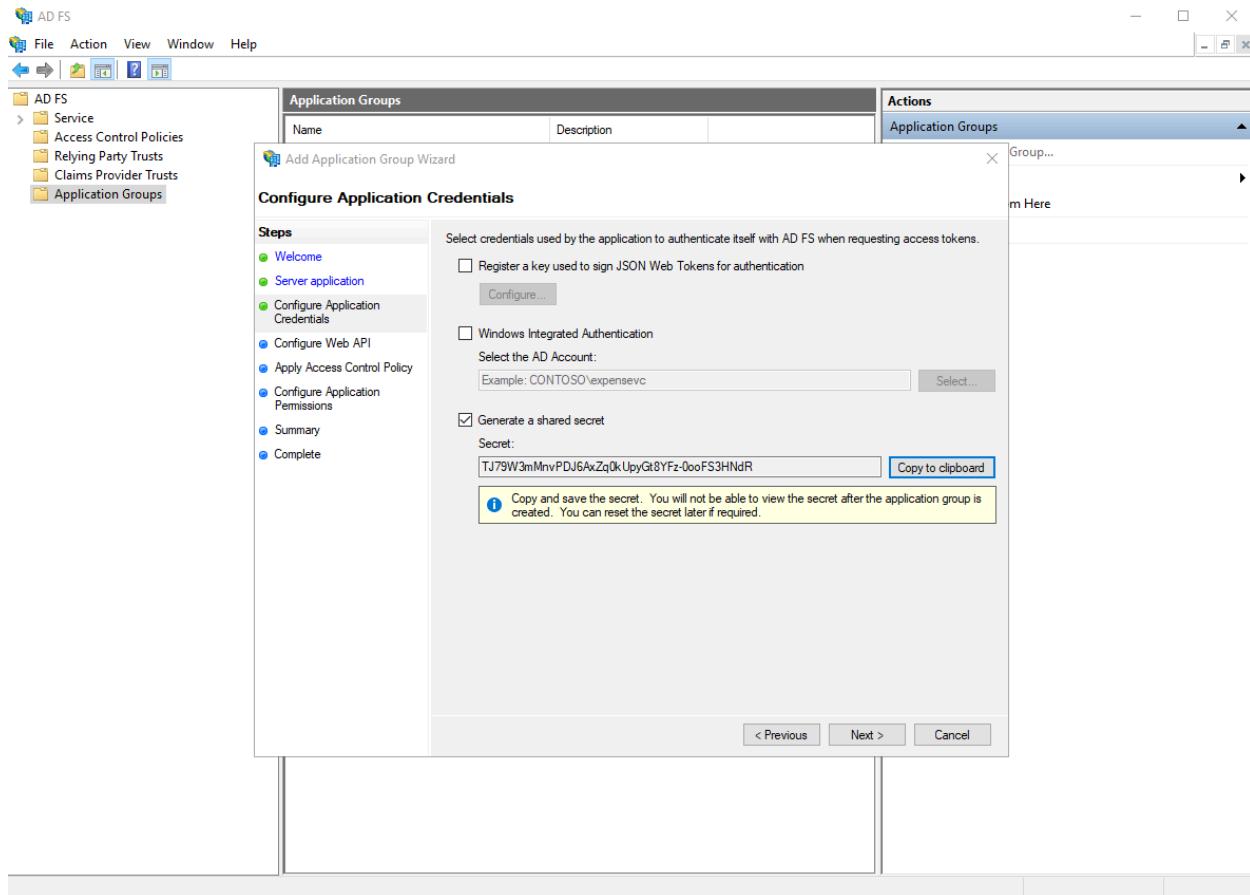
To set up Active Directory Federation Service, please refer to the [AD FS documentation](#) for a basic understanding of ADFS, and consult the [AD FS Deployment Guide](#) for instructions on setting up an AD FS server. Ensure that you have a fully operational AD FS server before proceeding to the next steps.

## Step 1: Enabling OAuth via AD FS

For detailed instructions on creating an app step by step, refer to the [Enabling OAuth Confidential Clients with AD FS](#) guide.

By the end of this step, you should have obtained a client ID and client secret as shown in the following screenshots:





The client identifier in the first picture and the secret in the second picture should be used as the client ID and client secret in the OAuth setup.

## Enabling Casdoor AD FS Provider

Add an AD FS provider and enter the "Client ID" and "Client Secret" in your Casdoor settings.

Edit Provider Save Save & Exit

Name ? :

Display name ? :

Category ? : OAuth

Type ? : Adfs ←

Client ID ? :

Client secret ? :   

Domain ? :

Provider URL ? : <https://openhome.alipay.com/platform/appManage.htm#/app/2021003111697088/overview>

Save Save & Exit

# Azure AD

## Introduction

Azure Active Directory (Azure AD) simplifies application management by providing a single identity system for cloud and on-premises applications. Software as a Service (SaaS) applications, on-premises applications, and Line of Business (LOB) applications can be added to Azure AD. Users can then log in once for secure and seamless access to these applications, as well as Office 365 and other business applications provided by Microsoft.

## How to use?

The steps to register an app are shown below.

### Step 1: Register an application

First, [register](#) an application and choose the account type as needed. The demo station uses the type shown below.

[Home](#) >

## Register an application

\* Name

The user-facing display name for this application (this can be changed later).

### Supported account types

Who can use this application or access this API?

- Accounts in this organizational directory only (Default only - Single tenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)
- Personal Microsoft accounts only

[Help me choose...](#)

---

### Redirect URI (optional)

By proceeding, you agree to the [Microsoft Platform Policies](#) 

[Register](#)

## Step 2: Create a client secret

Create a `client secret` and save the value because it will be used later.

The screenshot shows the Casdoor web interface under the 'Certificates & secrets' tab. On the left, a sidebar lists various management options like Branding & properties, Authentication, Certificates & secrets (which is highlighted with a red box), Token configuration, API permissions, Expose an API, App roles, Owners, Roles and administrators, and Manifest. The main content area has a heading 'Credentials enable confidential applications to identify themselves to the authentication service when receiving tokens at a web addressable location (using an HTTPS scheme). For a higher level of assurance, we recommend using a certificate (instead of a client secret) as a credential.' Below this, a sub-section for 'Client secrets' is shown with one entry: 'casdoor' (Description), '1/8/2023' (Expires), and a long redacted 'Value' (Secret ID: f3c7d37c-1def-4e29-b75f-457fa7c081e8).

## Step 3: Add redirect URIs

Follow the example in the picture to add the redirect URIs for Casdoor.

The screenshot shows the Casdoor 'Authentication' configuration page. The left sidebar includes 'Overview', 'Quickstart', 'Integration assistant', 'Branding & properties', 'Certificates & secrets' (highlighted with a red box), 'Token configuration', 'API permissions', 'Expose an API', 'App roles', 'Owners', 'Roles and administrators', and 'Manifest'. The main content area has sections for 'Platform configurations' (with a 'Add a platform' button), 'Supported account types' (listing 'Accounts in any organizational directory (Any Azure AD directory - Multitenant) and accounts (e.g. Skype, Xbox)'), and 'Implicit grant and hybrid flows' (with a note about using JavaScript for single sign-out). A specific section for 'Redirect URLs' is highlighted with a red box, containing the URL 'http://localhost:8000/callback'. Buttons for 'Save' and 'Discard' are at the bottom, along with 'Configure' and 'Cancel' buttons on the right.

## Step 4: Grant admin consent

The `user.read` API is open by default. You can add more scopes according to your needs. Finally, remember to grant admin consent.

The screenshot shows the Casdoor API permissions page. The left sidebar has sections for Overview, Quickstart, Integration assistant, Manage (with Branding & properties, Authentication, Certificates & secrets, Token configuration, and API permissions selected), Expose an API, App roles, Owners, Roles and administrators, Manifest, Support + Troubleshooting, Troubleshooting, and New support request. The main area shows a message: "Successfully granted admin consent for the requested permissions." A warning message states: "Starting November 9th, 2020 end users will no longer be able to grant consent to newly registered multitenant apps without verified publishers. [Add MPN ID to verify publisher](#)". Another message says: "The 'Admin consent required' column shows the default value for an organization. However, user consent can be customized per permission, user, or app. This column may not reflect the value in your org app will be used. [Learn more](#)". The "Configured permissions" section lists "Microsoft Graph (5)" with the following table:

API / Permissions name	Type	Description	Admin consent requ...	Status
email	Delegated	View users' email address	No	<span>Granted for Default Dire...</span> ...
offline_access	Delegated	Maintain access to data you have given it access to	No	<span>Granted for Default Dire...</span> ...
openid	Delegated	Sign users in	No	<span>Granted for Default Dire...</span> ...
profile	Delegated	View users' basic profile	No	<span>Granted for Default Dire...</span> ...
User.Read	Delegated	Sign in and read user profile	No	<span>Granted for Default Dire...</span> ...

To view and manage permissions and user consent, try [Enterprise applications](#).

## Step 5: Create AzureAD provider in Casdoor

The last step is to add an AzureAD OAuth provider and fill in the `Client ID` and `Client Secret` in your Casdoor.

Edit Provider

Save

Save & Exit

Name ? : provider\_casdoor\_azuread

Display name ? : Casdoor AzureAD

Category ? : OAuth

Type ? : AzureAD

Client ID ? : 621cc0f0-055f-433f-9894-bfa1bfde169d

Client secret ? : \*\*\*

Provider URL ? : [https://portal.azure.com/#view/Microsoft\\_AAD\\_RegisteredApps/Applications列表](https://portal.azure.com/#view/Microsoft_AAD_RegisteredApps/Applications列表)

Save

Save & Exit

# Azure AD B2C

## Introduction

Azure AD B2C is a customer identity access management solution, supporting standards like OpenID Connect, OAuth 2.0, and SAML. It allows the integration of consumer-facing applications with a scalable and customizable identity management solution.

## How to use?

The steps to set up Azure AD B2C for authentication are shown below.

### Step 1: Create a B2C Tenant

First, create a B2C Tenant in your Azure portal.

### Step 2: Register an application

Register an application within your B2C tenant.

[Home](#) >

## Register an application

\* Name

The user-facing display name for this application (this can be changed later).

### Supported account types

Who can use this application or access this API?

- Accounts in this organizational directory only (Default only - Single tenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)
- Personal Microsoft accounts only

[Help me choose...](#)

---

### Redirect URI (optional)

By proceeding, you agree to the [Microsoft Platform Policies](#) 

[Register](#)

## Step 3: Create a client secret

Create a `client secret` for your application and save the value as it will be used later.

casdoor | Certificates & secrets

Credentials enable confidential applications to identify themselves to the authentication service when receiving tokens at a web addressable location (using an HTTPS scheme). For a higher level of assurance, we recommend using a certificate (instead of a client secret) as a credential.

Application registration certificates, secrets and federated credentials can be found in the tabs below.

Description	Expires	Value	Secret ID
casdoor	1/8/2023	3Xr8Q~dFau2Hwyhg6y8Upb53PCFbuF... (red box)	f3c7d37c-1def-4e29-b75f-457fa7c081e8

## Step 4: Add redirect URIs

Add the redirect URIs for your application in the Azure AD B2C settings.

casdoor | Authentication

Platform configurations

The URLs we will accept as destinations when returning from the sign-in or sign-up flow after successfully authenticating or signing out us. The URL entered in the 'Redirect URIs' field must match the URL requested by the login server.

\* Redirect URIs

http://localhost:8000/callback

Front-channel logout URL

This is where we send a request to have the application log the user out. It is required for single sign-out to work correctly.

e.g. https://example.com/logout

Implicit grant and hybrid flows

Request a token directly from the authorization endpoint or from a single-page application (SPA) and doesn't use the auth code grant. If your application uses a SPA, select both access tokens and ID tokens. This is useful for mobile and other web apps that use hybrid authentication.

Configure Cancel

## Step 5: Define User Flows

Define user flows in Azure AD B2C to manage how users sign up, sign in, and manage their profiles.

## Step 6: Create Azure AD B2C provider in Casdoor

Finally, add an Azure AD B2C OAuth provider in Casdoor, using the `Client ID` and `Client Secret` from your B2C tenant.

Edit Provider Save Save & Exit

Name <span>?</span> :	provider_casdoor_azuread
Display name <span>?</span> :	Casdoor AzureAD
Category <span>?</span> :	OAuth
Type <span>?</span> :	AzureAD
Client ID <span>?</span>	621cc0f0-055f-433f-9894-bfa1bfde169d
Client secret <span>?</span>	***
Provider URL <span>?</span> :	<a href="https://portal.azure.com/#view/Microsoft_AAD_RegisteredApps/Applications">https://portal.azure.com/#view/Microsoft_AAD_RegisteredApps/Applications</a>

Save Save & Exit

# Custom OAuth

## NOTE

Casdoor supports custom providers. However, the custom providers must follow the standard process of 3-legged OAuth, and the return values of `Token URL` and `User Info URL` must conform to the format specified by Casdoor.

## Overview

Custom OAuth providers allow you to integrate any OAuth 2.0 compliant authentication service with Casdoor, even if it's not officially supported. This is useful when you want to integrate with:

- Internal enterprise OAuth servers
- Self-hosted authentication systems
- Third-party services not yet officially supported by Casdoor

## Multiple Custom Providers Support

Casdoor supports up to 10 different custom OAuth providers simultaneously. When creating custom providers, you can choose from the following types:

- **Custom** - The first custom provider
- **Custom2** through **Custom10** - Additional custom providers

This allows you to integrate multiple custom OAuth services without conflicts. Each custom provider maintains its own separate configuration and user data fields.

## Creating a Custom Provider

To create a new custom provider, navigate to the provider page of Casdoor, and select one of the custom types ("Custom", "Custom2", "Custom3", etc.) in the Type field. You will then need to fill in `Client ID`, `Client Secret`, `Auth URL`, `Scope`, `Token URL`, `User Info URL`, and `Favicon`.

Type [?](#) :

Custom

Auth URL [?](#)

<https://door.casdoor.com/login/oauth/authorize>

Scope [?](#)

openid profile email

Token URL [?](#)

[https://door.casdoor.com/api/login/oauth/access\\_token](https://door.casdoor.com/api/login/oauth/access_token)

UserInfo URL [?](#)

<https://door.casdoor.com/api/userinfo>

Favicon [?](#) :

URL [?](#) :



Preview:

Client ID [?](#)



Client secret [?](#)



- Auth URL is the custom provider's OAuth login page address.

If you fill in <https://door.casdoor.com/login/oauth/authorize> as the Auth URL, then, when a user logs in with this custom provider, the browser will first redirect to

```
https://door.casdoor.com/login/oauth/
authorize?client_id={ClientID}&redirect_uri=https://{{your-casdoor-
hostname}}/callback&state={State_generated_by_Casdoor}&response_type=code&scope={Scope}`
```

After authorization is completed, the custom provider should redirect to

```
https://{{your-casdoor-hostname}}/callback?code={code}
```

After this step, Casdoor will recognize the code parameter in the URL.

- Scope is the scope parameter carried when accessing the Auth URL, and you should fill it in as per the

custom provider's requirements.

- `Token URL` is the API endpoint for obtaining the accessToken.

Once you obtain the code in the previous step, Casdoor should use it to get the accessToken.

If you fill in `https://door.casdoor.com/api/login/oauth/access_token` as the `Token URL`, then Casdoor will access it using the following command

```
curl -X POST -u "{ClientID}:{ClientSecret}" --data-binary
"code={code}&grant_type=authorization_code&redirect_uri=https://{{your-casdoor-
hostname}}/callback" https://door.casdoor.com/api/login/oauth/access_token
```

The custom provider should return at least the following information:

```
{
  "access_token": "eyJhbGciOiJSUzI1NiIsImtpZCI6IxXXXXXXXXXXXX",
  "refresh_token": "eyJhbGciOiJSUzI1NiIsInR5cCI6IxXXXXXXXXXXXX",
  "token_type": "Bearer",
  "expires_in": 10080,
  "scope": "openid profile email"
}
```

- `UserInfo URL` is the API endpoint for obtaining user information via the accessToken.

If you fill in `https://door.casdoor.com/api/userinfo` as the `UserInfo URL`, then Casdoor will access it using the following command

```
curl -X GET -H "Authorization: Bearer {accessToken}" https://door.casdoor.com/api/
userinfo
```

The custom provider should return at least the following information:

```
{
  "name": "admin",
  "preferred_username": "Admin",
  "email": "admin@example.com",
  "picture": "https://casbin.org/img/casbin.svg"
}
```

- `Favicon` is the logo URL of a custom provider.

This logo will be displayed on Casdoor's login page together with other third-party login providers.

# Okta

To set up the Okta OIDC provider, first visit [Okta Developer](#) and sign up to get a developer account.

Navigate to the Applications > Applications tab, click Create App Integration, select a Sign-in method of OIDC - OpenID Connect, and choose an Application type of Web Application, then click Next.

### Create a new app integration

**Sign-in method**

[Learn More ↗](#)

- OIDC - OpenID Connect**  
Token-based OAuth 2.0 authentication for Single Sign-On (SSO) through API endpoints. Recommended if you intend to build a custom app integration with the Okta Sign-In Widget.
- SAML 2.0**  
XML-based open standard for SSO. Use if the Identity Provider for your application only supports SAML.
- SWA - Secure Web Authentication**  
Okta-specific SSO method. Use if your application doesn't support OIDC or SAML.
- API Services**  
Interact with Okta APIs using the scoped OAuth 2.0 access tokens for machine-to-machine authentication.

---

**Application type**

What kind of application are you trying to integrate with Okta?

Specifying an application type customizes your experience and provides the best configuration, SDK, and sample recommendations.

- Web Application**  
Server-side applications where authentication and tokens are handled on the server (for example, Go, Java, ASP.Net, Node.js, PHP)
- Single-Page Application**  
Single-page web applications that run in the browser where the client receives tokens (for example, Javascript, Angular, React, Vue)
- Native Application**  
Desktop or mobile applications that run natively on a device and redirect users to a non-HTTP callback (for example, iOS, Android, React Native)

[Cancel](#) [Next](#)

Enter the Sign-in redirect URIs, such as `https://door.casdoor.com/callback`.

<b>Sign-in redirect URIs</b> Okta sends the authentication response and ID token for the user's sign-in request to these URIs <a href="#">Learn More</a>	<input type="checkbox"/> Allow wildcard * in sign-in URI redirect. <code>https://door.casdoor.com/callback</code> <span style="border: 1px solid #ccc; padding: 2px 5px;">X</span>
<a href="#">+ Add URI</a>	

In the **Assignments** section, define the type of Controlled access for your app and then click **Save** to create the app integration.

Now you will have the `Client ID`, `Client secret`, and `Okta domain`.

<b>Client Credentials</b> <span style="float: right;"><a href="#">Edit</a></span>	
<b>Client ID</b>	<code>Ooa4we8u8iivyscpb5d7</code> <span style="border: 1px solid #ccc; padding: 2px 5px;">Edit</span>
Public identifier for the client that is required for all OAuth flows.	
<b>Client secret</b>	<code>.....</code> <span style="border: 1px solid #ccc; padding: 2px 5px;">Edit</span>
Secret used by the client to exchange an authorization code for a token. This must be kept confidential! Do not include it in apps which cannot keep it secret, such as those running on a client.	

<b>General Settings</b> <span style="float: right;"><a href="#">Edit</a></span>	
<b>Okta domain</b>	<code>dev-53555475.okta.com</code> <span style="border: 1px solid #ccc; padding: 2px 5px;">Edit</span>

Add an Okta OAuth provider in the Casdoor dashboard by entering your `Client ID`, `Client secret`, and `Domain`.

Edit Provider Save Save & Exit

Name ?: provider\_casdoor\_okta

Display name ?: Casdoor Okta

Category ?: OAuth

Type ?: Okta

Client ID ?: 0oa4we8u8iivyscpb5d7

Client secret ?: \*\*\*

Domain ?: <https://dev-53555475.okta.com/oauth2/default>

Provider URL ?: <https://dev-53555475.okta.com>

Save Save & Exit

#### ⚠ SET DOMAIN CORRECTLY

Note that the `Domain` is not just the `Okta domain`; `/oauth2/default` should be appended to it.

Visit [Okta docs on authorization servers](#) to get more details.

Now you can use Okta as a third-party service to complete authentication.

# Twitter

## Twitter (Work in Progress

Applying for a developer account on Twitter can be a bit cumbersome due to the strict official restrictions. It may be more challenging compared to other third-party platforms.

To get started, visit the [Developer Portal](#) and create an account if you don't have one. Twitter requires you to provide detailed information about your application for a developer account. Make sure to fill in the information accurately to avoid any issues during the review process.

Once your application is approved, you can proceed to create an application. You need to complete two important tasks in the **Authentication settings** section:

1. Manually enable 3-legged OAuth. This is necessary for features such as "Sign in with Twitter" and posting Tweets on behalf of other accounts.
2. Enable Request email address from users to obtain the user's email address.

Make sure to carefully fill in the callback address and other required information for your application.

# Weibo

## Weibo ✓

Applying for a developer account with Weibo is not difficult, but the process can be slow, taking about 2-3 days.

To get started, visit the [Developer Website](#) and fill in the required basic information. Then, you will need to wait for a thorough review...

Once your application is approved, you will receive the Client Id and Client Secret.

# WeChat

## WeChat ✓

### Add WeChat OAuth Provider

To add WeChat OAuth provider to your application, follow these steps:

1. Visit the [WeChat developer platform](#) and register as a developer.
2. After your web application or mobile application is approved, you will receive your App ID and App Secret.

Name ⓘ: provider\_casdoor\_wechat

Display name ⓘ: Casdoor WeChat

Organization ⓘ: admin (Shared)

Category ⓘ: OAuth

Type ⓘ:  WeChat

Client ID ⓘ: wx049c70e6c2027b0b

Client secret ⓘ: \*\*\*

Client ID 2 ⓘ: wxe933a9cd81c396d1

Client secret 2 ⓘ: \*\*\*

服务器配置(已启用)

Use WeChat

Media Platform in PC ⓘ:  令牌(Token) 123

Access token ⓘ: 

Follow-up action:  Use WeChat Open Platform to login  Use WeChat Media Platform to login

Provider URL ⓘ:  <https://open.weixin.qq.com/>

The WeChat provider offers two different sets of keypairs:

- The first keypair (`Client ID`, `Client Secret`) is for the `WeChat Open Platform` (二维码) and is designed for the PC login scenario. It allows you to display a QR code in the PC browser, which users can scan using the WeChat app on their mobile phone to sign in.
- The second keypair (`Client ID 2`, `Client Secret 2`) and `Access Token`

field is for the WeChat Media Platform (微信媒体平台) and is intended for the inside-WeChat-app login scenario. Access Token field is the Token you fill in the server configuration of the WeChat Media Platform (微信媒体平台). It enables users to log in with the WeChat built-in browser inside the WeChat mobile app, which will redirect them to your WeChat Official Account (微信公众号) to log in. Please note that WeChat does not support logging in outside of the WeChat app in other mobile browsers or apps. This limitation is imposed by WeChat and not by Casdoor.

If you fill in the second keypair (Client ID 2, Client Secret 2), fill the Access Token field and enable the Enable QR code switch, then you can choose to login directly using the information from the WeChat Media Platform (微信媒体平台) after scanning the QR code, or use the information from the WeChat Open Platform (微信开放平台) to login, if you choose use Wechat Open Platform to login, after user follow the the WeChat official account (微信公众号), users will be required to scan the QR code of WeChat Open Platform (微信开放平台) to login. Casdoor will ask the user to follow the WeChat official account (微信公众号) before proceeding with the login process when the user clicks on the WeChat button to login. It's important to note that this functionality is only available in the PC login scenario because a mobile phone cannot scan the QR code by itself. When used in the mobile scenario (i.e., the WeChat built-in browser inside the WeChat mobile app), Casdoor will automatically skip this step.

You can choose whether to enable the WeChat QR code login option on the setting page. To do so, add the WeChat provider in your application configuration and add the WeChat option in your signin methods. Once added, the login page will display a "WeChat" tab as a login option, allowing users to log in by scanning the QR code.

The QR code login process is as follows:

1. On the login page, after selecting the "WeChat" tab, a WeChat QR code will be

automatically loaded and displayed.

2. The user scans the QR code using the WeChat app and completes the authorization to log in.
3. If the QR code expires or needs to be refreshed, the user can click the "Refresh" link below the QR code to obtain a new one.

The screenshot shows the 'Signin methods' section of the Casdoor configuration interface. It includes a table for existing methods like Password, Verification code, WebAuthn, Face ID, and a section for LDAP. A red box highlights the 'WeChat' entry under the 'Org choice mode' section, which is currently selected.

### TIP

We recommend setting both key sets at the same time and linking your [WeChat Open Platform](#) account and [WeChat Media Platform](#) account together inside the [WeChat Open Platform](#). This will allow Casdoor to recognize a WeChat user logged in through both PC and mobile as the same user.

### NOTE

Due to the limitations of WeChat OAuth, there is currently no way to log in via WeChat in a third-party mobile app or in a mobile browser other than the WeChat app. The mobile login must happen inside the WeChat app for now.

For more detailed information, please visit the [WeChat Open Platform](#).

# Enable WeChat QR Code Login

You can choose whether to enable the WeChat QR code login option on the setting page. To do so, add the WeChat provider in your application configuration and add the WeChat option in your signin methods. Once added, the login page will display a "WeChat" tab as a login option, allowing users to log in by scanning the QR code.

The QR code login process is as follows:

1. On the login page, after selecting the "WeChat" tab, a WeChat QR code will be automatically loaded and displayed.
2. The user scans the QR code using the WeChat app and completes the authorization to log in.
3. If the QR code expires or needs to be refreshed, the user can click the "Refresh" link below the QR code to obtain a new one.

Signin methods

Org choice mode :

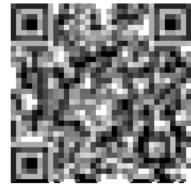
Name	Display name	Rule	Action
Password	Password	All	[Up, Down, Delete]
Verification code	Verification code	All	[Up, Down, Delete]
WebAuthn	WebAuthn		[Up, Down, Delete]
Face ID	Face ID		[Up, Down, Delete]
			[Up, Down, Delete]

LDAP

WeChat



Password [WeChat](#)



[Refresh](#)

Powered by Casdoor

# WeCom

## Introduction

WeCom provides an authorized login method using OAuth, which allows you to obtain members' identity information directly from the webpage opened by the WeCom terminal, eliminating the need for a login process.

There are two types of applications: **internal** applications and **third-party** applications.

## Basic Configuration

To configure a WeCom provider, you need to provide the following parameters:

Parameter Description:

Parameter	Description
Sub type	Internal or Third-party
Method	Silent or Normal
Client ID	The enterprise CorpID
Client secret	The enterprise CorpSecret
Agent ID	Application agentid

 INFO

WeCom supports two authorization methods: Silent authorization and normal authorization.

**Silent authorization:** After the user clicks the link, the page is redirected to  
`redirect_URI? code=CODE&state=STATE`

**Normal authorization:** After the user clicks the link, a middle page is displayed for the user to choose whether to authorize or not. After the user confirms the authorization, they are redirected to

`redirect_uri?code=CODE&state=STATE`

For more details, please refer to the [official documentation](#).

## More Information

For more information about internal applications, please refer to the [Internal Application](#) documentation.

For information about third-party applications, please refer to the [Third-Party Application](#) documentation.

# Tencent QQ

## Tencent QQ ✓

To add Tencent QQ OAuth provider to your application, visit the authentication platform of QQ - [Connect QQ](#).

First, you need to apply to [become a developer](#). After your application is approved, follow the instructions of the platform to obtain your Client Id and Client Secret.

# DingTalk

## DingTalk ✓

### Configuring DingTalk

To configure DingTalk, visit the [DingTalk developer platform](#) and log in using your DingTalk account. Once you're on the platform, follow the instructions provided to obtain your `Client Id` and `Client Secret`. The corresponding terms in DingTalk are as follows:

Term	DingTalk Name
Client ID	AppKey
Client secret	AppSecret

In DingTalk, you can find the `Appkey` and `AppSecret` in the App Info.

基础信息

应用信息

开发管理

权限管理

应用功能

机器人与消息推送

事件与回调

登录与分享

酷应用

安全与监控

监控中心

部署与发布

版本管理与发布

## 应用信息



casdoor

document

## 应用凭证

AgentId

2687194261

AppKey

ding6dposo0nm8u4t2g5

AppSecret

hE4cwQ4PjKDSp\_ucHTBTqjAAfZfsNGkxwNg1q1FCiiTRW7apxJhzjFOjw46NfFWn

## 删除应用

删除操作不可逆，该应用所有信息将被删除，请谨慎操作。

删除

Make sure to add the **Redirect Domain**, which should be your Casdoor domain.

基础信息

应用信息

开发管理

权限管理

应用功能

机器人与消息推送

事件与回调

登录与分享

酷应用

安全与监控

监控中心

部署与发布

## 接入登录

添加重定向 URL 作为免登授权码跳转地址。[了解更多](#)

\* 回调域名

请填写 HTTP/HTTPS 开头的 URL

添加

微应用回调的URL

http://localhost:7001

复制

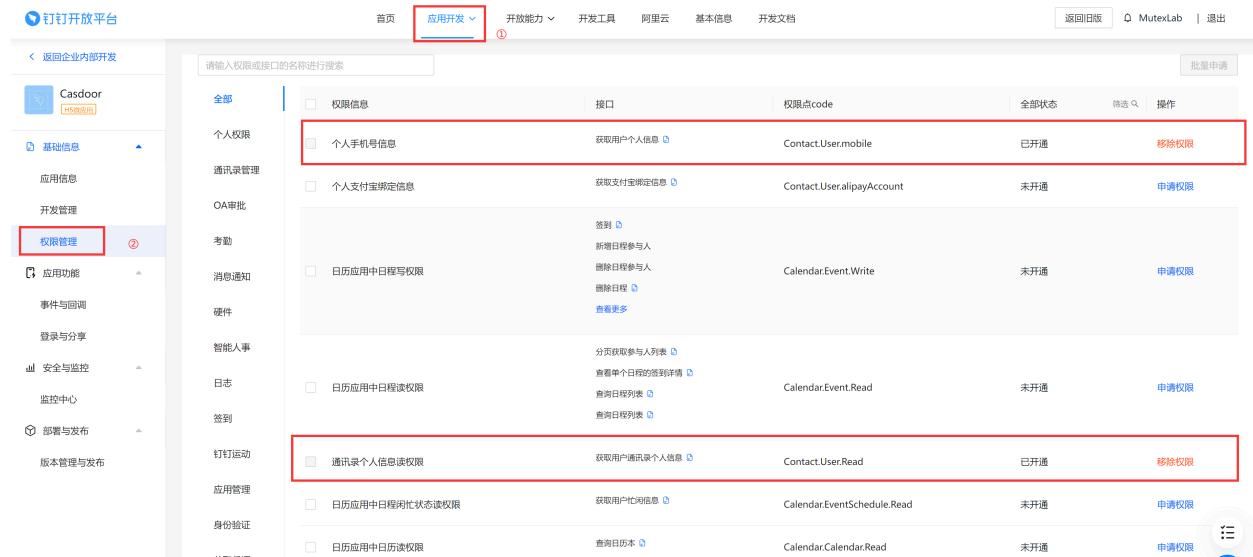
## 接入分享

嵌入分享SDK，实现一键登录后内容分享。[了解更多](#)

iOS 分享

For more detailed information, please refer to the [DingTalk developer docs](#).

Additionally, you need to add the following permissions to the DingTalk application:



The screenshot shows the DingTalk Open Platform interface with the '应用开发' (Application Development) tab selected. On the left, there's a sidebar with various management sections like '基础信息', 'OA审批', '考勤', etc. The '权限管理' section is highlighted with a red box. In the main content area, there's a search bar and a table listing permissions. Two specific permissions are highlighted with red boxes: '个人手机号信息' (under '个人权限') and '通讯录个人信息读权限' (under '钉钉运动').

## Configuring Casdoor

Here's the final configuration for DingTalk:

Name <a href="#">?</a> :	dingding
Display name <a href="#">?</a> :	dingding
Organization <a href="#">?</a> :	admin (Shared)
Category <a href="#">?</a> :	OAuth
Type <a href="#">?</a> :	 DingTalk
Client ID <a href="#">?</a> :	ding6dposoonm8u4t2g5
Client secret <a href="#">?</a> :	***
Provider URL <a href="#">?</a> :	<a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>

# Steam

## Steam ✓

To add the Steam OAuth provider to your application, follow these steps:

1. Visit the [Steam WebAPI platform](#) and log in using your Steam account.
2. Apply for an API Key for your Casdoor domain or IP.
3. Fill in your API Key as the Client Secret into Casdoor. The ClientID does not need to be filled.
4. Make sure that your Steam account has games in order to apply for the API.

For more detailed information, please visit the [Steam WebAPI documentation](#).

# Gitee

To set up the Gitee OAuth provider, please go to the [Gitee developer](#) website. If you haven't created applications before, the Gitee workbench will look like this:



The screenshot shows the Gitee workbench interface. At the top, there is a dark navigation bar with links for '企业版' (Enterprise), '高校版' (University Edition), '私有云' (Private Cloud), '博客' (Blog), and '我的' (My). On the right side of the bar are icons for notifications, a lightbulb, a plus sign, and a user profile. Below the bar, there is a search bar with the placeholder '搜开源'. To the right of the search bar are icons for a bell, a lightbulb, a plus sign, and a user profile. The main content area has tabs for '我的应用' (My Applications) and '已授权应用' (Authorized Applications), with '我的应用' being the active tab. A large 'No Data' message with a magnifying glass icon is centered on the page, indicating that no applications have been created yet.

You can then create your Gitee app.

## 创建第三方应用

应用名称 \*

应用描述

应用主页 \*

应用回调地址 \* +

Enter the name, description, homepage, and callback URL, and carefully choose the permissions.

### ⚠ SET THE AUTHORIZATION CALLBACK URL CORRECTLY

In the Gitee OAuth config, the `authorization callback URL` must be your Casdoor's callback URL, and the `Redirect URL` in Casdoor should be your application's callback URL.

For more details, please read the [App config](#) guide.

After creating the Gitee app, you can obtain the `Client ID` and `Client Secrets`!

### Casdoor (今日请求次数: 0 次)

应用名称 \*

Casdoor

Client ID

300ff94d994a7597850bbafb2d5dc67929676dd8e7176b029e067dc6966ef9c4

Client Secret

60be2e4e0f3fb8286cfe9f129ab0c3d6b40718a964dade150a8095eb2748730c

重置 Client Secret

移除已授权用户的有效 Token

Add a Gitee OAuth provider and enter the `Client ID` and `Client Secrets` in your Casdoor.

Edit Provider

Save

Name [?](#) :

my\_gitee\_provider

Display name [?](#) :

Gitee provider

Category [?](#) :

OAuth

Type [?](#) :

Gitee

Client ID [?](#)

300ff94d994a7597850bbafb2d5dc67929676dd8e7176b029e067dc6966ef9c4

Client secret [?](#)

\*\*\*\*\*

Now you can use Gitee as a third-party service to complete authentication!

### CAUTION

Since Casdoor needs to obtain the user's email, the email option must be checked; otherwise, it will cause scope authorization errors.

Permissions (Be careful to select scopes, users might deny authorization when there are too many scopes.)

All

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> user_info | Access and update user data, activities, etc |
| <input type="checkbox"/> projects             | Full control of user projects                |
| <input type="checkbox"/> pull_requests        | Full control of user pull requests           |
| <input type="checkbox"/> issues               | Full control of user issues                  |
| <input type="checkbox"/> notes                | Access, create and edit user comments        |
| <input type="checkbox"/> keys                 | Full control of user public keys             |
| <input type="checkbox"/> hook                 | Full control of user webhook                 |
| <input type="checkbox"/> groups               | Full control of user orgs and teams          |
| <input type="checkbox"/> gists                | Access, create and update user gists         |
| <input type="checkbox"/> enterprises          | Full control of user enterprises and teams   |
| <input checked="" type="checkbox"/> emails    | Access user emails data                      |

**Submit**

**Delete**

# Baidu

To set up the Baidu OAuth provider, please read the [Baidu documentation](#) and follow their steps to complete the [application creation](#).

**开发者服务管理**

**📍 提示:**

轻应用平台不再支持创建直达号，如需开通直达号请登录<http://zhida.baiu.com>

**创建工作**

\* 应用名称: CasdoorTest 11/32

传统接入扩展:  合作网站

解决方案:  使用BAE

**创建**

After creating your app, the redirect URL should be set in the following position:

**Casdoor**

**基本信息**

接入类型 —————

**其他应用**

开发者服务 ————— ✖

**Oauth2.0**

**安全设置**

**基本信息**

 名称: Casdoor [!\[\]\(da1076617262920b73fa3d6c1f160b36\_img.jpg\)](#)

Icon: 

ID: 25547043

API Key: Hn[REDACTED]yQmAp61

Add your Casdoor domain in the following position:

The screenshot shows the Casdoor web interface. On the left sidebar, there are several menu items: 基本信息 (Basic Information), 接入类型 (Access Type), 其他应用 (Other Applications), 开发者服务 (Developer Services), OAuth2.0, and 安全设置 (Security Settings). The Security Settings page is currently active, indicated by a blue header bar.

In the main content area, there is a section titled "安全设置" (Security Settings) with a back arrow icon. Below it, there are two radio buttons for "Implicit Grant 授权方式": "启用" (Enabled) and "禁用" (Disabled). The "禁用" button is selected. A note below says: "不配置OAuth授权回调地址，会存在用户授权信息被窃取风险，强烈建议配置该项。" (If no OAuth authorization callback URL is configured, user authorization information may be stolen, strongly recommend to configure this item.)

There is a "授权回调页:" (Authorization Callback Page) input field with a placeholder "授权回调页" and a note "0/500".

A red box highlights the "根域名绑定:" (Root Domain Binding) section. It contains a text input field with the value "door.casbin.com" and a note "15/255". Below the input field is a checkbox labeled "限制访问OpenAPI的Referer" (Restrict OpenAPI Referer access).

Below this is another section for "应用服务器IP地址:" (Application Server IP Address) with a note "0/500" and a checkbox "同时绑定访问OpenAPI服务器IP" (Bind to OpenAPI server IP at the same time).

At the bottom of the page are two buttons: "确定" (Confirm) and "取消" (Cancel).

### ⚠ CAUTION

This part is very different from the information provided in the Baidu documentation:

1. Adding the URL to the callback URL setting will most likely fail to validate the URL and cause the login to fail, so we add our domain name to the domain setting.
2. Only one URL or domain name can be added, which is very different from the documentation.

Then you can obtain the `Client ID` and `Client Secrets`.

# Casdoor

- 基本信息
- 接入类型
- 其他应用
- 开发者服务
- Oauth2.0
- 安全设置

## 基本信息

名称: Casdoor

Icon:

ID:

Client ID API Key: HnhK7...QmAp61

Client Secret Secret Key: DTgBZ...ls1bLm1Gha

创建时间: 2022-01-22 16:20:05

更新时间: 2022-01-23 15:45:06

Add a Baidu OAuth provider and fill in the `Client ID` and `Client Secrets` in your Casdoor.

casbin

- Home
- Organizations
- Users
- Roles
- Permissions
- Providers
- Applications
- Resources
- Tokens

Edit Provider Save Save & Exit

Name ②: Baidu

Display name ②: Baidu

Category ②: OAuth

Type ②: Baidu

Client ID ② HsM...nWT

Client secret ② \*\*\*

Provider URL ②: <https://github.com/organizations/xxx/settings/applications/1234567>

Save Save & Exit

Now you can use Baidu as a third-party service to complete authentication!

### GENERAL TROUBLESHOOTING

If you encounter a Baidu prompt that states your redirect URL is incorrect, here are some ways you might be able to fix it:

1. Add your domain name to the appropriate location and then reset the Secret (Baidu reset Secret has a bug, it will prompt you an error, but after refreshing the page the Secret has been refreshed).
2. If the above methods do not solve the problem, we suggest you delete the application and create a new one, and set your domain name first.

Another problem is that the user name returned by Baidu is masked, unlike their documentation which shows the user name and displayed name. Therefore, we can currently only use the masked name as the user name.

# Infoflow

To set up the Infoflow OAuth provider, please follow these steps:

1. Go to [Infoflow](#) and log in using your Infoflow account.
2. Visit the [Infoflow Application](#) page.

The screenshot shows the Infoflow application management interface. At the top, there is a navigation bar with the Infoflow logo, followed by tabs: 首页 (Home), 通讯录 (Address Book), 应用中心 (Application Center) which is highlighted with a red box, 数据统计 (Data Statistics), and 设置 (Settings). Below the navigation bar, the main content area has a title '应用(5)' and three buttons: '新建应用' (Create New Application) which is also highlighted with a red box, '应用分组/排序' (Group/Sort Applications), and '应用宣传栏' (Promotion Column).

3. Register your Infoflow app.

The screenshot shows the Casdoor application registration form. At the top, there are buttons for '返回' (Back) and 'Casdoor'. The form has a header '基本信息' (Basic Information) with '保存' (Save) and '取消' (Cancel) buttons on the right. The fields include:

- 应用logo: A placeholder image of a camera icon with a green checkmark.
- 建议使用640\*640, 2M以内的jpg、png图片 (Suggestion: Use a 640x640, 2M jpg or png image).
- 应用名称: Casdoor
- 应用介绍: Casdoor单点登录系统
- 功能: A checkbox labeled '应用' (Application) is checked and highlighted with a red box. Other options like '机器人' (Robot) and '服务号' (Service Account) are available but not checked.

4. Obtain the AgentID.

< 返回

Casdoor

I 基本信息

应用logo:



应用名称: Casdoor

应用介绍: Casdoor单点登录系统

功能: 应用

AgentID

应用ID: 55

5. Navigate to the Setting tab and create a new management group.

如流 Infoway

首页 通讯录 应用中心 数据统计 设置 ①

基本信息 成员加入 权限设置 ② 通讯录设置 安全设置 客户端启动页

系统管理组 ③ 管理员 新建下级管理组 ④

普通管理组 暂未设置管理员

通讯录权限 组织架构

6. Add your structure to the address book permissions and give it the necessary permissions. Also, add the application you just created to the specified location.

### 通讯录权限

[修改](#)

组织架构	查看	管理
	<input checked="" type="checkbox"/>	<input type="checkbox"/>

对部门仅有查看权限时，只可查看被授权的成员资料信息；对部门有管理权限时，可查看成员的所有资料信息

<input checked="" type="checkbox"/> 成员ID	<input checked="" type="checkbox"/> 姓名	<input checked="" type="checkbox"/> 部门	<input checked="" type="checkbox"/> 头像
<input checked="" type="checkbox"/> 手机号	<input checked="" type="checkbox"/> 邮箱	<input checked="" type="checkbox"/> 登录帐号	

### 应用权限

[修改](#)

应用权限	发消息	配置应用
Casdoor	<input checked="" type="radio"/>	<input type="radio"/>

7. Add the sensitive interface permissions as shown.

## 敏感接口权限

修改

接口名称	权限开放
获取部门成员	<input checked="" type="checkbox"/>
获取部门列表	<input type="checkbox"/>
获取成员信息	<input checked="" type="checkbox"/>
获取标签成员	<input type="checkbox"/>
维护通信录	<input type="checkbox"/>
获取成员群组列表	<input type="checkbox"/>
获取群组成员列表	<input type="checkbox"/>
维护群组成员	<input type="checkbox"/>
发送群组消息	<input type="checkbox"/>
维护群组话题	<input type="checkbox"/>
维护勋章	<input type="checkbox"/>
通讯录搜索	<input type="checkbox"/>

8. On the same page, you will find the `CorpID` and `Secret`.

## 开发者凭据

### Client ID

CorpID	hir...1
Secret	HgH...NB
Client Secret	

9. Add an Infoflow OAuth provider to Casdoor and fill in the Client ID, Client Secret, and Agent ID.

Edit Provider		Save	Save & Exit
Name ② :	Infoflow		
Display name ② :	Infoflow		
Category ② :	OAuth		
Type ② :	Infoflow		
Sub type ② :	Internal		
Client ID ②	CorpID		
Client secret ②	***	Secret	
Agent ID ②	55	AgentID	

You can now use Infoflow as a third-party service for authentication.

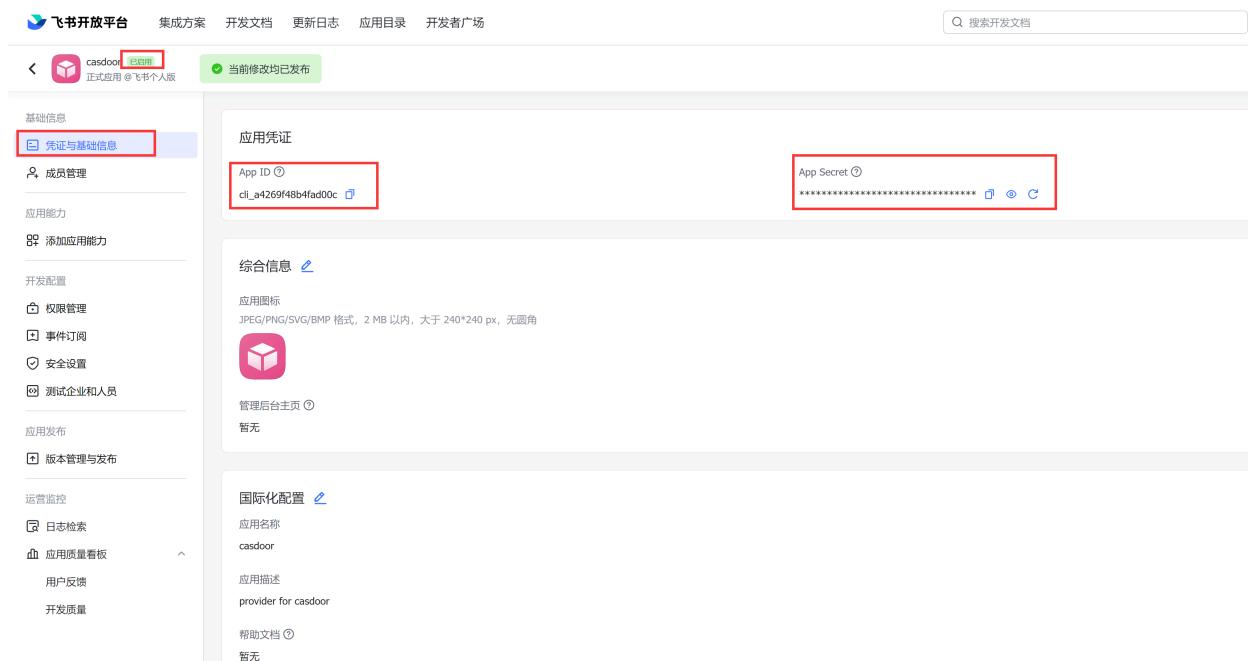
# Lark

## ① NOTE

This is an example of how to configure a Lark OAuth provider.

## Step 1: Create a Lark application

First, you need to create a new application on the [Lark Open Platform](#) and enable it. You can find the `App ID` and `App Secret` in the basic information of your application.



The screenshot shows the Lark Open Platform application configuration interface. On the left, there's a sidebar with various settings like basic information, development configuration, and operational monitoring. The main area is titled '凭证与基础信息' (Credentials and Basic Information). It displays the '应用凭证' (Application Credentials) section where the 'App ID' (value: cli\_a4269f48b4fad00c) and 'App Secret' (value: masked with asterisks) are listed. Below this is the '综合信息' (Comprehensive Information) section, which includes an application icon and a note about the management console. At the bottom is the '国际化配置' (Internationalization Configuration) section with application name, description, and help documentation.

Next, add the redirect URL `<your-casdoor-domain>/callback` (e.g., <http://localhost:7001/callback>) in the security settings of your application.

The screenshot shows the Casdoor application settings interface. On the left sidebar, under the '安全设置' (Security Settings) section, there is a red box highlighting the '重定向 URL' (Redirection URL) and 'IP 白名单' (IP Whitelist) sections. The '重定向 URL' section contains a single entry: 'http://localhost:7001/callback'. The 'IP 白名单' section is currently empty. At the bottom right of the main content area, there is a blue button labeled '技术支持' (Technical Support) with a gear icon.

## Step 2: Create a Lark OAuth provider

Now create a Lark OAuth provider in Casdoor. Fill in the necessary information.

Name	Name in Lark
Category	Choose <button>OAuth</button>
Type	Choose <button>Lark</button>
Client ID	<input type="text"/> App ID obtained from Step 1
Client secret	<input type="text"/> App Secret obtained from Step 1

The screenshot shows two side-by-side interfaces. On the left is the 'Edit Provider' form in Casdoor, where 'lark' is selected as the provider type. On the right is the Feishu Open Platform application configuration page for 'casdoor'. Red arrows highlight the 'Client ID' field in Casdoor pointing to the 'App ID' field in Feishu, and the 'Client secret' field in Casdoor pointing to the 'App Secret' field in Feishu.

Now you can use Lark as the third-party service to complete authentication.

## Username Handling

Casdoor uses a fallback mechanism to ensure user accounts are created successfully even when Lark's OAuth response has incomplete data. The username field follows this priority:

1. UserId - Primary identifier used when available
2. UnionId - Links users across multiple Lark organizations
3. OpenId - Always present, used as final fallback

This ensures authentication succeeds reliably since OpenId is guaranteed in Lark's OAuth response.

# Email

## Overview

Using Email for authentication

## SendGrid

Using SendGrid as an Email Provider

## Azure ACS

Using Azure ACS as the email provider

## Brevo

Using Brevo as the SMTP server

 **MailHog**

Using MailHog as the SMTP server

 **Mailpit**

Using Mailpit as the SMTP server

# Overview

## Adding an Email provider

1. Click on **Add** to add a new provider.
2. Select **Email** under the **Category** section.

Name <small>?</small> :	email provider
Display name <small>?</small> :	My Email
Category <small>?</small> :	Email
Type <small>?</small> :	Default

3. Fill in the fields for **Username**, **Password**, **Host**, and **Port** for your SMTP service.

Username <small>?</small>	no-reply@casbin.com
Password <small>?</small>	***
Host <small>?</small> :	smtp.qiye.aliyun.com
Port <small>?</small> :	465

4. Customize the `Email Title` and `Email Content`, then save the changes.

## Proxy configuration

If your server cannot directly access the SMTP service (such as Gmail), you can enable the proxy option. When enabled, email traffic will be routed through the SOCKS5 proxy configured in Casdoor's configuration file.

To enable proxy support, toggle the `Enable proxy` switch in the provider settings. This is particularly useful when connecting to external email services from restricted network environments.

## Modify email content

You can use the following placeholders to display some variables.

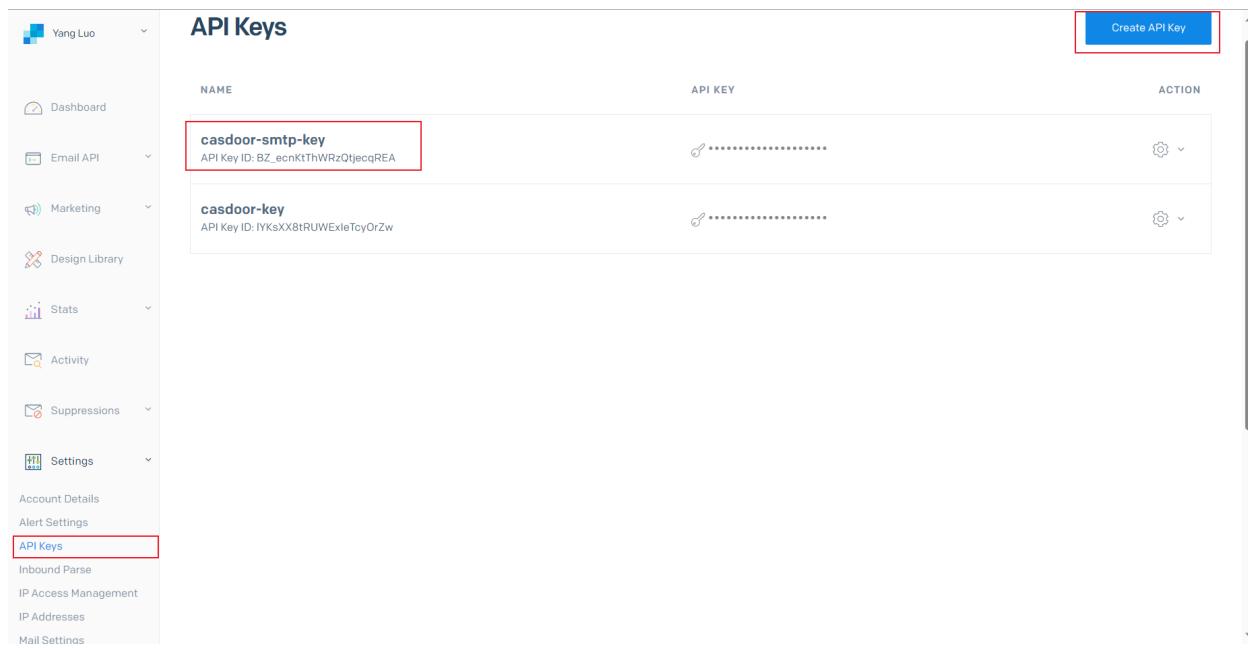
1. `%{user.friendlyName}` is the Display name of user.
2. `%link` is the reset link for forget password function. (You should put `%link` in the `<reset-link></reset-link>` label)

# SendGrid

In this guide, we will use SendGrid as an email provider.

## Step 1: Create an API Key for Your SendGrid Account

Expand **Settings** from the left navigation bar, then click on **API Keys**. Here, you will see all previously generated API keys. To create a new one, click on **Create API Key** and configure the necessary permissions.



The screenshot shows the SendGrid dashboard with the left sidebar expanded to show various account management sections. The 'API Keys' section is selected and highlighted with a red box. On the main page, there is a table titled 'API Keys' with two entries:

NAME	API KEY	ACTION
casdoor-smtp-key API Key ID: BZ_ecnKtThWRzQtjecqREA	copy *****	⚙️
casdoor-key API Key ID: IYKsXX8tRUWExleTcyOrZw	copy *****	⚙️

A blue 'Create API Key' button is located in the top right corner of the table area. The entire 'API Keys' section in the sidebar is also highlighted with a red box.

## Step 2: Sender Verification

To verify your email sender, choose between Single Sender Verification or Domain Authentication by referring to the official documentation:

## Sender Identity

# Step 3: Configure Casdoor as an Email Provider

Create a SendGrid email provider in Casdoor and fill in the following fields:

## Required Fields

Field	Description
Secret Key	Your SendGrid API key
From Address	Your verified email address (or domain)

## Default Fields

Field	Description
Endpoint	Default: <code>/v3/mail/send</code>
Host	Default: <code>https://api.sendgrid.com</code>

# Email Fields

Field	Description
From Name	The display name of the email sender
Email Title	The subject of the email
Email Content	Supports HTML templates
Test Email	The recipient's email address for testing

The screenshot shows the Casdoor provider configuration interface. A red box highlights the 'Type' field set to 'SendGrid' and the 'Secret key' field. A green box highlights the 'Email content' section, which contains an HTML template for a verification code. To the right, a test email is shown with a Casdoor logo, the recipient 'Admin', a verification code '123456', and a note about its validity period. At the bottom, there is a 'Send Testing Email' button.

Provider Configuration:

- Name: provider\_Insiah
- Display name: New Provider - Insiah
- Organization: admin (Shared)
- Category: Email
- Type: SendGrid (highlighted by a red box)
- Secret key: (highlighted by a red box)
- From address: (highlighted by a red box)
- From name: (highlighted by a green box)
- Endpoint: /v3/mail/send (highlighted by a green box)
- Host: http://api.sendgrid.com (highlighted by a green box)
- Email title: Casdoor Verification Code (highlighted by a green box)
- Email content:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Verification Code Email</title>
</head>
<body style="font-family: Arial, sans-serif;">
    <div style="text-align: center; margin: 0 auto; width: 600px;">
        <div style="font-size: 24px; margin: 20px 0; text-align: center;">
            <code>123456</code>
        </div>
        <div style="font-size: 12px; text-align: center; margin-top: 50px;">
            <p>Thanks</p>
            <p>Casdoor Team</p>
        </div>
    </div>
</body>
```

Test Email:

Admin, here is your verification code  
Use this code for your transaction. It's valid for 5 minutes  
123456  
Thanks  
Casdoor Team

Casdoor is a brand operated by Casbin Organization. For more info please refer to <https://casdoor.org>

Finally, click on the **Send Testing Email** button and check your **Test Email** address for the test email.

# Azure ACS

In this guide, we will be using ACS as the Email Provider.

## Step 1: Config ACS

Follow the documentation below, complete configuration.

- [Create and manage Email Communication Service](#)
- [Get a free Azure managed domain](#) or [Add a custom domain](#)
- [Connect domain](#)

Copy your `Endpoint` and `Private Key` for usage

The screenshot shows the Azure Communication Services Keys page for a resource named 'casdoor'. The left sidebar has a 'Keys' section highlighted with a red box. The main content area shows an 'Endpoint' field containing 'https://casdoor.unitedstates.communication.azure.com/' and two sets of 'Primary key' and 'Secondary key' fields. Each key field has a 'Regenerate' button and a 'Show values' link. Below each key is a 'Connection string' field. The entire screenshot is framed by a red border.

## Step 2: Configure Casdoor email Provider

Now create an email provider in Casdoor, fill in the necessary information. The relationship between the fields and Azure ACS is as follows:

 NOTE

From Address must be a verified email domain.

Name	Name in Azure ACS
From Address	
Secret key	Private Key
Host	Endpoint

Name ⓘ : acs

Display name ⓘ : acs

Organization ⓘ : admin (Shared)

Category ⓘ : Email

Type ⓘ :  Azure ACS

Secret key ⓘ : \*\*\*

From address ⓘ : donotreply@59e2329a-a0c8-491f-b470-6d3c044fd8cf.azurecomm.net

Host ⓘ :  https://casdoor.unitedstates.communication.azure.com

Email title ⓘ : Casdoor Verification Code

Email content ⓘ : You have requested a verification code at Casdoor. Here is your code: %s, please enter in 5 minutes.

Test Email ⓘ : 1270329076@qq.com Send Testing Email

Provider URL ⓘ :  https://github.com/organizations/xxx/settings/applications/1234567

# Brevo

In this guide, we will be using Brevo as the SMTP server.

## Step 1: Request the activation of your Brevo SMTP account

Refer to the documentation to activate Brevo SMTP: [Send transactional emails using Brevo SMTP](#)

In my case, when I created a ticket to activate my smtp account, I got this reply:



Rafael Guimaraes

Last Response: 2 days ago



Hi there,

Thank you for reaching out!

I've activated your account's SMTP/Transactional capabilities.

You can find your account's SMTP credentials by clicking [here](#).

To get you started, I'll include some useful links about our SMTP/Transactional services:

- [Our complete library of help articles related to SMTP](#)
- [Troubleshooting common issues with SMTP](#)

The SMTP port listed by default, Port 587, will be used without a secure connection. If you want to use a secure connection (SSL or TLS), please use Port 465.

Please be sure to let me know if you have more questions or if you need any help.

Best regards,

## Step 2: Get Brevo SMTP configuration

In your Brevo dashboard, find **SMTP&API**, get **SMTP Server**, **Port**, **Login**, **SMTP key value**

SMTP & API

SMTP API Keys

Your SMTP Settings

SMTP Server	smtp-relay.brevo.com
Port	587
Login	baicaicxl@gmail.com

Your SMTP Keys

SMTP key name	SMTP key value	Status	Created on
Master Password	*****	Active	

baicaicxl@gmail.com

Usage and plan casdoor

My profile

My plan

Settings

Plugins & Integrations

Senders & IP

SMTP & API

Users

Security

Compliance

Select your language

Log out

## Step 3: Configure Casdoor email Provider

Now create an email provider in Casdoor. Fill in the necessary information.

SMTP & API

SMTP API Keys

Your SMTP Settings

SMTP Server	smtp-relay.brevo.com
Port	587
Login	baicaicxl@gmail.com

Your SMTP Keys

SMTP key name	SMTP key value	Status	Created on
Master Password	*****	Active	

Name: brevo  
Display name: brevo  
Organization: admin (Shared)  
Category: Email  
Type: Email  
Username: baicaicxl@gmail.com  
Password: \*\*\*  
From address: baicaicxl@gmail.com  
From name: casdoor  
Host: smtp-relay.brevo.com  
Port: 465  
Disable SSL:

Click on the **Test SMTP Connection** button. If you see **provider: SMTP connected successfully**, it means that your Casdoor service can access the Brevo service.

Next, click on the **Send Testing Email** button. If you see **Email sent successfully**, it means that the test email has been sent successfully from the **From** address to the **Test Email**.



# MailHog

In this guide, we will be using MailHog as the SMTP server. [MailHog](#) is an email-testing tool that operates with a fake SMTP server.

## Step 1: Deploy the MailHog service

The IP address for the MailHog service is `192.168.24.128`, and the SMTP service port is `1025`.

```
[HTTP] Binding to address: 0.0.0.0:8025
2023/07/13 03:06:43 Serving under http://0.0.0.0:8025/
Creating API v1 with WebPath:
Creating API v2 with WebPath:
[APIv1] KEEPALIVE /api/v1/events
[HTTP] Binding to address: 0.0.0.0:8025
Creating API v1 with WebPath:
Creating API v2 with WebPath:
2023/07/13 03:10:36 Using maildir message storage
2023/07/13 03:10:36 Maildir path is /tmp/mailhog641072855
2023/07/13 03:10:36 [SMTP] Binding to address: 0.0.0.0:1025
2023/07/13 03:10:36 Serving under http://0.0.0.0:8025/
[APIv2] GET /api/v2/jim
[APIv2] GET /api/v2/messages
2023/07/13 03:10:36 [HTTP] Connection established for client 192.168.24.128:51497
```

## Step 2: Create an email provider

Provide the necessary information and save the settings.

Category <a href="#">?</a> :	Email
Type <a href="#">?</a> :	Default
Username <a href="#">?</a> :	
Password <a href="#">?</a> :	
From address <a href="#">?</a> :	notification@casdoor.com
From name <a href="#">?</a> :	Casdoor Notification
Host <a href="#">?</a> :	192.168.24.128
Port <a href="#">?</a> :	1025
Disable SSL <a href="#">?</a> :	<input checked="" type="checkbox"/>
Email title <a href="#">?</a> :	Casdoor Verification Code (Test)
Email content <a href="#">?</a> :	You have requested a verification code at <a href="#">Casdoor (Test)</a> . Here is your code: <u>%s</u> , please enter in 5 minutes.
Test Email <a href="#">?</a> :	admin@example.com
	<a href="#">Test SMTP Connection</a>
	<a href="#">Send Testing Email</a>
<a href="#">Provider URL <a href="#">?</a>:</a>	<a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>
<a href="#">Save</a>	<a href="#">Save &amp; Exit</a>

## Step 3: Send a test email

First, click on the [Test SMTP Connection](#) button. If you see [provider: SMTP connected successfully](#), it means that your Casdoor service can access the MailHog service.

Next, click on the [Send Testing Email](#) button. If you see [Email sent successfully](#), it means that the test email has been sent successfully from the [From](#) address to the [Test Email](#).

Name ?: email\_provider provider:SMTP connected successfully

Display name ?: Email Provider Email sent successfully

Organization ?: admin (Shared)

Category ?: Email

Type ?: Default

Username ?:

Password ?:

From address ?: notification@casdoor.com

From name ?: Casdoor Notification

Host ?: 192.168.24.128

Port ?: 1025

Disable SSL ?:

Email title ?: Casdoor Verification Code (Test)

Email content ?: You have requested a verification code at Casdoor (Test). Here is your code: 123456, please enter in 5 minutes.

Test Email ?: admin@example.com **Test SMTP Connection** **Send Testing Email**

Provider URL ?: <https://github.com/organizations/xxx/settings/applications/1234567>

 MailHog

Connected

Inbox (4)

From "Casdoor Notification" <notification@casdoor.com>  
Subject Casdoor Verification Code (Test)  
To admin@example.com

HTML Plain text Source

Jim  
Jim is a chaos monkey.  
[Find out more at GitHub.](#)

[Enable Jim](#)

You have requested a verification code at Casdoor (Test). Here is your code: 123456, please enter in 5 minutes.

# Mailpit

## Mailpit

In this guide, we will be using Mailpit as the SMTP server. [Mailpit](#) is an email-testing tool that operates with a fake SMTP server.

## Step 1: Deploy the Mailpit service

The IP address for the Mailpit service is `127.0.0.1`. By default, the Mailpit SMTP server listens on port 1025 and does not use encryption or authentication.

```
> { home } * mailpit.exe
time="2025/07/19 16:13:51" level=info msg="[smtpd] starting on [::]:1025 (no encryption)"
time="2025/07/19 16:13:51" level=info msg="[http] starting on [::]:8025"
time="2025/07/19 16:13:51" level=info msg="[http] accessible via http://localhost:8025/"
```

## Step 2: Create an email provider

Provide the necessary information and save the settings.

Edit Provider	
	<a href="#">Save</a>
	<a href="#">Save &amp; Exit</a>
Name ⓘ :	mailpit
Display name ⓘ :	mailpit
Organization ⓘ :	admin (Shared)
Category ⓘ :	Email
Type ⓘ :	 Default
Username ⓘ :	
Password ⓘ :	
From address ⓘ :	2707138687@qq.com
From name ⓘ :	attack825
Host ⓘ :	 127.0.0.1
Port ⓘ :	1025
Disable SSL ⓘ :	<input checked="" type="checkbox"/>

## Step 3: Send a test email

First, click on the `Test SMTP Connection` button. If you see `provider: SMTP connected successfully`, it means that your Casdoor service can access the Mailpit service.

Next, click on the `Send Testing Email` button. If you see `Email sent successfully`, it means that the test email has been sent successfully from the `From` address to the `Test Email`.

The screenshot shows the Mailpit web interface. At the top, there are input fields for 'Test Email' (admin@example.com) and 'Provider URL' (https://github.com/organizations/xxx/settings/applications/1234567), along with buttons for 'Test SMTP Connection', 'Send Testing Email', 'Save', and 'Save & Exit'. Below this, a list of received emails is shown:

- attack825 (5 minutes ago) - To: admin@example.com, Subject: Casdoor Verification Code
- attack825 (13 minutes ago) - To: 2707138687@qq.co, Subject: Casdoor Verification Code
- attack825 (15 minutes ago) - To: 2707138687@qq.co, Subject: Casdoor Verification Code
- attack825 (17 minutes ago) - To: admin@example.com, Subject: Casdoor Verification Code
- sender@example.com (29 minutes ago) - To: recipient@example.com, Subject: Email Subject

On the right, a preview of the last email is displayed:

**Casdoor Organization**  
Admin, here is your verification code  
Use this code for your transaction. It's valid for 5 minutes  
123456

Thanks  
Casbin Team

Casdoor is a brand operated by Casbin organization. For more info please refer to https://casdoor.org

# SMS



## Overview

Using SMS for authentication



## Twilio

Using Twilio as an SMS provider for Casdoor



## Amazon SNS

Using Amazon SNS as an SMS provider for Casdoor



## Azure ACS

Using ACS as an SMS provider for Casdoor



## Alibaba Cloud

Using Alibaba Cloud as an SMS provider for Casdoor



# Overview

We use [casdoor/go-sms-sender](#) to send SMS for Casdoor. The `go-sms-sender` library currently supports Twilio, Submail, SmsBao, Alibaba Cloud, Tencent Cloud, Huawei Cloud, and Volc SMS APIs. If you want to add support for other SMS providers, you can either raise an issue or submit a pull request.

## Adding an SMS provider

1. Click on `Add` to add a new provider.
2. Select `SMS` in the `Category` section.

The screenshot shows a dropdown menu for selecting a category. The menu items are: SMS (selected), AI, Captcha, Email, OAuth, Payment, SAML, and Storage. The 'SMS' option is highlighted with a purple background.

Category ② :	SMS
Type ② :	AI Captcha Email OAuth Payment SAML <b>SMS</b> Storage
Client ID ② :	
Client secret ② :	
Sign Name ② :	
Template code ② :	

3. Choose the type of your provider.

The screenshot shows a dropdown menu for selecting a provider type. The menu items are: Aliyun SMS (selected), Huawei Cloud SMS, SmsBao SMS, SUBMAIL SMS, Tencent Cloud SMS, Twilio SMS, and Volc Engine SMS. The 'Aliyun SMS' option is highlighted with a purple background.

Category ② :	SMS
Type ② :	Aliyun SMS Huawei Cloud SMS SmsBao SMS SUBMAIL SMS Tencent Cloud SMS Twilio SMS Volc Engine SMS
Client ID ② :	
Client secret ② :	
Sign Name ② :	
Template code ② :	

4. Retrieve the necessary information from your SMS provider and fill out the corresponding fields.

## Proxy configuration

For SMS providers that use HTTP APIs (such as Custom HTTP SMS), you can enable proxy support if your server cannot directly access the SMS service. When enabled, SMS traffic will be routed through the SOCKS5 proxy configured in Casdoor's configuration file.

To enable proxy support, toggle the `Enable proxy` switch in the provider settings. This option is available for Custom HTTP SMS providers and helps when operating in restricted network environments.

# Twilio

## Fill in the necessary information in Casdoor

There are four required fields: `Client ID`, `Client secret`, `Sender number`, and `Template code`. The corresponding relationship to the Twilio account is as follows:

Name	Name in Twilio	Required
Client ID	Account SID	Required
Client secret	Auth Token	Required
Sender number	Twilio phone number	Required
Template code		Required

### Twilio information

- Account SID, Auth Token, and Twilio phone number

**Step 4: invite and upgrade**

**Develop Monitor**

**Invite teammates**  
Invite developers to your Twilio account to start building! [Learn more about user access management](#)

**Upgrade your account**  
Upgrade your account to send to any number, buy local numbers, and more. [Learn more about trial account limitations](#)

**Account Info**

- Account SID**: AC06b73d65c8ee67ce8e448edcc64b6ec6
- Auth Token**: ..... [Show](#)
- My Twilio phone number**: +12186751069

**Helpful links**

- [How does Twilio work?](#)
- [SMS Quickstart guides](#)
- [Support help center](#)

## Configure Casdoor provider

You can configure the `template code` to suit your requirements, and then enter your phone number in `SMS Test` to test.

Name <a href="#">?</a> :	twilio
Display name <a href="#">?</a> :	twilio
Organization <a href="#">?</a> :	admin (Shared)
Category <a href="#">?</a> :	SMS
Type <a href="#">?</a> :	Twilio SMS
Client ID <a href="#">?</a> :	AC06b73d65c8ee67ce8e448edcc64b6ec6
Client secret <a href="#">?</a> :	***
Sender number <a href="#">?</a> :	+12186751069
Template code <a href="#">?</a> :	get the message
SMS Test <a href="#">?</a> :	+1 <a href="#">▼</a> Input your phone num... <a href="#">Send Testing SMS</a>
Provider URL <a href="#">?</a> :	<a href="#">🔗</a>



# Amazon SNS

## Obtaining the necessary information in Amazon

There are four required fields: **Access Key**, **Secret Access Key**, **Region**, and **Template code**. I will show you how to obtain this information from Amazon SNS.

- Access Key and Secret Access Key

In Identity and Access Management (IAM), you can create an **Access Key** and **Secret Access Key**.

The screenshot shows the AWS IAM Access Keys page. On the left, there's a sidebar with 'Identity and Access Management (IAM)' selected. The main area has a heading 'Access keys (1)'. It contains a table with one row:

Access key ID	Created on	Access key last used	Region last used	Service last used	Status
AKIAJYOMMMXHVZLH4LYKGL	16 days ago	None	N/A	N/A	Active

Below this, there's a section for 'CloudFront key pairs (0)' with a table header 'Creation time' and 'CloudFront key ID'.

- Region

The **Region** is related to the topic you created.

The screenshot shows the AWS Amazon SNS Dashboard. On the left, there's a sidebar with links for 'Dashboard', 'Topics', 'Subscriptions', and sections for 'Mobile' (Push notifications, Text messaging (SMS), Origination numbers). The main area is titled 'Dashboard' and shows a summary: 'Resources for ap-southeast-1'. It lists 'Topics' (1), 'Platform applications' (0), and 'Subscriptions' (0). Below this, there's a section titled 'Overview of Amazon SNS' with a sub-section 'Application-to-application (A2A)' which describes Amazon SNS as a managed messaging service for decoupling publishers from subscribers.

## Configuring the Casdoor provider

The `Template code` is the message you want to send. Enter your phone number in the `SMS Test` to test.

Name [?](#) :

Display name [?](#) :

Organization [?](#) :

Category [?](#) :

Type [?](#) :

Access key [?](#) :

Secret access key [?](#) :

Region [?](#) :

Template code [?](#) :

SMS Test [?](#) :

Provider URL [?](#) :

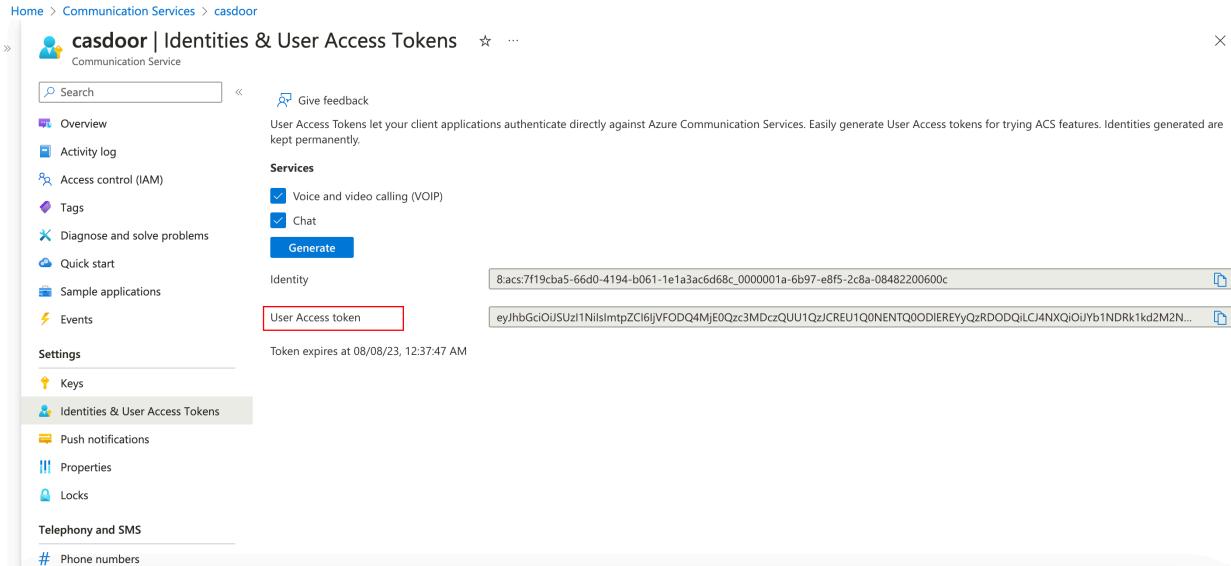
# Azure ACS

## Obtaining the necessary information in Azure

There are four required fields: `Client secret`, `Sender number`, `Template code`, and `Provider Url`. I will show you how to obtain this information from Azure ACS.

- `Client secret`

In Communication Service, you can create a User Access Token, which is the `client secret` in Casdoor.



The screenshot shows the Azure Communication Services Identity & User Access Tokens page for a service named 'casdoor'. On the left, there's a sidebar with various navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Quick start, Sample applications, Events, Keys, and Settings. Under Settings, 'Identities & User Access Tokens' is selected. In the main content area, there's a 'Services' section with checkboxes for 'Voice and video calling (VOIP)' and 'Chat', both of which are checked. Below that is a 'Generate' button. To the right, there's a 'Identity' section with a text input field containing a long token string: '8.acs:7f19cba5-66d0-4194-b061-1e1a3ac6d68c\_0000001a-6b97-e8f5-2c8a-08482200600c eyJhbGciOiJSUzI1NlsltmpZCI6ijVFODQ4MjE0Qzc3MDczQUU1QzCREU1Q0NENTQ0ODIERYyQzRDODQilCj4NXQiOjYb1NDRk1kd2M2N...'. Below this, it says 'Token expires at 08/08/23, 12:37:47 AM'.

- `Sender number`

The `Sender number` is the phone number you create in Communication Service.

Communication Service

Search (Cmd+/) Get Port Release Give feedback

Tools

- Keys
- Identities & User Access Tokens
- Push notifications

Voice Calling - PSTN

- # Phone numbers
- Direct routing (Preview)

SMS

- Short Codes (Preview)

Monitoring

- Insights (preview)
- Metrics
- Diagnostic settings
- Logs

	Number	Status	Cost (monthly)
<input checked="" type="checkbox"/>	1-833-920-3625	Active	\$2

- Provider Url

The **Provider Url** is the endpoint in Communication Service.

Communication Service

Search Move Delete Give feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Quick start

Sample applications

Events

Settings

Keys

Identities & User Access Tokens

Endpoint : https://casdoor.unitedstates.communication.azure.com

Resource group (move) : casdoor

Status : Active

Location : Global

Subscription (move) : 免费试用

Subscription ID : e054e27a-96e8-4cca-a1cf-32717dcd303c

Tags (edit) : Add tags

Build engaging communication experiences at scale

Azure Communication Services brings rich communication APIs to all of your apps across any device, on any platform, using the same reliable and secure infrastructure that powers Microsoft Teams.

Learn more

# Configure Casdoor provider

The `template code` is the message you want to send. Enter your phone number in `SMS Test` to test.

---

Name [?](#) :

Display name [?](#) :

Organization [?](#) :

Category [?](#) :

Type [?](#) :  

Client ID [?](#) :

Client secret [?](#) :

Sender number [?](#) :

Template code [?](#) :

SMS Test [?](#) :

Provider URL [?](#) :

---

# Alibaba Cloud

## Fill in the necessary information in Casdoor

There are four required fields: `Client ID`, `Client secret`, `Sign Name`, and `Template code`. The corresponding relationship with the Alibaba Cloud account is as follows:

Name	Name in Alibaba	is required
Client ID	AccessKey ID	required
Client secret	AccessKey Secret	required
Sign Name	Signature	required
Template code	Template code	required

## Alibaba information

- AccessKey ID and AccessKey Secret

After logging into my Alibaba Cloud workbench, I click on "AccessKey" to create an ID and Secret.

The screenshot shows the Alibaba Cloud SMS service interface. At the top, there's a search bar and navigation links like '费用', '工单', 'ICP 备案', '企业', '支持', 'App', etc. Below the header, a banner reads '【有奖调研】阿里云短信服务易用性有奖调研 点击进入'. The main area has tabs for '新手引导', 'OpenAPI 开发者门户', '开发者指南', and 'AccessKey' (which is circled in orange). On the left, there's a section for '发送量数据' with a chart and a note about data being updated at 22:33:52. The right side has sections for '用户监控信息', '快捷操作入口', and '国内消息'. A central callout box says '快速上手短信服务, 从这里开始!' and '您已完成20%的学习进度, 继续努力吧.' with a '快速学习短信服务' button.

By creating an AccessKey, I obtain my AccessKey ID and AccessKey Secret:

This screenshot shows the '安全信息管理' (Security Information Management) section. It highlights the '用户AccessKey' (User AccessKey) table. The table includes columns for 'AccessKey ID', 'AccessKey Secret', '状态' (Status), '最后使用时间' (Last Used Time), and '创建时间' (Creation Time). A specific row is shown with the AccessKey ID 'LTAI4Fy4mVoMjAzC95rt5Wh7', AccessKey Secret '显示' (Visible), Status '启用' (Enabled), Last Used Time '2020年7月19日 20:24:58', and Creation Time '2020年7月11日 17:52:50'. There are '禁用' (Disable) and '删除' (Delete) buttons for this row. A yellow warning bar at the top states: '① AccessKey ID和AccessKey Secret是您访问阿里云API的密钥, 具有该账户完全的权限, 请您妥善保管,' (① AccessKey ID and AccessKey Secret are your keys to access Alibaba Cloud API, they have full permissions for the account, please keep them safe).

- Signature

This screenshot shows the 'Signatures' management interface. On the left is a sidebar with options like 'Go China', 'Go Globe', 'Analytics', 'Dashboard', 'Delivery Report', 'Messaging Logs', 'Bills', 'Resource Plan Usage', 'Short URL Statistics', 'System Configurations', and 'General Settings'. The main area has a QR code and a message: 'Join the group chat to try new features.' Below is a note about Alibaba Cloud SMS prohibiting illegal content. The 'Signatures' tab is selected, showing a table with columns: 'Signature' (with a checkbox), 'Ticket ID', 'Scenario', 'Review Status', 'Created At', and 'Actions'. One row is highlighted with a red box around the 'Signature' column value 'casdoor 测'. A blue note at the bottom says: 'Generally, signatures are reviewed within 2 hours. Enterprise or institution signatures are reviewed within 2 business days. Recently, a review process took about 1 hour on average. More time may be required due to system upgrades or workload spikes. Business hours: Signatures are reviewed from 9:00 to 21:00 (UTC+8) every day, excluding statutory holidays. Thanks for your cooperation.'

- Template code

The screenshot shows the Alibaba Cloud SMS service interface. On the left, there's a sidebar with navigation links like Overview, Quick Start & Delivery Test, Go China, Go Globe, Analytics, Dashboard, Delivery Report, Messaging Logs, Bills, Resource Plan Usage, Short URL Statistics, System Configurations, General Settings, and Domestic SMS Settings. The main area is titled "Create Dedicated DingTalk Group Chat" and features a QR code with instructions to scan it. Below the QR code, there's a note about legal content restrictions and a section for managing message templates. A table lists existing message templates, including one named "casdoor" with the template code "SMS\_462155126".

Template Name	Tag	Ticket ID	Template Code	Template Type	Created At
casdoor	测	20020389144	SMS_462155126	Verification Code Message	2023-07-26 17:54:00

## Configure Casdoor provider

Enter your phone number in the `SMS Test` field to test.

The configuration form for the Aliyun SMS provider includes the following fields:

- Name: alibaba
- Display name: alibaba
- Organization: admin (Shared)
- Category: SMS
- Type: Aliyun SMS
- Client ID: LTAI5tFwxoA51CnSiQFyyPU5
- Client secret: \*\*\*
- Sign Name: casdoor
- Template code: SMS\_462155126
- SMS Test: +86 (dropdown), Input your phone num..., Send Testing SMS
- Provider URL: (empty input field)

# Notification

## Overview

Add Notification providers to your application

## Telegram

Using Telegram as a notification provider for Casdoor

## Custom HTTP

Using Custom HTTP as a notification provider for Casdoor

## Slack

Using Slack as a notification provider for Casdoor

 **Google Chat**

Using Google Chat as a notification provider for Casdoor

 **Twitter**

Using Twitter as a notification provider for Casdoor

 **Discord**

Using Discord as a notification provider for Casdoor

 **WeCom**

Using WeCom as a notification provider for Casdoor

# Overview

Casdoor can be configured to send notification messages using various Notification providers.

Currently, Casdoor supports multiple Notification providers. Here are the providers that Casdoor supports:

Provider	Logo
Telegram	
Custom HTTP	
Slack	
Google Chat	
Twitter	
Discord	
Bark	
DingTalk	

Provider	Logo
Lark	
Line	
Matrix	[matrix]
Microsoft Teams	
WeCom	
Pushbullet	
Pushover	
Reddit	
Rocket Chat	
Viber	
Webpush	

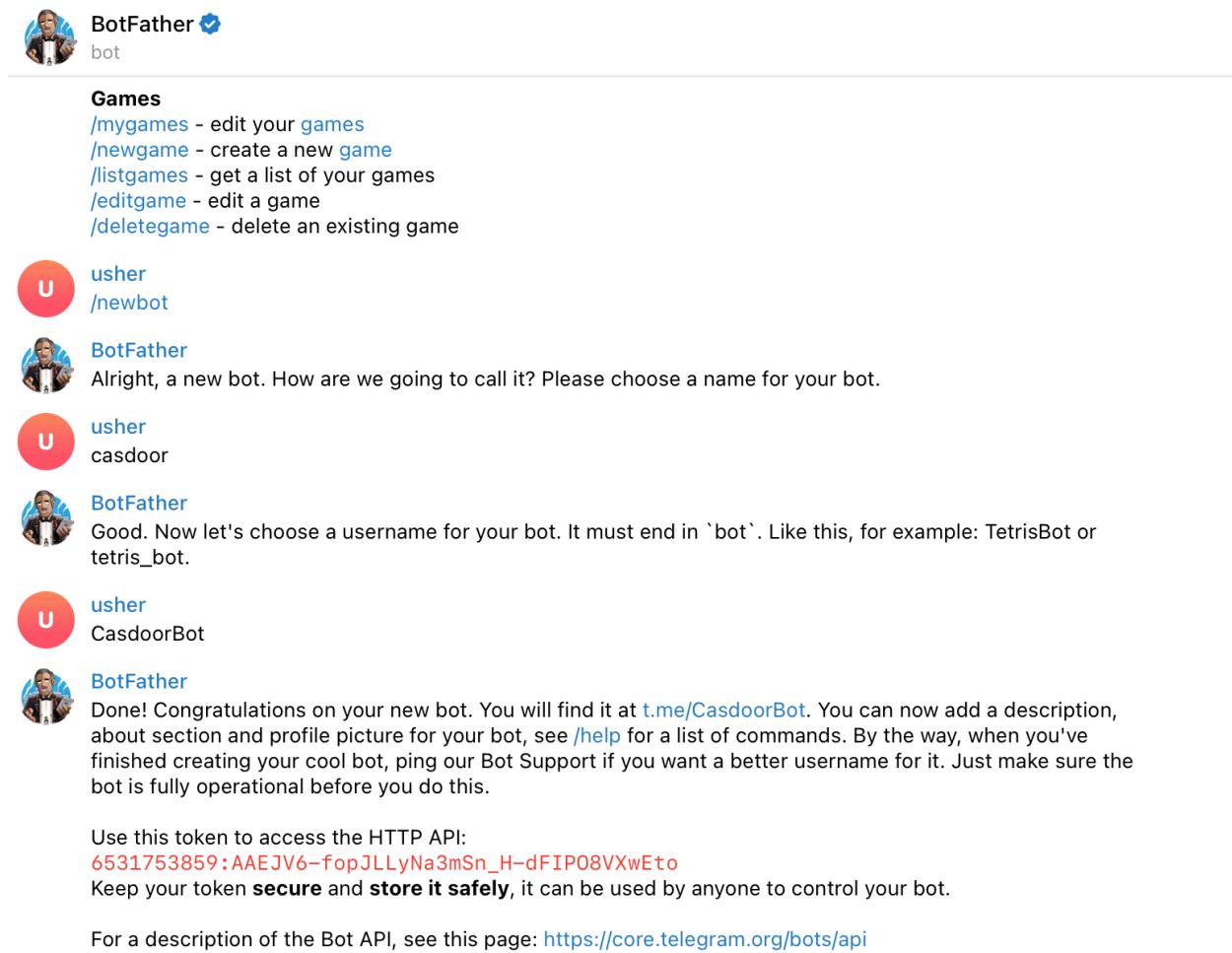


# Telegram

## Step 1: Get API Token

First, you need to create an account on [Telegram](#). After creating an account, you should contact the [BotFather](#), which is a bot used to create other bots.

To create your bot, use the command `/newbot`:



The screenshot shows a Telegram conversation between a user named 'usher' and the BotFather bot. The BotFather bot asks for a name for the new bot, and 'usher' responds with 'casdoor'. The BotFather bot then asks for a username, and 'usher' responds with 'CasdoorBot'. Finally, the BotFather bot congratulates 'usher' on creating a new bot and provides the bot's token: `6531753859:AAEJV6-fopJLLyNa3mSn_H-dFIP08VXwEto`. It also advises to keep the token secure and stored safely.

BotFather  
bot

---

**Games**

[/mygames](#) - edit your [games](#)  
[/newgame](#) - create a new [game](#)  
[/listgames](#) - get a list of your games  
[/editgame](#) - edit a game  
[/deletegame](#) - delete an existing game

usher  
[/newbot](#)

BotFather  
Alright, a new bot. How are we going to call it? Please choose a name for your bot.

usher  
casdoor

BotFather  
Good. Now let's choose a username for your bot. It must end in 'bot'. Like this, for example: TetrisBot or tetris\_bot.

usher  
CasdoorBot

BotFather  
Done! Congratulations on your new bot. You will find it at [t.me/CasdoorBot](https://t.me/CasdoorBot). You can now add a description, about section and profile picture for your bot, see [/help](#) for a list of commands. By the way, when you've finished creating your cool bot, ping our Bot Support if you want a better username for it. Just make sure the bot is fully operational before you do this.

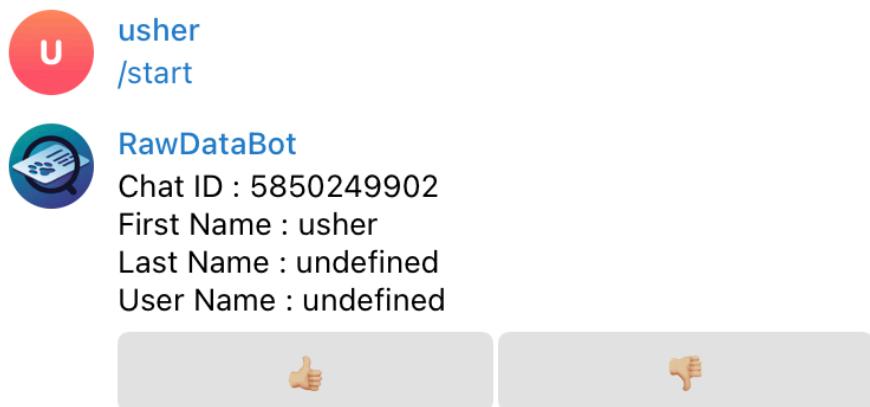
Use this token to access the HTTP API:  
`6531753859:AAEJV6-fopJLLyNa3mSn_H-dFIP08VXwEto`  
Keep your token **secure** and **store it safely**, it can be used by anyone to control your bot.

For a description of the Bot API, see this page: <https://core.telegram.org/bots/api>

Your bot should have two attributes: a `name` and a `username`. After creating the bot, you will receive an `API Token`.

## Step 2: Get Chat ID

To find your chat ID, use [RawDataBot](#).



## Step 3: Configure Casdoor Telegram Provider

There are three required fields: `App Key`, `Content`, and `Chat ID`. The relationship between the fields and Telegram is as follows:

Name	Name in Telegram
Secret key	API Token
Chat ID	Chat ID
Content	

Name ? : telegram

Display name ? : telegram

Organization ? : admin (Shared)

Category ? : Notification

Type ? :  Telegram

Secret key ? : \*\*\*

Content ? : test

Chat ID ? : 5850249902 Send Testing Notification

Provider URL ? :  <https://github.com/organizations/xxx/settings/applications/1234567>

# Custom HTTP

 NOTE

Casdoor supports Custom HTTP Notification Provider. You can use it to send messages to specific HTTP addresses.

## Configure Casdoor Custom HTTP Provider

There are three required fields: `Method`, `Parameter name`, `Content`, and `Chat ID`.

Name	Description
Method	Select <code>GET</code> or <code>POST</code> method.
Parameter name	URL query parameter name or body parameter, depending on the <code>method</code> .
Content	The message you want to send.
Endpoint	Your HTTP address

Name <small>②</small> :	custom_http
Display name <small>②</small> :	custom_http
Organization <small>②</small> :	admin (Shared)
Category <small>②</small> :	Notification
Type <small>②</small> :	 Custom HTTP
Method <small>②</small> :	POST
Parameter <small>②</small> :	test
Content <small>②</small> :	test
Endpoint <small>②</small> :	<input type="text" value="http://localhost:12345"/>
	<button style="background-color: #007bff; color: white; border-radius: 5px; padding: 5px;" type="button">Send Testing Notification</button>
Provider URL <small>②</small> :	<a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>

In my example, when I click `Send Notification Message`, I receive this request:

```
Listening on :12345...
Received a request:
Method: POST
URL: /
Body: test
```

# Slack

## Step 1: Config Slack App

First, you need to create an app on [Slack API](#). Give your bot/app the following OAuth permission scopes: `chat:write`, `chat:write.public`

The screenshot shows the 'Scopes' section of a Slack app configuration. It includes a table with two rows, each with an 'OAuth Scope' and its 'Description'. The first row has a red border around the 'chat:write' scope. A dropdown menu is open above the table.

OAuth Scope	Description	Action
<code>chat:write</code>	Send messages as @casdoor	
<code>chat:write.public</code>	Send messages to channels @casdoor isn't a member of	

[Add an OAuth Scope](#)

## Step 2: Get Bot User OAuth Access Token and Channel ID

Copy your [Bot User OAuth Access Token](#) for usage below.

**Features**

- App Home
- Org Level Apps
- Incoming Webhooks
- Interactivity & Shortcuts
- Slash Commands
- Workflow Steps

**OAuth & Permissions**

- Event Subscriptions
- User ID Translation
- App Manifest NEW
- Beta Features

**Submit to App Directory**

- Review & Submit
- Give feedback

**Slack ❤️**

- Help
- Contact
- Policies
- Our Blog

**Opt In**

At least one redirect URL needs to be set below before this app can be opted into token rotation

## OAuth Tokens for Your Workspace

These tokens were automatically generated when you installed the app to your team. You can use these to authenticate your app. [Learn more.](#)

**User OAuth Token**

xoxp-5865439759200-5827199080935-5865457291440-67810c12dfcae [Copy](#)

Access Level: Workspace

**Bot User OAuth Token**

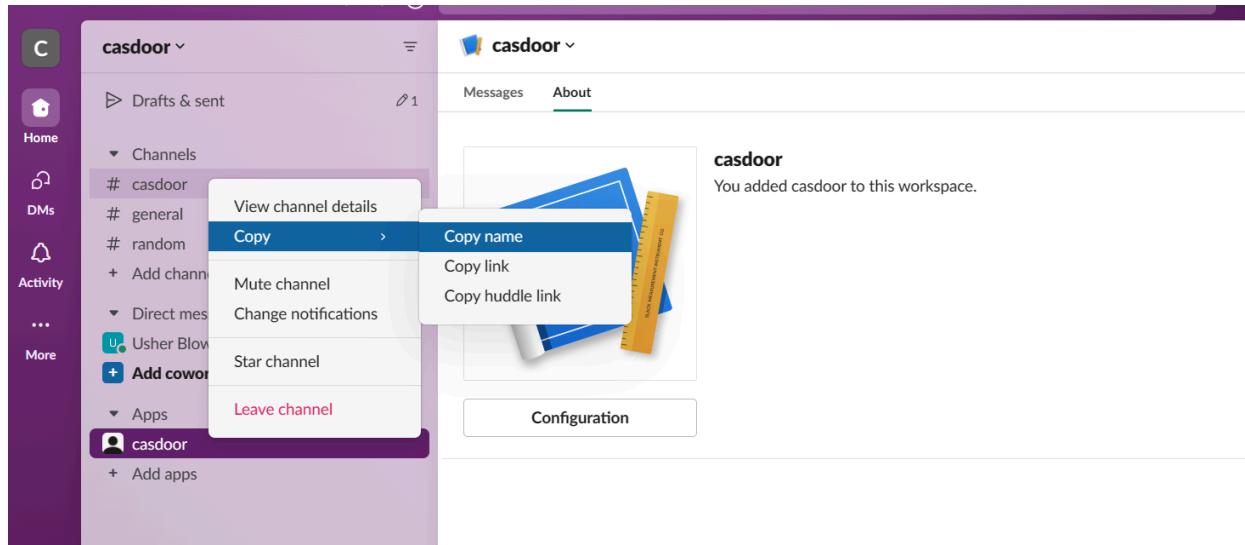
xoxb-5865439759200-5865457299776-2tbOAVTNPpG7vmLoG7OFJS5t [Copy](#)

Access Level: Workspace

[Reinstall to Workspace](#)

## Redirect URLs

Copy the Channel ID of the channel you want to post a message to. You can grab the Channel ID by right clicking a channel and selecting [copy name](#)



# Step 3: Configure Casdoor Slack Provider

There are three required fields: App Key, Content, and Chat ID. The relationship between the fields and Slack is as follows:

Name	Name in Slack
Secret key	Access Token
Chat ID	Channel ID
Content	

Name <small>②</small> :	slack
Display name <small>②</small> :	slack
Organization <small>②</small> :	admin (Shared)
Category <small>②</small> :	Notification
Type <small>②</small> :	 Slack
Secret key <small>②</small> :	***
Content <small>②</small> :	don't reply
Chat ID <small>②</small> :	<input type="text" value="casdoor"/> <span>Send Testing Notification</span>
Provider URL <small>②</small> :	<small>②</small> <a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>

# Google Chat

## Step 1: Get Application Default Credentials

In order to integrate notify with a Google Chat Application, [Application credentials](#) must be supplied. For more information on Google Application credential JSON see: [How Application Default Credentials works](#)

The json will look like this:

```
{  
  "type": "service_account",  
  "project_id": "",  
  "private_key_id": "",  
  "private_key": "",  
  "client_email": "",  
  "client_id": "",  
  "auth_uri": "",  
  "token_uri": "",  
  "auth_provider_x509_cert_url": "",  
  "client_x509_cert_url": ""  
}
```

## Step 3: Configure Casdoor Google Chat Provider

Fill in the [Application credential](#) in the metadata.

Name [?](#):

Display name [?](#):

Organization [?](#):

Category [?](#):

Type [?](#):  

Metadata [?](#): 

```
{  
  "type": "service_account",  
  "project_id": "",  
  "private_key_id": ""  
}'
```

Content [?](#):

Test Notification [?](#):

Provider URL [?](#):  

# Twitter

## Step 1: Get the configuration items from twitter

First, sign up for a Twitter developer account, create a Twitter App within the developer portal refer to the documentation: [Authentication](#)

Copy your `API Key` and `API Secret`, `Access Token` and `Access Token Secret`

The screenshot shows the Twitter Developer Portal interface. On the left is a dark sidebar with navigation links: Dashboard, Projects & Apps (selected), Products (NEW), and Account. The main content area has a light background. At the top, there are two tabs: 'Settings' and 'Keys and tokens' (which is underlined). Below this, the 'Consumer Keys' section is visible, featuring a red-bordered box around the 'API Key and Secret' card. This card contains the text 'API Key and Secret ⓘ' and a 'Regenerate' button. The 'Authentication Tokens' section follows, with a card for a 'Bearer Token' (Generated September 3, 2023) and another red-bordered card for an 'Access Token and Secret' (Generated September 3, 2023, For @Allcompleteness). Both tokens have 'Revoke' and 'Regenerate' buttons.

## Step 2: Get Twitter ID

`Twitter ID` can't be obtained directly, you can get it from some third-party tools.

- [TweeterID](#)
- [Twiteridfinder](#)

## Step 3: Configure Casdoor Twitter Provider

There are five required fields: `Client ID`, `Client secret`, `Client ID 2`, `Client secret 2` and `Chat ID`. The relationship between the fields and Twitter is as follows:

Name	Name in Twitter
Client ID	API Key
Client secret	API Secret
Client ID 2	Access Token
Client secret 2	Access Token Secret
Chat ID	Twitter ID

Name ? :

Display name ? :

Organization ? :

Category ? :

Type ? :  

Client ID ? :

Client secret ? :

Client ID 2 ? :

Client secret 2 ? :

Content ? :

Chat ID ? :  Send Testing Notification

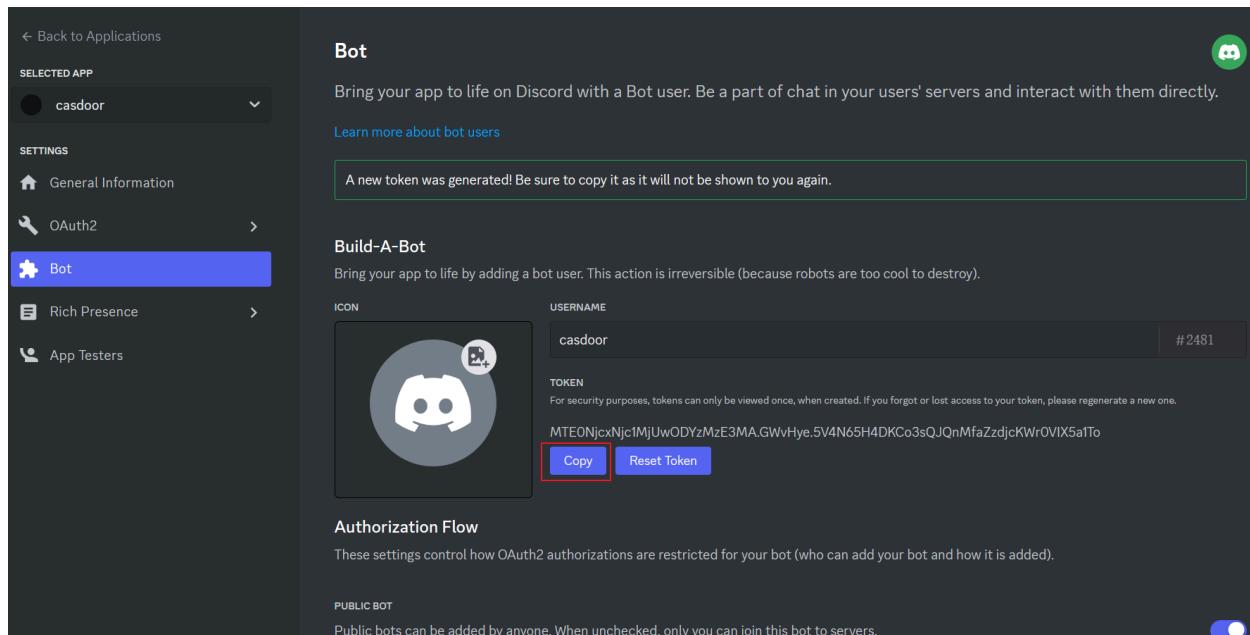
Provider URL ? :

# Discord

## Step 1: Get Token from Discord

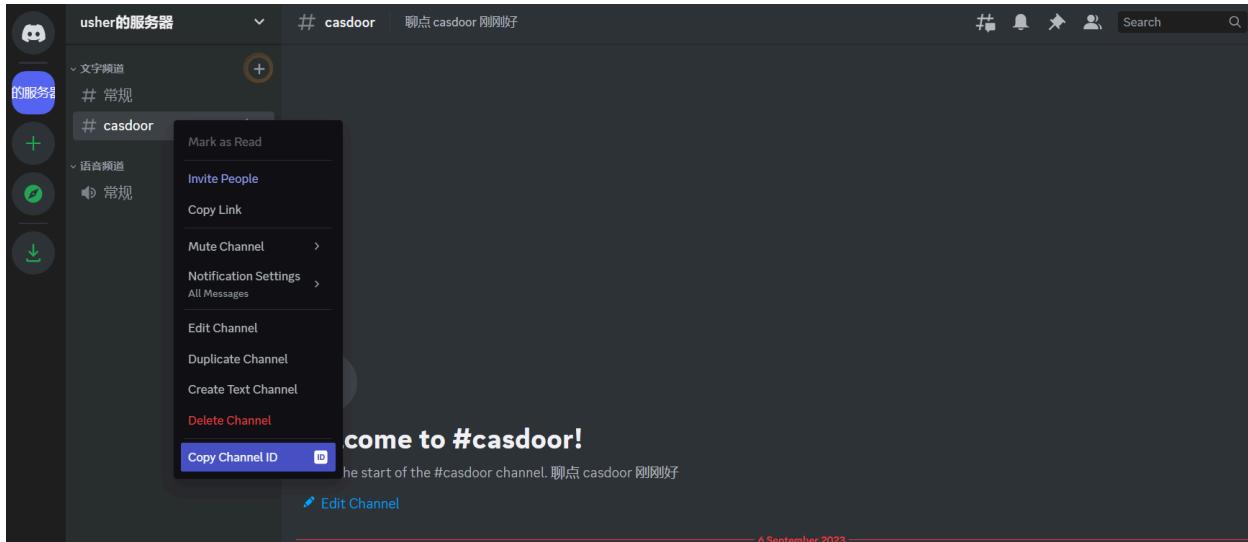
First, sign up for the Discord Developer portal, create a new application, navigate to the “Bot” tab to configure it.

Copy your Bot token



## Step 2: Get Channel ID

Copy the Channel ID of the channel you want to post a message to. You can grab the Channel ID by right clicking a channel and selecting Copy Channel ID



## Step 3: Configure Casdoor Discord Provider

There are three required fields: `App Key`, `Content`, and `Chat ID`. The relationship between the fields and Discord is as follows:

Name	Name in Slack
Secret key	Token
Chat ID	Channel ID
Content	

Name ⓘ :	discord
Display name ⓘ :	discord
Organization ⓘ :	admin (Shared)
Category ⓘ :	Notification
Type ⓘ :	 Discord
Secret key ⓘ :	***
Content ⓘ :	test
Chat ID ⓘ :	1146715329133821972
Provider URL ⓘ :	<a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>
	<button>Send Testing Notification</button>

# WeCom

## Step 1: Create a WeCom Group Chat Bot

WeCom (WeChat Work) supports sending notifications through group chat bots. First, create a group chat in WeCom and add a bot to it.

In your WeCom group chat, go to group settings and add a bot. After adding the bot, you will receive a webhook URL.

## Step 2: Get the Webhook URL

Copy the webhook URL provided by WeCom. This URL is used to send messages to your group chat.

The webhook URL format is: `https://qyapi.weixin.qq.com/cgi-bin/webhook/send?key=YOUR_KEY`

For more information, refer to the [WeCom Webhook Documentation](#).

## Step 3: Configure Casdoor WeCom Provider

In Casdoor, create a new notification provider and select "WeCom" as the type.

Configure the following field:

Name	Name in WeCom
Endpoint	Webhook URL

Paste your webhook URL into the `Endpoint` field. The `Content` field can be used to define a message template for notifications sent to your WeCom group.

# Storage

## Overview

Setting up a storage provider for uploading files in Casdoor

## Local File System

Using the Local File System as a storage provider for Casdoor

## Amazon S3

Using Amazon S3 as a storage provider for Casdoor

## Azure Blob

Using Azure Blob as a storage provider for Casdoor



## Google Cloud Storage

Using Google Cloud Storage as a storage provider for Casdoor



## MinIO

Using MinIO as a storage provider for Casdoor



## Alibaba Cloud OSS

Using Alibaba Cloud OSS as a storage provider for Casdoor



## Tencent Cloud COS

Using Tencent Cloud COS as a storage provider for Casdoor



## Synology NAS

Using Synology NAS as a storage provider for Casdoor

# Overview

If you need to use file storage services, such as "avatar upload", you will need to set up a storage provider and apply it to your application in Casdoor.

Casdoor supports two types of storage: Local and Cloud. In this chapter, you will learn how to add a storage provider to use these services.

## Item

- **Client ID:** A unique identifier provided by the cloud storage provider.
- **Client secret:** A secure value known only to Casdoor and the cloud storage service.
- **Endpoint:** The public URL or domain of the cloud storage service.
- **Endpoint (Intranet):** The internal or private URL or domain of the cloud storage service.
- **Path prefix:** Path prefix for the file location.

### ⓘ INFO

The default `Path prefix` is "/". For example, when the `Path prefix` is empty, a default file path would be:

```
https://cdn.casbin.com/casdoor/avatar.png
```

You can fill it with "abcd/xxxx", and then you can store your avatar in:

```
https://cdn.casbin.com/abcd/xxxx/casdoor/avatar.png
```

- **Bucket:** A container used for storing files and data.
- **Domain:** The custom domain name of the CDN for your cloud storage.
- **Region ID:** An identifier used to specify the data center region where the cloud storage service is located.

## Local

We support uploading files to the local system.

## Cloud

We support AWS S3, Azure Blob Storage, MinIO, Alibaba Cloud OSS, Tencent Cloud COS, and we are constantly adding more Cloud storage services.

# Local File System

## INFO

The Local File System provider will store your uploaded files in the Casdoor `files` folder.

For example, when your Casdoor is located in the `/home/user/casdoor` directory, the uploaded files will be stored in the `/home/user/casdoor/files` folder.

## Configure the Casdoor provider

Name [?](#) : localfile

Display name [?](#) : localfile

Organization [?](#) : admin (Shared)

Category [?](#) : Storage

Type [?](#) : Local File System

Path prefix [?](#) :

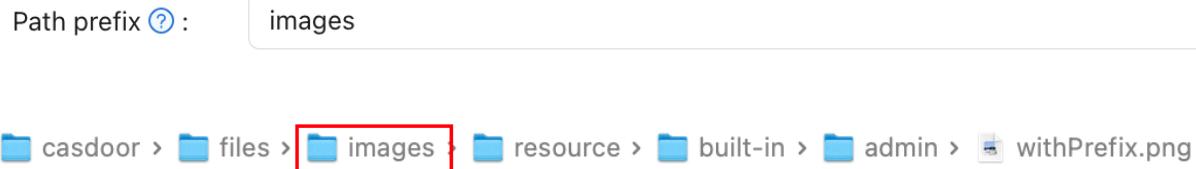
Domain [?](#) : http://localhost:8000

Provider URL [?](#) :

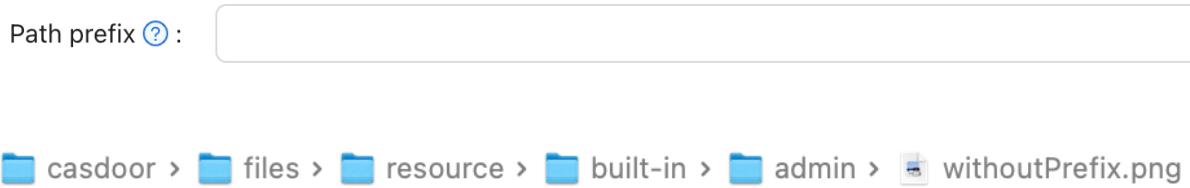
The `Path prefix` is the prefix of the location path for your files. You can fill it in

as needed. In the following example, you can see the difference with or without the prefix.

## With prefix



## Without prefix



# Amazon S3

 NOTE

This is an example of Amazon S3.

## Create security credentials

Follow the document: [Managing access keys](#) to create and save your `access key` and `secret access key` in the Amazon console.

## Configure your bucket

In your bucket permissions options, uncheck the "block" option and save the changes.

## Block public access (bucket settings)

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

### **Block all public access**

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

#### **Block public access to buckets and objects granted through *new* access control lists (ACLs)**

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

#### **Block public access to buckets and objects granted through *any* access control lists (ACLs)**

S3 will ignore all ACLs that grant public access to buckets and objects.

#### **Block public access to buckets and objects granted through *new* public bucket or access point policies**

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

#### **Block public and cross-account access to buckets and objects through *any* public bucket or access point policies**

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

[Cancel](#)

[Save changes](#)

Edit the object ownership and check ACLs enabled.

## Object Ownership

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

**ACLs disabled (recommended)**

All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

**ACLs enabled**

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

**⚠️** We recommend disabling ACLs, unless you need to control access for each object individually or to have the object writer own the data they upload. Using a bucket policy instead of ACLs to share data with users outside of your account simplifies permissions management and auditing.

### Object Ownership

**Bucket owner preferred**

If new objects written to this bucket specify the bucket-owner-full-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.

**Object writer**

The object writer remains the object owner.

**ⓘ** If you want to enforce object ownership for new objects only, your bucket policy must specify that the bucket-owner-full-control canned ACL is required for object uploads. [Learn more ↗](#)

Cancel

Save changes

## Configure Casdoor

Name	Name in Amazon	Is Required
Client ID	Access key	Required
Client secret	Secret access key	Required
Endpoint	Endpoint	Required
Endpoint (intranet)	VPC endpoint	

Name	Name in Amazon	Is Required
Bucket	Bucket name	Required
Path prefix		
Domain	CloudFront domain	
Region ID	AWS region	Required

Fill in the necessary information, including the `Client ID` and `Client Secret` obtained from the `access key` and `secret access key` in the previous step. You can refer to this documentation for information on the formatting of the `endpoint`: [Website endpoints](#)

Name <a href="#">?</a> :	awss3
Display name <a href="#">?</a> :	awss3
Organization <a href="#">?</a> :	admin (Shared)
Category <a href="#">?</a> :	Storage
Type <a href="#">?</a> :	AWS S3
Client ID <a href="#">?</a> :	AKIAYOMMXHVZC5CHBPNR
Client secret <a href="#">?</a> :	***
Endpoint <a href="#">?</a> :	<a href="http://kininaru.s3-website.ap-northeast-1.amazonaws.com">http://kininaru.s3-website.ap-northeast-1.amazonaws.com</a>
Endpoint (Intranet) <a href="#">?</a> :	
Bucket <a href="#">?</a> :	kininaru
Path prefix <a href="#">?</a> :	
Domain <a href="#">?</a> :	
Region ID <a href="#">?</a> :	ap-northeast-1
Provider URL <a href="#">?</a> :	<a href="#">🔗</a>

## (Optional) Use VPC

You can refer to the official documentation for configuration: [Access AWS services through AWS PrivateLink](#)

## (Optional) Use CloudFront distribution

Follow the document to configure CloudFront: [Configure CloudFront](#)

In the domain field, enter your distribution domain name.

Endpoint [?](#) : <http://kininaru.s3-website.ap-northeast-1.amazonaws.com>

Bucket [?](#) : kininaru

Path prefix [?](#) :

Domain [?](#) : <https://d20zlk9foisfk0.cloudfront.net>

Region ID [?](#) : ap-northeast-1

Provider URL [?](#) : [🔗](#)

# Azure Blob

**ⓘ NOTE**

This is an example of Azure Blob.

- You must have an [Azure storage](#) account.

## Step 1: Select Azure Blob

Select Azure Blob as the storage type.

The screenshot shows the 'Edit Provider' page with the following fields:

Edit Provider		Save	Save & Exit
Name	provider_ftfzes		
Display name	New Provider - ftfzes		
Category	Storage		
Type	Azure Blob		
Client ID	Local File System		
	AWS S3		
Client secret	Aliyun OSS		
	Tencent Cloud COS		
Endpoint	Azure Blob		

## Step 2: Fill in the necessary information in Casdoor

There are four required fields: `Client ID`, `Client secret`, `Endpoint`, and `Bucket`. The corresponding relationship to the Azure Blob account is as follows:

Field Name	Azure Name	Required
Client ID	AccountName	Required
Client secret	AccountKey	Required
Endpoint	ContainerUrl	Required
Endpoint (intranet)	PrivateEndpoint	
Bucket	ContainerName	Required
Path prefix		
Domain	DomainName	

- AccountName

The `AccountName` is your AccountName.

- AccountKey

The `AccountKey` is your key to access the Azure API.

 NOTE

You can obtain your account key from the Azure Portal under the "Access Keys" section on the left-hand pane of your storage account.

The screenshot shows the 'Access keys' section of the Azure Storage account settings for 'casbin'. The left sidebar lists 'Containers', 'File shares', 'Queues', and 'Tables' under 'Data storage'; 'Networking', 'Azure CDN', and 'Access keys' under 'Security + networking'; and 'Shared access signature', 'Encryption', and 'Microsoft Defender for Cloud' under 'Data management'. The 'Access keys' section is highlighted with a red box. It displays two key pairs: 'key1' (last rotated 0 days ago) and 'key2' (last rotated 0 days ago). Each key has a 'Show' button to reveal the value. Below each key pair is a 'Connection string' input field with a 'Show' button.

Storage account name: casbin

key1 Rotate key

Last rotated: 2023/7/22 (0 days ago)

Key: [REDACTED] [Show](#)

Connection string: [REDACTED] [Show](#)

key2 Rotate key

Last rotated: 2023/7/22 (0 days ago)

Key: [REDACTED] [Show](#)

Connection string: [REDACTED] [Show](#)

- ContainerUrl

You can obtain the ContainerUrl from your container properties.

 default | Properties

Container

Search Refresh Give feedback

Overview Diagnose and solve problems Access Control (IAM)

Shared access tokens Access policy Properties Metadata

**NAME**  
default

**URL**  
`https://casbin.blob.core.windows.net/default`

**LAST MODIFIED**  
7/22/2023, 5:18:03 PM

**ETAG**  
0x8DB8A948D644055

- (Optional) PrivateEndpoint

Azure Private Endpoint is a feature that allows connecting Azure services to Azure Virtual Network (VNet) private subnets. You can refer to the official Azure documentation for configuration: [private endpoint config](#)

- ContainerName

In this example, a default container called 'default' is created.

Home > casbin

## casbin | Containers

Storage account

Search (Ctrl+ /) Container Change access level Restore containers Refresh Delete

Overview Activity log Tags Diagnose and solve problems Access Control (IAM) Data migration Events Storage browser (preview)

**Data storage**

- Containers** (highlighted with a red circle)
- File shares
- Queues
- Tables

Name

Name	Created
\$logs	2022-04-23
<b>default</b>	2022-04-26

- (Optional) DomainName

The custom domain name in your Azure CDN.

Home > fd-profile

## fd-profile | Front Door and CDN profiles

Front Door and CDN profiles

Search (Ctrl+ /) Purge cache Origin response timeout Delete Refresh

Overview Activity log Access control (IAM) Tags Diagnose and solve problems

**Settings**

- Front Door manager
- Domains
- Origin groups
- Rule set
- Security policies
- Optimizations
- Secrets
- Properties
- Locks

**Analytics**

- Reports
- Monitoring

**Essentials**

Resource group (move)	: default
Status	: Active
Location	: Global
Subscription (move)	: Visual Studio Enterprise
Subscription ID	[REDACTED]
Tags (edit)	: Click here to add tags

**Properties**

Endpoints	Endpoint hostname	Route name
	endpoint-hth4eebgcdzc2ex.z01.azurefd.net	default-route

**Custom domains**

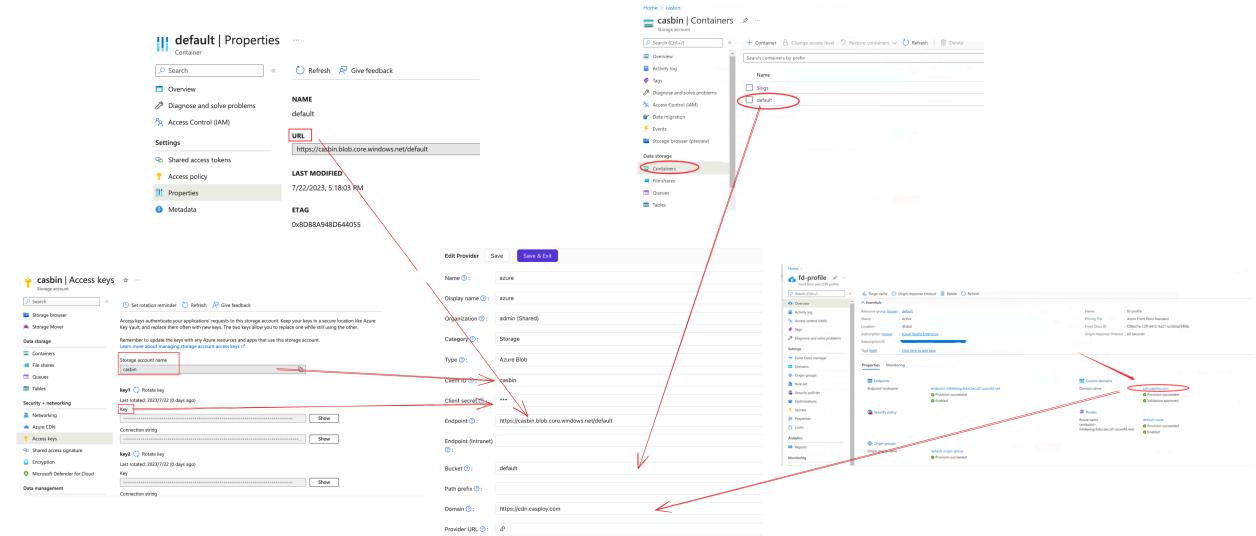
Domain name
cdn.casploy.com

**Routes**

Route name	Endpoint
default-route	endpoint-hth4eebgcdzc2ex.z01.azurefd.net

# Step 3: Save your configuration

The final result is as follows:



Now you can use Azure Blob Storage services in your application.

# Google Cloud Storage

 NOTE

This is an example of Google Cloud Storage.

## Create security credentials

Follow the document: [Cloud Storage Authentication](#) to create a [service account](#) with the correct [IAM permissions](#) to access the bucket in the GCP console.

## Configure Casdoor

Name	Name in Google	Is Required
Service Account JSON	Service Account Key	Required
Endpoint	Endpoint	
Bucket	Bucket name	Required

Name ⓘ :

Display name ⓘ :

Organization ⓘ :  ▾

Category ⓘ :  ▾

Type ⓘ :  ▾

Service account JSON ⓘ :

Endpoint ⓘ :

Bucket ⓘ :

Path prefix ⓘ :

Provider URL ⓘ :

# MinIO

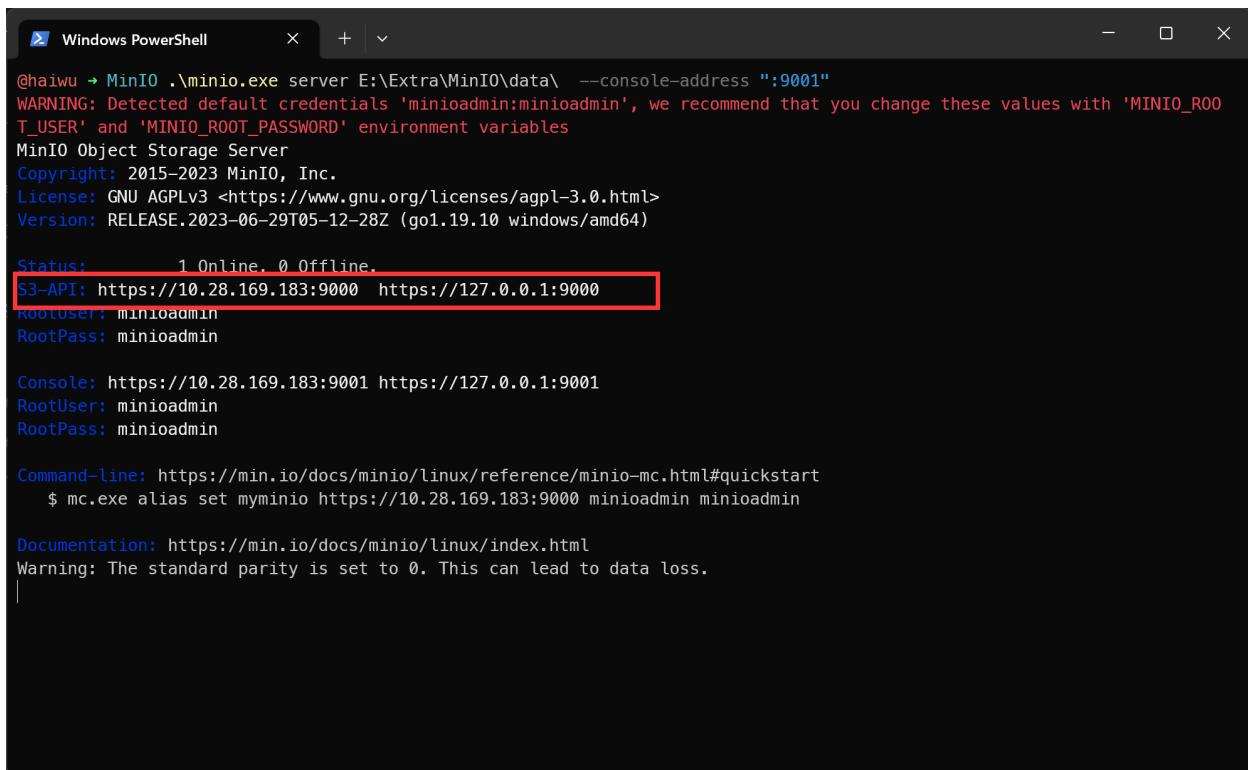
## ⓘ NOTE

This is an example of how to configure a MinIO provider.

MinIO is a high-performance object storage service that is API compatible with Amazon S3 cloud storage service.

## Step 1: Deploy the MinIO service

First, deploy the MinIO service with TLS enabled. You can obtain the [API address](#) from the console.

A screenshot of a Windows PowerShell window titled "Windows PowerShell". The command run is ".\minio.exe server E:\Extra\MinIO\data\ --console-address \"":9001\"". The output shows the MinIO Object Storage Server starting up, including copyright information (2015-2023 MinIO, Inc.), license (GNU AGPLv3), and version (RELEASE.2023-06-29T05-12-28Z). It also displays connection details: Status (1 Online, 0 Offline), S3-API (https://10.28.169.183:9000 https://127.0.0.1:9000), RootUser (minioadmin), RootPass (minioadmin), Console (https://10.28.169.183:9001 https://127.0.0.1:9001), and Command-line (https://min.io/docs/minio/linux/reference/minio-mc.html#quickstart \$ mc.exe alias set myminio https://10.28.169.183:9000 minioadmin minioadmin). A red box highlights the S3-API and RootUser/RootPass lines.

```
@haiwu ~ MinIO .\minio.exe server E:\Extra\MinIO\data\ --console-address ":"9001"
WARNING: Detected default credentials 'minioadmin:minioadmin', we recommend that you change these values with 'MINIO_ROOT_USER' and 'MINIO_ROOT_PASSWORD' environment variables
MinIO Object Storage Server
Copyright: 2015-2023 MinIO, Inc.
License: GNU AGPLv3 <https://www.gnu.org/licenses/agpl-3.0.html>
Version: RELEASE.2023-06-29T05-12-28Z (go1.19.10 windows/amd64)

Status:      1 Online, 0 Offline.
S3-API: https://10.28.169.183:9000 https://127.0.0.1:9000
RootUser: minioadmin
RootPass: minioadmin

Console: https://10.28.169.183:9001 https://127.0.0.1:9001
RootUser: minioadmin
RootPass: minioadmin

Command-line: https://min.io/docs/minio/linux/reference/minio-mc.html#quickstart
$ mc.exe alias set myminio https://10.28.169.183:9000 minioadmin minioadmin

Documentation: https://min.io/docs/minio/linux/index.html
Warning: The standard parity is set to 0. This can lead to data loss.
```

Second, create the [Access Key](#) and [Secret key](#).

**Create Access Key**

Access Key: `ulqg2f67Or9mmTnphPA`

Secret Key: `.....`

Restrict beyond user policy

You can specify an optional JSON-formatted IAM policy to further restrict Access Key access to a subset of the actions and resources explicitly allowed for the parent user. Additional access beyond that of the parent user cannot be implemented through these policies.

**Learn more about Access Keys**

**Create Access Keys**

Access Keys inherit the policies explicitly attached to the parent user, and the policies attached to each group in which the parent user has membership.

**Assign Custom Credentials**

Randomized access credentials are recommended, and provided by default. You may use your own custom Access Key and Secret Key by replacing the default values. After creation of any Access Key, you will be given the opportunity to view and download the account credentials.

Access Keys support programmatic access by applications. You cannot use a Access Key to log into the MinIO Console.

**Assign Access Policies**

You can specify an optional JSON-formatted IAM policy to further restrict Access Key access to a subset of the actions and resources explicitly allowed for the parent user. Additional access beyond that of the parent user cannot be implemented through these policies.

You cannot modify the optional Access Key IAM policy after saving.

Third, create the Bucket.

**Create Bucket**

Bucket Name\*: `casdoor`

View Bucket Naming Rules

**Features**

Versioning	<input type="checkbox"/> OFF	<input checked="" type="checkbox"/> ON
Object Locking	<input type="checkbox"/> OFF	<input checked="" type="checkbox"/> ON
Quota	<input type="checkbox"/> OFF	<input checked="" type="checkbox"/> ON

**Buckets**

MinIO uses buckets to organize objects. A bucket is similar to a folder or directory in a filesystem, where each bucket can hold an arbitrary number of objects.

**Versioning** allows to keep multiple versions of the same object under the same key.

**Object Locking** prevents objects from being deleted. Required to support retention and legal hold. Can only be enabled at bucket creation.

**Quota** limits the amount of data in the bucket.

**Retention** imposes rules to prevent object deletion for a period of time. Versioning must be enabled in order to set bucket retention policies.

## Step 2: Create a MinIO provider in Casdoor

Now create a MinIO provider in Casdoor. Fill in the necessary information.

Name	Name in MinIO
Category	choose Storage
Type	choose MinIO
Client ID	Access Key obtained from Step 1
Client secret	Secret Key obtained from Step 1
Endpoint	API address obtained from Step 1
Bucket	Bucket obtained from Step 1

The diagram illustrates the configuration of a Casdoor provider for MinIO. It shows three main components:

- Provider Configuration:** A screenshot of the Casdoor provider configuration page. It includes fields for Name (minio), Display name (minio), Organization (admin (Shared)), Category (Storage), Type (MinIO), Client ID (uIqg2f67Or9mmTnphPA), Client secret (\*\*\*), Endpoint (http://10.28.169.183:9000), Bucket (casdoor), Path prefix, and Provider URL.
- Create Access Key Dialog:** A screenshot of the MinIO 'Create Access Key' dialog. It shows the 'Access Key' field containing 'uIqg2f67Or9mmTnphPA' and the 'Secret Key' field containing a masked password.
- Create Bucket Dialog:** A screenshot of the MinIO 'Create Bucket' dialog. It shows the 'Bucket Name' field containing 'casdoor'.
- Windows PowerShell Terminal:** A screenshot of a Windows PowerShell window showing the command `mc.exe alias set myminio https://10.28.169.183:9000` being run.

## Step 3: Use MinIO storage service in your application

Now you can use the MinIO storage service in your application.

# Alibaba Cloud OSS

**ⓘ NOTE**

This is an example of Alibaba Cloud OSS.

The AccessKey is your key to access Alibaba Cloud API with full account permissions.

To create an AccessKey, follow the instructions in the [Alibaba Cloud workbench](#).

Next, create the OSS service:

The screenshot shows the 'Create Bucket' page. At the top, there is a note: '注意: Bucket 创建成功后, 您所选择的 存储类型、区域、存储冗余类型 不支持变更。' (Note: After creating the bucket successfully, the selected Storage Type, Region, and Redundancy Type cannot be changed). Below this, there are input fields for 'Bucket Name' (mycasdoor), 'Region' (North China 2 (Beijing)), and 'Endpoint' (oss-cn-beijing.aliyuncs.com). There is also a link '(?) Create Storage Space' and a close button (X).

Fill in the necessary information in Casdoor and save:

Name <a href="#">?</a> :	provider_storage_aliyun_oss
Display name <a href="#">?</a> :	Storage Aliyun OSS
Category <a href="#">?</a> :	Storage
Type <a href="#">?</a> :	Aliyun OSS
Client ID <a href="#">?</a>	LTAIxFoNpNAnPoiT
Client secret <a href="#">?</a>	***
Endpoint <a href="#">?</a> :	oss-cn-beijing.aliyuncs.com
Endpoint (Intranet) <a href="#">?</a> :	oss-cn-beijing-internal.aliyuncs.com
Bucket <a href="#">?</a> :	casbin
Domain <a href="#">?</a> :	<a href="https://cdn.casbin.com/casdoor/">https://cdn.casbin.com/casdoor/</a>
Provider URL <a href="#">?</a> :	<a href="https://oss.console.aliyun.com/bucket/oss-cn-beijing/casbin/object">https://oss.console.aliyun.com/bucket/oss-cn-beijing/casbin/object</a>

You can now use Alibaba Cloud cloud storage services in your application.

# Tencent Cloud COS

 NOTE

This is an example of Tencent Cloud COS.

## Fill in the necessary information in Casdoor

There are five required fields: `Client ID`, `Client secret`, `Endpoint`, `Bucket`, and `Region ID`. The corresponding relationship to the Tencent Cloud COS account is as follows:

Name	Name in Tencent	Required
Client ID	SecretId	Yes
Client secret	SecretKey	Yes
Endpoint	Endpoint	Yes
Bucket	BucketName	Yes
Path prefix		
Domain	CDNDomain	
Region ID	Region	Yes

## Tencent Cloud COS information

- SecretId and SecretKey

The screenshot shows the Tencent Cloud API Key Management interface. On the left sidebar, 'API 密钥管理' (API Key Management) is selected. The main area displays a table with one row of data:

APPID	密钥	创建时间	最近访问时间	状态
1319606438	<div style="border: 1px solid red; padding: 2px;">SecretId: AKIDdAlMuNrJn8GHI6mLi6NSWbheNr7MViec</div> <div style="border: 1px solid red; padding: 2px;">SecretKey: ***** 显示</div>	2023-07-22 19:01:...	2023-07-22 22:09	已启用

- Endpoint, BucketName, and Region

The screenshot shows the Tencent Cloud Bucket Overview page for the bucket 'casdoor-1319606438'. The left sidebar has '概览' (Overview) selected. The main area includes sections for '用量概览' (Usage Overview), '基本信息' (Basic Information), and '域名信息' (Domain Name Information). The '基本信息' section shows the storage bucket details:

存储桶名称	casdoor-1319606438 (存储桶不支持改名)
所属地域	广州 (中国) (ap-guangzhou)
创建时间	2023-07-22 18:57:50
访问权限	私有读写

The '域名信息' section shows the domain configuration:

访问域名	https://casdoor-1319606438.cos.ap-guangzhou.myqcloud.com
自定义CDN加速域名	0条
自定义源站域名	0条
全球加速域名	未开启
静态网站域名	未开启

- (Optional) CDNDomain

You can refer to the official documentation for configuration: [Config CDN](#)

## Configure Casdoor provider

The screenshot shows two overlapping interfaces. The top interface is the 'API密钥管理' (API Key Management) in the Tencent Cloud console, displaying an access key with a secret key. The bottom interface is the 'Casdoor provider' configuration page in Casdoor's settings. Red arrows point from the 'Secret ID' and 'Secret Key' fields in the Casdoor provider config to their corresponding fields in the Tencent Cloud API key management interface.

**Tencent Cloud API Key Management (Top):**

- Name: tencentcos
- Display name: tencentcos
- Organization: admin (Shared)
- Category: Storage
- Type: Tencent Cloud COS
- Client ID: AKID4dMhNjNj8GH6mL6NSWbheN7Mveic
- Client secret: \*\*\*
- Endpoint: casdoor-1319606438.cos.ap-guangzhou.myqcloud.com
- Bucket: casdoor-1319606438
- Path prefix:
- Domain:
- Region ID: ap-guangzhou
- Provider URL: dP

**Casdoor provider Configuration (Bottom):**

- Secret ID: AKDDAMuJn8GH8mLjRNSWbheN7Mveic
- Secret Key: SecretKey

# Synology NAS

 NOTE

This is an example of Synology NAS.

## Fill in the necessary information in Casdoor

There are five required fields: `Client ID`, `Client secret` and `Endpoint`. The corresponding relationship to the Synology NAS account is as follows:

Name	Name in Tencent	Required
Client ID	SecretId	Yes
Client secret	SecretKey	Yes
Endpoint	Endpoint	Yes
Bucket		
Path prefix		
Domain		
Region ID		

## Configure Casdoor provider

The screenshot illustrates the configuration of a Casdoor provider, specifically for Synology, across two windows:

- Casdoor Provider Configuration:** This window shows the "Edit Provider" form for "provider\_synology". Key fields include:
  - Name: provider\_synology
  - Display name: New Provider - synology
  - Organization: built-in
  - Category: Storage
  - Type: Synology
  - Client ID: password\_ls\_xiaokonglong
  - Client secret: \*\*\*
  - Endpoint: http://169.254.0.2:5000
- Synology Assistant:** This window displays the Synology NAS status. It lists one device:

服务器名称	IP 地址	IP 状态	状态	网络物理地址	版本	型号	序列号	IWOL
synologyNAS	169.254.0.2	Manual	已就绪	00:11:32:2C:A6:03	6.1.7-15284	DS3617xs	A8ODD02468	-

The endpoint listed is **Endpoint: http://169.254.0.2:5000**.

Red arrows highlight the following mappings between the provider configuration and the Synology status:

- The Client ID in the provider config is mapped to the IP address in the Synology status.
- The Endpoint in the provider config is mapped to the IP address in the Synology status.

You can refer to the official documentation for configuration: [link](#)

# SAML

## Overview

Using identities from external identity providers that support SAML 2.0

## Custom

Configure your SAML Custom Provider

## Keycloak

Using Keycloak to authenticate users

## Alibaba Cloud IDaaS

Using Alibaba Cloud IDaaS to authenticate users

# Overview

Casdoor can be configured to support user login to the UI using identities from external identity providers that support SAML 2.0. In this configuration, Casdoor never stores any credentials for the users.

Now, Casdoor supports multiple SAML application providers. Icons of the providers will be displayed on the login page after being added to Casdoor. Here are the providers that Casdoor supports:

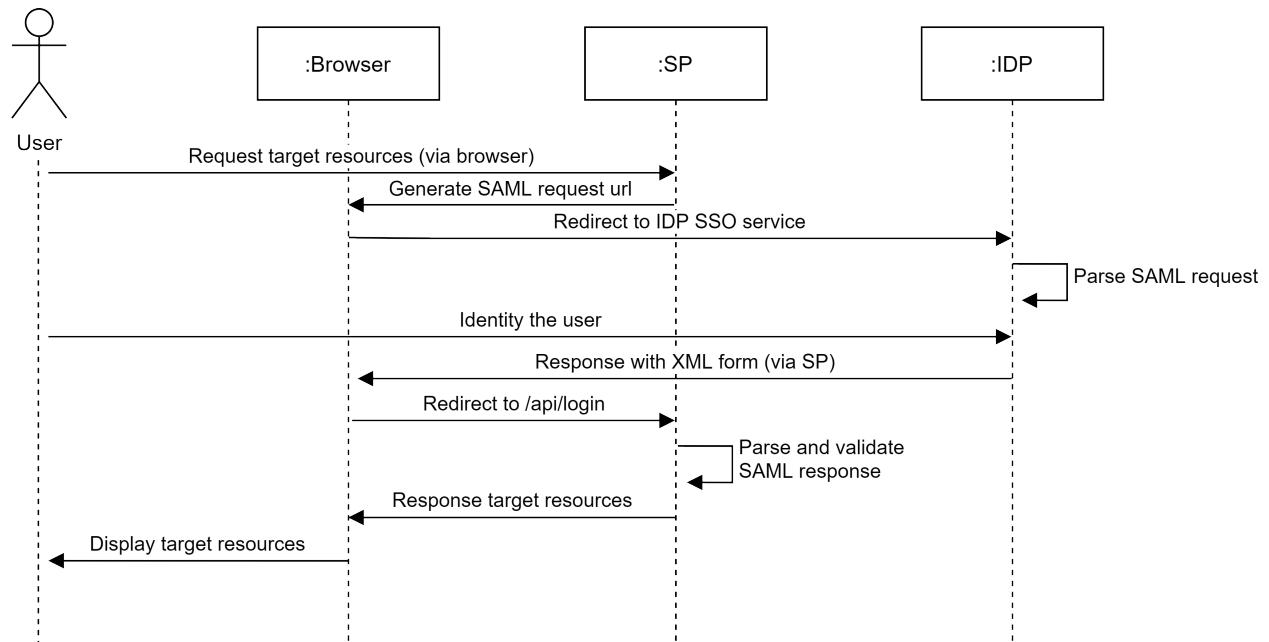
Alibaba Cloud IDaaS	Keycloak	Custom
		
		

## Terms

- Identity Provider (IDP) - The service that stores the identity database and provides identity and authentication services to Casdoor.
- Service Provider (SP) - The service that provides resources to the end user, in this case, the Casdoor deployment.
- Assertion Consumer Service (ACS) - The consumer of SAML assertions generated by the Identity Provider.

# How SAML integration works

When using SAML SSO, users log into Casdoor via the identity provider without ever passing credentials to Casdoor. The process is shown in the following diagram.



# Custom

Casdoor supports configuring SAML Custom Provider, and you can use Casdoor as a Service Provider (SP) to connect any Identity Provider (IDP) that support SAML 2.0 protocol.

## Step1. Get the metadata of IDP

First, you need to obtain the metadata of IDP, which is a XML document used to describe the configuration information of the services provided by IDP. It needs to include information such as `EntityID`, `SSO Endpoint`, etc.

Some IDPs, such as Keycloak, require SP information to provide metadata. You can refer to the document [Keycloak](#).

You can use oktadev to test the SAML Custom Provider, here is the [metadata](#).

## Step2. Configure SAML Custom Provider

After obtain the metadata of IDP, create a SAML Custom Provider and fill the neccessary information.

Field	Description
Category	Choose <code>SAML</code>
Type	Choose <code>Custom</code>

Field	Description
Favicon.URL	The URL of the IdP logo
Metadata	The metadata of IdP

Then click `Parse` button, and fileds `Endpoint`, `IdP`, `Issuer URL`, `SP ACS URL` and `SP Entity ID` will be automatically parsed.

Name [?](#):

Display name [?](#):

Organization [?](#):

Category [?](#):

Type [?](#):  Custom

User mapping [?](#): ?:

Username [?](#):

Display name [?](#):

Email [?](#):

Avatar [?](#):

Favicon [?](#): ?: [https://cdn.casbin.org/img/social\\_okta.png](https://cdn.casbin.org/img/social_okta.png)

Preview: 

Client ID [?](#):

Client secret [?](#):

Sign request [?](#):

Metadata [?](#):   
[Parse](#)

Endpoint [?](#):

IdP [?](#):

Issuer URL [?](#):

SP ACS URL [?](#):

SP Entity ID [?](#):

Provider URL [?](#):

Finally, add the SAML Custom Provider to **Providers** of the application.

Providers <a href="#">?</a>	Add <a href="#">?</a>	Category	Type	Can signup	Can signin	Can unlink	Prompted	Rule	Action
provider_storage_minio_s3		Storage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
provider_oauth_jar		OAuth		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
provider_email_rq		Email		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
provider_web3_metamask		Web3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
provider_google_oauth		OAuth		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">One Tap</a>	<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
provider_web3_onboard		Web3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
saml_custom_provider_okev		SAML		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>
saml_custom_provider_keycloak		SAML		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">^</a> <a href="#">v</a> <a href="#">o</a>

# Keycloak

The JBoss [Keycloak](#) system is a widely used and open-source identity management system that supports integration with applications via SAML and OpenID Connect. It can also operate as an identity broker between other providers such as LDAP or other SAML providers and applications that support SAML or OpenID Connect.

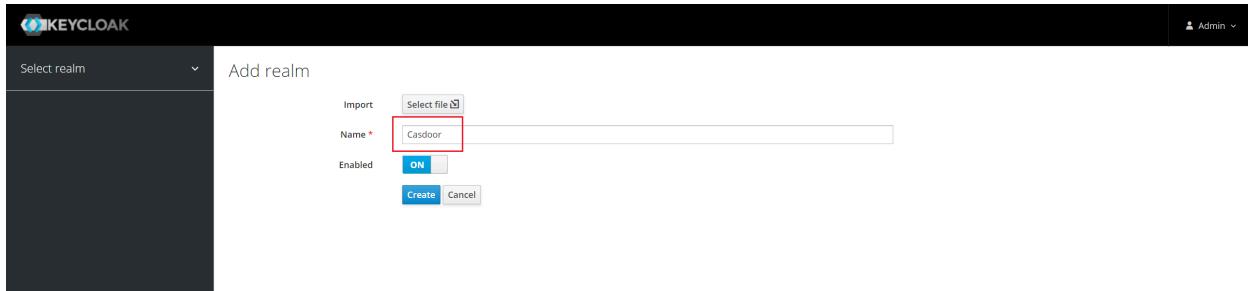
Here is an example of how to configure a new client entry in Keycloak and configure Casdoor to use it to allow UI login by Keycloak users who are granted access via Keycloak configuration.

## Configure Keycloak

For this example, let's make the following configuration choices and assumptions:

- Assume that you are running Casdoor in dev mode locally. The Casdoor UI is available at `http://localhost:7001` and the server is available at `http://localhost:8000`. Replace with the appropriate URL as needed.
- Assume that you are running Keycloak locally. The Keycloak UI is available at `http://localhost:8080/auth`.
- Based on that, the SP ACS URL for this deployment will be:  
`http://localhost:8000/api/acs`.
- Our SP Entity ID will use the same URL: `http://localhost:8000/api/acs`.

You can use the default realm or create a new realm.



## Add a client entry in Keycloak

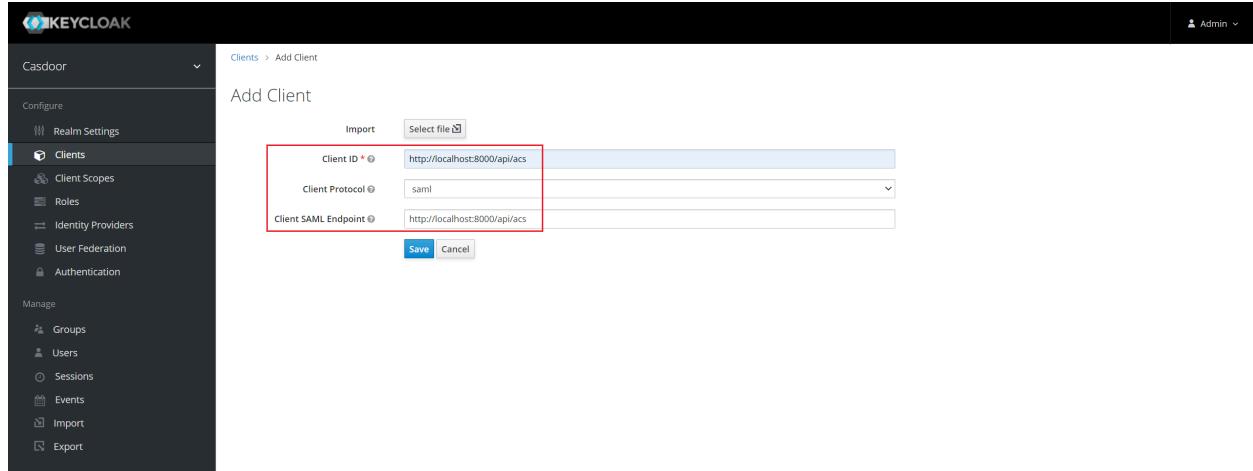
### INFO

For more details about Keycloak Clients, refer to the [Keycloak documentation](#).

Click Clients in the menu and then click Create to go to the Add Client page. Fill in the fields as follows:

- **Client ID:** `http://localhost:8000/api/acs` - This will be the SP Entity ID used in the Casdoor configuration later.
- **Client Protocol:** `saml`.
- **Client SAML Endpoint:** `http://localhost:8000/api/acs` - This URL is where

you want the Keycloak server to send SAML requests and responses. Generally, applications have one URL for processing SAML requests. Multiple URLs can be set in the Settings tab of the client.



The screenshot shows the Keycloak administration interface. On the left, a sidebar menu is open with 'Clients' selected. The main area is titled 'Add Client'. A red box highlights the input fields for 'Client ID' (set to 'http://localhost:8000/api/acs'), 'Client Protocol' (set to 'saml'), and 'Client SAML Endpoint' (set to 'http://localhost:8000/api/acs'). Below these fields are 'Save' and 'Cancel' buttons. The top right corner shows the user is 'Admin'.

Click Save. This action creates the client and brings you to the Settings tab.

The following are part of the settings:

1. Name - Casdoor. This is only used to display a friendly name to Keycloak users in the Keycloak UI. You can use any name you prefer.
2. Enabled - Select on.
3. Include Authn Statement - Select on.
4. Sign Documents - Select on.
5. Sign Assertions - Select off.
6. Encrypt Assertions - Select off.
7. Client Signature Required - Select off.
8. Force Name ID Format - Select on.
9. Name ID Format - Select username.
10. Valid Redirect URIs - Add http://localhost:8000/api/acs.
11. Master SAML Processing URL - http://localhost:8000/api/acs.

## 12. Fine Grain SAML Endpoint Configuration

- i. Assertion Consumer Service POST Binding URL -

`http://localhost:8000/api/acs.`

- ii. Assertion Consumer Service Redirect Binding URL -

`http://localhost:8000/api/acs.`

Save the configuration.

KEYCLOAK Admin

Clients > http://localhost:8000/api/acs

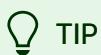
**Http://localhost:8000/api/acs**

Configure Realm Settings Clients

**Settings** Roles Client Scopes Mappers Scope Sessions Offline Access Clustering Installation

Client ID: http://localhost:8000/api/acs  
 Name: Casdoor  
 Description:  
 Enabled: ON  
 Always Display in Console: OFF  
 Consent Required: OFF  
 Login Theme:  
 Client Protocol: saml  
 Include AuthnStatement: ON  
 Include OneTimeUse Condition: OFF  
 Force Artifact Binding: OFF  
 Sign Documents: ON  
 Optimize REDIRECT signing key lookup: OFF  
 Sign Assertions: OFF  
 Signature Algorithm: RSA\_SHA256  
 SAML Signature Key Name: KEY\_ID  
 Canonicalization Method: EXCLUSIVE  
 Encrypt Assertions: OFF  
 Client Signature Required: OFF  
 Force POST Binding: OFF  
 Front Channel Logout: ON  
 Force Name ID Format: ON  
 Name ID Format: username  
 Root URL:  
 Valid Redirect URIs: http://localhost:8000/api/acs  
 Base URL:  
 Master SAML Processing URL: http://localhost:8000/api/acs  
 IDP Initiated SSO URL Name:  
 IDP Initiated SSO Relay State:  
**Fine Grain SAML Endpoint Configuration**  
 Assertion Consumer Service POST Binding URL: http://localhost:8000/api/acs  
 Assertion Consumer Service Redirect Binding URL: http://localhost:8000/api/acs  
 Logout Service POST Binding URL:  
 Logout Service Redirect Binding URL:  
 Logout Service ARTIFACT Binding URL:  
 Artifact Binding URL:  
 Artifact Resolution Service:  
**Advanced Settings**  
**Authentication Flow Overrides**

Save Cancel



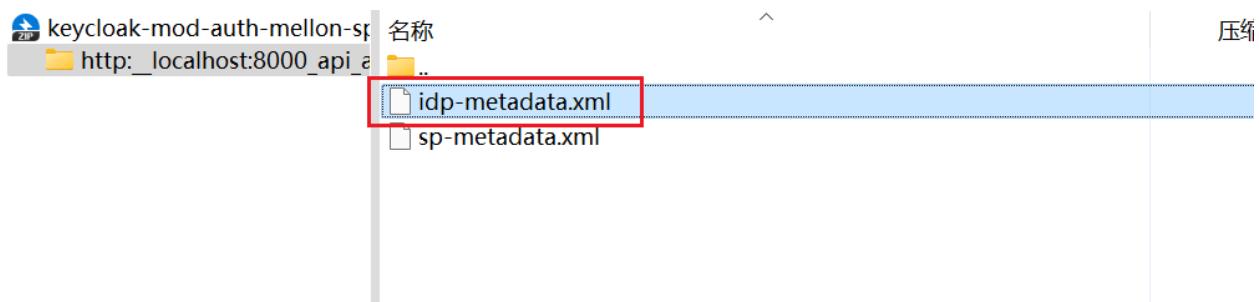
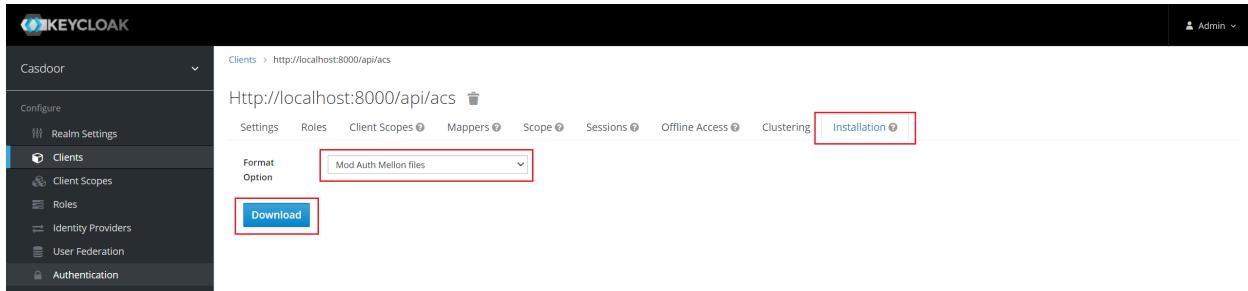
TIP

If you want to sign the authn request, you need to enable the **Client Signature Required** option and upload the certificate generated by yourself. The private key and certificate used in Casdoor, `token_jwt_key.key` and `token_jwt_key.pem`, are located in the `object` directory. In Keycloak, you need to click the **Keys** tab, click the **Import** button, select **Archive Format** as **Certificate PEM**, and upload the certificate.

Click **Installation** tab.

For Keycloak <= 5.0.0, select Format Option - **SAML Metadata IDPSSODescriptor** and copy the metadata.

For Keycloak 6.0.0+, select Format Option - **Mod Auth Mellon files** and click **Download**. Unzip the downloaded.zip, locate `idp-metadata.xml`, and copy the metadata.



# Configure in Casdoor

Create a new provider in Casdoor.

Select category as SAML, type as Keycloak. Copy the content of metadata and paste it into the Metadata field. The values of Endpoint, IdP, and Issuer URL will be generated automatically after clicking the Parse button. Finally, click the Save button.



TIP

If you enable the Client Signature Required option in Keycloak and upload the certificate, please enable the Sign request option in Casdoor.

The screenshot shows the Casdoor provider configuration interface for a SAML provider. The provider is named 'keycloak-casdoor' and its display name is also 'keycloak-casdoor'. The category is set to 'SAML' and the type is 'Keycloak'. The 'Sign request' option is enabled. The 'Metadata' field contains a large block of XML code representing the SAML 2.0 assertion. Below the XML, there is a 'Parse' button. The 'Endpoint' field is set to 'http://localhost:8080/auth/realm/casdoor/protocol/saml'. The 'IdP' field contains a long URL starting with 'MIICnTCCAYUCBgF9pAmxSDANBgkqhkiG9w0BAQsFADASMRawDgYDVQQDDAdjYXNkb29yMB4XDtxMTIxMDExMDg1OFoXDTMxMTIxMDExMTAxOFowEjEQMA4GA1UEAwwHY2FzZG9vccCA5IwDQYJKoZIhvcNAQEBBQADggEPADCCAQk'. The 'Issuer URL' field is set to 'http://localhost:8080/auth/realm/casdoor'. The 'SP ACS URL' field is set to 'http://localhost:8000/api/acs' with a 'Copy' button next to it. The 'SP Entity ID' field is set to 'http://localhost:8000/api/acs' with another 'Copy' button next to it. The 'Provider URL' field contains a placeholder URL 'https://github.com/organizations/xxx/settings/applications/1234567'.

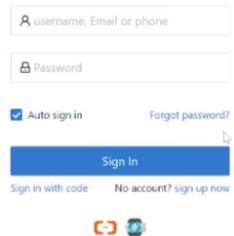
Edit the application you want to configure in Casdoor. Select the provider you just added and click the Save button.

Providers <small>(1)</small>		Providers	Add									
Name		Category	Type	canSignUp	canSignIn	canUnlink	prompted	Action				
casdoor-idaas		SAML										
keycloak-casdoor		SAML										

## Validate the effect

Go to the application you just configured and you will find a Keycloak icon on the login page.

Click the icon and you will be redirected to the Keycloak login page. After successful authentication, you will be logged into Casdoor.



A screenshot of the Casdoor login page. It features a header with the Casbin logo. Below the header are two input fields: one for "username, Email or phone" and one for "Password". Underneath these fields are two buttons: "Auto sign in" (with a checked checkbox) and "Forgot password?". At the bottom of the form are links for "Sign in with code" and "No account? sign up now". Below the form are two small icons: a red square with a white circle and a blue square with a white circle.

# Alibaba Cloud IDaaS

## Create SAML application in Alibaba Cloud IDaaS

Login to the [Alibaba Cloud management console](#), search and go to the Application Identity Service (IDentity-as-a-Service, IDaaS).

The screenshot shows the Alibaba Cloud Management Console interface. On the left, there's a sidebar with navigation links for Application Identity Management (EIAM), including EIAM Instance List, CIAM Instance List, and various documentation and support links. The main content area is titled "概览页" (Overview Page) under "应用身份服务". It contains a section about IDaaS (Identity-as-a-Service) and compares it to EIAM and CIAM. Below this is a table titled "EIAM 不同版本区别" (Difference between EIAM editions) comparing Standard Edition and Enterprise Edition across various features like single sign-on, password complexity, and LDAP synchronization. To the right, there's a "阿里云售后" (AliCloud After-sales) section with a QR code for support.

Click EIAM Instance List and open the free version.

This screenshot shows the "EIAM 实例列表" (EIAM Instance List) page. The sidebar on the left has "EIAM 实例列表" selected. The main table header includes columns for "实例ID/名称" (Instance ID/Name), "标准版实例ID" (Standard Edition Instance ID), "状态 (全部)" (Status (All)), "规格授权" (Quota Authorization), "最大用户数" (Max Users), "创建时间" (Creation Time), "产品版本" (Product Version), "用户登录页地址" (User Login Page Address), and "操作" (Operations). A prominent blue button labeled "开通免费版" (Enable Free Edition) is located in the top right corner of the table area. The table body displays a message: "没有相关实例" (No related instances).

An instance will be created and run automatically after opening. Click on the instance name or the Manage button to enter the IDaaS management console.

The screenshot shows the EIAM Instance List page. At the top, there's a navigation bar with tabs like '工作台' (Workbench) and '华东2 (上海)' (East China 2 (Shanghai)). Below the navigation is a search bar and a toolbar with links for '费用' (Cost), '工单' (Ticket), 'ICP 备案' (ICP Registration), '企业' (Enterprise), '支持' (Support), 'App', and other icons. The main area is titled 'EIAM 实例列表' (EIAM Instance List). On the left, there's a sidebar with sections like '概览页' (Overview Page), 'EIAM 实例列表' (EIAM Instance List), 'CIAM 实例列表' (CIAM Instance List), '安全认证' (Security Authentication), '产品文档' (Product Documentation), '联系我们' (Contact Us), and '专家服务' (Expert Services). The main table lists instances with columns: 实例ID/名称 (Instance ID/Name), 标准版实例ID (Standard Edition Instance ID), 状态 (全部) (Status (All)), 规格授权 (Specification Authorization), 最大用户数 (Max Users), 到期时间 (Expiration Time), 产品版本 (Product Version), 用户登录页地址 (User Login Page Address), 实例开放接口域名 (Instance Open Interface Domain Name), and 操作 (Operations). A single row is selected, showing 'idaas-cn-shanghai' as the instance name, '运行中' (Running) as the status, '免费版' (Free Edition) as the specification, '100' as the max users, 'V1.9.6-GA' as the product version, and a blurred URL as the user login page. The '操作' (Operations) column contains a '管理' (Manage) link, which is highlighted with a red box. At the bottom right of the table, there are navigation buttons for '< 上一页' (Previous Page), '1' (Page 1), and '下一页 >' (Next Page).

After entering the IDaaS management console, click Add Application, search for SAML, and click Add Application.

The screenshot shows the '添加应用' (Add Application) page. The left sidebar has sections like '概览', '快速入门', '应用' (Application), '机构及组织', '账户管理', '分类管理', '认证', '授权', '权限系统', '应用授权', '审计', '其它管理', and '设置'. The '应用' section is expanded, and '添加应用' (Add Application) is highlighted with a red box. The main area has tabs for '全部' (All), '标准协议' (Standard Protocols), and '定制模板' (Custom Templates). A search bar at the top has 'SAML' typed into it, with a magnifying glass icon. Below the search bar is a modal window titled '添加应用' (Add Application) with a note about supported applications and a warning about custom protocols. The main table lists applications with columns: 应用图标 (Application Icon), 应用名称 (Application Name), 应用ID (Application ID), 标签 (Tags), 描述 (Description), 应用类型 (Application Type), and 操作 (Operations). The table shows several entries, including '云安全访问服务SASE' (Cloud Access Service Edge), '阿里云RAM-用户SSO', '阿里云RAM-角色SSO', '阿里邮箱', 'WordPressSaml', 'SAML', and 'GitLab'. Each entry includes a brief description and a '添加应用' (Add Application) button, which is highlighted with a red box for the 'SAML' and 'GitLab' entries.

Click Add SigningKey.

## 添加应用 (SAML)

×

导入SigningKey	添加SigningKey				
别名	序列号	有效期	秘钥算法	算法长度	操作
暂无数据					

Fill in all required information and submit.

## 添加SigningKey

×

* 名称	CASDOOR-TEST
部门名称	请输入部门名称
公司名称	请输入公司名称
* 国家	CN
* 省份	Beijing
城市	请输入城市
* 证书长度	1024
* 有效期	3 年
<button>提交</button>	<button>取消</button>

Select the added SigningKey.

## 添加应用 (SAML)

×

操作					
别名	序列号	有效期	秘钥算法	算法长度	
CN=CASDOOR-TEST, ST=Beijing, C=CN	3322747020095790430	1095	RSA	1024	<button>选择</button> <button>导出</button>

Fill in all the required information below and submit.

- IDP IdentityId: Keep the same as Issuer URL in Casdoor.
- SP Entity ID & SP ACS URL(SSO Location): Now fill in whatever you want. After completing the configuration of Casdoor, you need to come to modify.
- Assertion Attribute: Directly fill in as username.
- Account Association Mode: Account Association

## 添加应用 (SAML)

X

图片大小不超过1MB

应用ID

idaas-cn-shanghai-pvl0hq0ojjpplugin\_saml

\* 应用名称

CASDOOR-SAML

\* IDP IdentityId

CASDOOR

IDP IdentityId is required

\* SP Entity ID

http://localhost

SP Entity ID is required

\* SP ACS URL(SSO Location)

http://localhost

\* NameIdFormat

urn:oasis:names:tc:SAML:2.0:nameid-format:transient

v

\* Binding

POST

v

SP 登出地址

请输入 SP 登出地址

Assertion Attribute

username

应用子账户

v



断言属性。设值后，会将值放入SAML断言中。名称为自定义名称，值为账户的属性值。

Sign Assertion



IDaaS发起登录地址

IDaaS发起登录地址

以 http://、https:// 开头，填写后使用 IDaaS 发起登录将会跳转到该地址，而不会使用 SAML 的idp发起登录流程

\* 账户关联方式

账户关联 (系统按主子账户对应关系进行手动关联，用户添加后需要管理员审批)

账户映射 (系统自动将主账户名称或指定的字段映射为应用的子账户)

# Account authorization & association

After the application is successfully added, an authorization prompt will pop up.  
Do not authorize it now, add an account and then authorize it.

Go to Organizations and Groups and click on New Account.

The screenshot shows the Alibaba Cloud Organization Structure Management interface. On the left sidebar, under the '账户' (Account) category, the '机构及组' (Organizational Units and Groups) option is selected and highlighted with a red box. In the main content area, there is a large callout box titled '机构及组' (Organizational Units and Groups) with the following text:  
管理员在当前页面对组织架构、部门及其包含的组、账户进行管理，也可以使用AD、LDAP或Excel文件的方式配置导入或同步。  
在左侧的组织架构树中，可以右键点击某个部门对其进行操作，也可以左键选择某个部门，并在右侧为其进行创建账户、创建组、创建部门等操作。  
Below this, there is a section titled '组织架构' (Organization Structure) with a sub-section '查看详情' (View Details). A red box highlights the '新增账户' (Add New Account) button. To the right, there is a search bar and a table listing accounts. The table has columns: 编号 (Number), 账户名称 (Account Name), 显示名称 (Display Name), 类型 (Type), 目录 (Directory), and 操作 (Operations). One account is listed: idaas\_manager (显示名称: 默认管理员, 类型: 自建账户, 目录: /). At the bottom of the table, there are buttons for '修改' (Modify), '账户同步' (Account Sync), and '同步记录' (Sync Record). The page footer shows pagination information: 共 1 条, 1/1 页, 10 条/页, 跳至 1 页.

Fill in all required information and submit.

## 新建账户

X

### 账户属性

### 扩展属性

### 父级组

父级

阿里云IDaaS

\* 账户名称

casdoor

账户名称不能以特殊字符开始，可包含大写字母、小写字母、数字、中划线(-)、下划线(\_)、点(.)，长度至少 4 位

\* 显示名称

casdoor

\* 密码

\*\*\*\*\*

密码中必须包含大小写字母+数字+特殊字符的组合;长度至少 10 位，密码不能包含"<"和">"。

邮箱

请输入有效的邮箱地址

手机号或邮箱至少填写一个。

手机号

+86 ▾ 151 123456789

手机号或邮箱至少填写一个。

外部ID

外部ID

IDaaS 平台中的唯一身份标识, 若不填将由系统自动生成。

过期时间

过期时间

不填将使用系统默认过期时间 2116-12-31

备注

备注

用户备注信息

提交

取消

Go to Application Authorization, select the accounts you want to authorize and click Save.

The screenshot shows the 'Application Authorization' section of the Alibaba Cloud Management Console. On the left sidebar, under the 'Authorization' category, 'Application Authorization' is highlighted with a red box. The main panel displays a table of accounts associated with the application 'CASDOOR-SAML'. One account, 'casdoor', is selected and highlighted with a red box. A large blue 'Save' button is at the bottom of the table.

Go to the Application List, click View application sub-accounts, and then click Add account association.

The screenshot shows the 'Application List' section of the Alibaba Cloud Management Console. On the left sidebar, 'Application List' is highlighted with a red box. The main panel displays detailed information for the application 'CASDOOR-SAML'. In the 'Operations' column for this application, there is a 'Details' link which is also highlighted with a red box.

The screenshot shows the Alibaba Cloud application management interface. On the left, there's a sidebar with categories like Application Catalog, Add Application, Accounts, Institutions & Groups, Account Management, Classification Management, Authentication, Authentication Sources, RADIUS, Certificate Management, Authorization, System Authorization, and Application Authorization. The main area has tabs for Application Catalog and Accounts. A modal window titled 'Add Account Association' is open, with a red box highlighting the 'Add Account Association' button. The modal contains information about sub-accounts and examples of how they relate to the main account.

Fill in the primary and sub accounts that need to be associated and click Save.

The primary account exists in IDaaS, and the sub account is the ID of the user in Casdoor.

The screenshot shows the 'Add Account Association' dialog box. It has two input fields: one for the primary account ('Primary Account') containing 'casdoor' and another for the secondary account ('Sub Account') containing '52908237-fa4c-4681-b636-a6afce22fb2e'. At the bottom are two buttons: a blue 'Save' button and a white 'Cancel' button.

## Export IDaaS Metadata

Go to the Application List, click View Application Details and click Export IDaaS SAML Metadada.

The screenshot shows the Alibaba Cloud Idaas application management interface. On the left, there's a sidebar with categories like Application, Account, Authentication, Authorization, Audit, and Others. The main area has tabs for Application List and Application Details. In Application Details, a sub-tab for SAML is selected. The right panel displays detailed configuration for a provider named 'CASDOOR-SAML'. It includes fields for Application ID, Name, UUID, Signing Key, NameID Format, SP ACS URL, and various other SAML parameters. A red box highlights the 'IDP Identity Id' field, which contains the value 'CASDOOR'.

# Configure in Casdoor

Create a new provider in Casdoor.

Select category as **SAML**, type as **Alibaba Cloud Idaas**. Copy the content of metadata and paste it to the **Metadata** input. The values of **Endpoint**, **IdP** and **Issuer URL** will be generated automatically after clicking the **Parse** button.

Name ⓘ:	casdoor-idaas	
Display name ⓘ:	casdoor-idaas	
Category ⓘ:	SAML	
Type ⓘ:	Aliyun IDaaS	
Client ID ⓘ:		
Client secret ⓘ:		
Metadata ⓘ:	<pre>&lt;md:IDPSSODescriptor&gt; &lt;md:SingleLogoutService binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" location="https://alibabacloud.com/saml/sp_sso_post"/&gt; &lt;/md:IDPSSODescriptor&gt; &lt;/md:EntityDescriptor&gt;</pre>	
Endpoint ⓘ:	https://dvmoykbkxx.login.aliyunidaas.com/enduser/api/application/plugin_saml/idaas-cn-shanghai... \_saml/sp_sso	
IdP ⓘ:	MIIIBzCCAVCgAwIBAgIILhzEz2NMHV4wDQYJKoZIhvNAQEFBQAwNjELMAkGA1UEBhMCQ04xEDAOBgNVBAgTB0JlaWppbmcxFTATBgNVBAMTDENBU0RPTIItVEVTVDaEfFw0yMTEyMDkwNzEyMTFaFw0yNDEyMDgwNzEyMTFaMDYxCzAJE	
Issuer URL ⓘ:	CASDOOR	
SP ACS URL ⓘ:	http://localhost:8000/api/acs	<button>Copy</button>
SP Entity ID ⓘ:	http://localhost:8000/api/acs	<button>Copy</button>
Provider URL ⓘ:	<a href="https://github.com/organizations/xxx/settings/applications/1234567">https://github.com/organizations/xxx/settings/applications/1234567</a>	

Copy the SP ACS URL and the SP Entity ID and click the Save button.

Edit the application you want to configure in Casdoor. Select the provider just added and click the button **Save**.

Providers	⑤
Providers	<a href="#">Add</a>
Name	<input type="text" value="casdoor-idaas"/>
Category	SAML
Type	
canSignUp	
canSignIn	
canUnlink	
prompted	
Action	<a href="#"></a> <a href="#"></a>
Preview	⑤
Test signup page.	<a href="#">Test signin page.</a>

# Modify SAML application in Alibaba Cloud IDaaS

Disable the application and then click **Modify Application**.

The screenshot shows the Alibaba Cloud Application Management interface. On the left, there's a sidebar with categories like Application, Account, Authentication, Authorization, Audit, and Settings. The main area is titled 'Application List' and contains a table with columns: Application Icon, Application Name, Application ID, Device Type, Status, Two-factor Authentication Status, and Operations. One row in the table is highlighted with a red box around its 'Status' column, which has a toggle switch. Below the table, there are tabs for Application Information, Authentication Information, Account Information - Sync, Account Information - Sub-account, Authorization Information, Audit Information, and API. At the bottom, there are pagination controls showing '1' of 1 page.

Fill in SP Entity ID and SP ACS URL(SSO Location) with the content copied in Casdoor. Submit and enable application.

## 修改应用 (CASDOOR-SAML)

×

图标



上传文件

图片大小不超过1MB

应用ID

idaas-cn-shanghai-...\\login\_saml

\* 应用名称

CASDOOR-SAML

\* IDP IdentityId

CASDOOR

IDP IdentityId is required

\* SP Entity ID

http://localhost:8000/api/acs

SP Entity ID is required

\* SP ACS URL(SSO Location)

http://localhost:8000/api/acs

\* NameIdFormat

urn:oasis:names:tc:SAML:2.0:nameid-format:transient

\* Binding

POST

SP 登出地址

请输入SP 登出地址

Assertion Attribute

username

应用子账户



断言属性。设值后，会将值放入SAML断言中。名称为自定义名称，值为账户的属性值。

Sign Assertion



IDaaS发起登录地址

IDaaS发起登录地址

以 http://、https://开头，填写后使用 IDaaS 发起登录将会跳转到该地址，而不会使用 SAML 的idp发起登录流程

## Validate the effect

Go to the application you just configured and you can find that there is an icon in the login page.

Click the icon and jump to the Alibaba Cloud IDaaS login page, and then successfully login to the Casdoor after authentication.



---

username, Email or phone

Password

Auto sign in      [Forgot password?](#)

[Sign In](#)

[Sign in with code](#)    No account? [sign up now](#)

A row of social media icons for GitHub, LinkedIn, and others.

---

# Payment

## Overview

Add Payment providers to your application

## PayPal

Add PayPal as a payment provider to your application

## Stripe

Add Stripe payment provider to your application

## Alipay

Add Alipay payment provider to your application

 WeChat Pay

Add WeChat Pay payment provider to your application

 AirWallex

Add AirWallex payment provider to your application

# Overview

If you want to use payment services in Casdoor, you need to create a Payment provider and add it to your products.

The screenshot shows the Casdoor web interface with the 'Providers' tab selected. A new provider is being created with the following details:

- Name:** provider\_payment\_paypal
- Display name:** PayPal Payment Provider
- Organization:** admin (Shared)
- Category:** Payment (highlighted with a red box)
- Type:** PayPal
- Client ID:** Alipay
- Client secret:** Dummy
- Provider URL:** GC
- PayPal:** (selected)
- WeChat Pay:**

At the bottom, there are 'Save' and 'Save & Exit' buttons.

To learn how to configure a product, refer to [Product](#). After configuring a product, you can add Payment providers for the product so that users can purchase the product through the Payment providers.

# PayPal

## NOTE

This is an example of how to configure the PayPal payment provider.

## Step 1: Create a PayPal application

First, you need to create an application in PayPal. To access the PayPal Developer site, you should have a PayPal business account. If you don't have an account, [create one first](#).

After you create a PayPal business account, log in to the [Developer Dashboard](#) using your account and then click on [Create App](#) under [Apps & Credentials](#).

The screenshot shows the PayPal Developer Dashboard interface. At the top, there's a navigation bar with links for Docs, APIs & SDKs, Tools, Help, and Business Dashboard. A user profile icon is also present. Below the navigation, there are tabs for Home, Apps & Credentials (which is highlighted with a red box), Testing Tools, and Event Logs. A toggle switch indicates 'Sandbox' mode is active. A message at the bottom of the dashboard says 'You're in sandbox mode.' On the right side, there's a 'Create App' button with a red arrow pointing towards it. The main content area is titled 'API Credentials' and contains a sub-section for 'REST API apps'. A yellow banner at the top of this section says 'Viewing sandbox API credentials. [View live credentials](#)'. Below the banner, there's a table listing two applications: 'casdoor' and 'Default Application'. The table columns include 'App name', 'Client ID', 'Secret', and a settings gear icon. The 'Client ID' and 'Secret' columns for both entries are heavily redacted with dots.

App name	Client ID	Secret	
casdoor	AVEu0A_sbq6tnKyOxbeBAcEw0Jcsgbv...	.....	⋮
Default Application	AR6LK9lz8ZkHdt6H1n_N9Jaq3IXY5rVK...	.....	⋮

You can find the [Client ID](#) and [Secret key](#) in the basic information of your application.

← Back

## casdoor

Viewing sandbox API credentials. [View live credentials.](#)

### API credentials

App name casdoor 

Client ID AVEu0A\_sbq6ttnKyOxbeBAcEw0Jcsgbv2JZvQAtK  

Secret key 1 .....   

[+ Add Second Key](#)

### Sandbox account info

[View details](#)

Sandbox URL <https://sandbox.paypal.com> 

Sandbox Region C2

Email sb-qqaiv26894991@business.example.com 

Password \*\*\*\*\*  

### Features

## Step 2: Create a PayPal payment provider

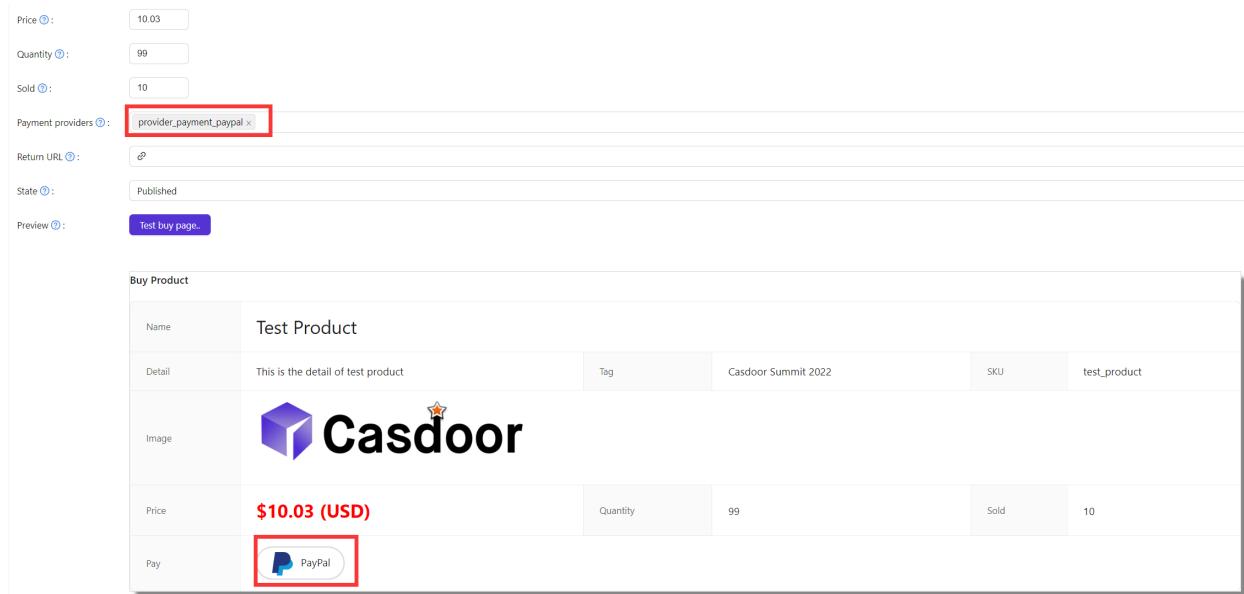
Next, create a PayPal payment provider in Casdoor. Fill in the necessary information:

Name	Name in PayPal
Category	Choose <button>Payment</button>

Name	Name in PayPal
Type	Choose <b>PayPal</b>
Client ID	Use the <b>Client ID</b> obtained from Step 1
Client secret	Use the <b>Secret key</b> obtained from Step 1

## Step 3: Add the PayPal payment provider for your product

Finally, add the PayPal payment provider for your product so that users can purchase the product using PayPal.



The screenshot shows the Casdoor product management interface. At the top, there are input fields for Price (10.03), Quantity (99), and Sold (10). Below these, the 'Payment providers' field contains 'provider\_payment\_paypal x', which is highlighted with a red box. Further down, the 'Return URL' field is empty, 'State' is set to 'Published', and 'Preview' shows a 'Test buy page...' button. At the bottom, the 'Buy Product' section displays a table with columns for Name, Detail, Tag, SKU, and Price. The 'Name' row shows 'Test Product'. The 'Detail' row contains the text 'This is the detail of test product'. The 'Tag' row is empty. The 'SKU' row is 'test\_product'. The 'Price' row shows '\$10.03 (USD)'. Below the table, there is a 'Pay' button with a PayPal logo, also highlighted with a red box.



NOTE

The above operations are all performed in PayPal's `Sandbox` mode. If you want to use it in a live production environment, you need to create an application in PayPal's `Live` mode and set `runmode=prod` in Casdoor's configuration file `conf/app.conf`.

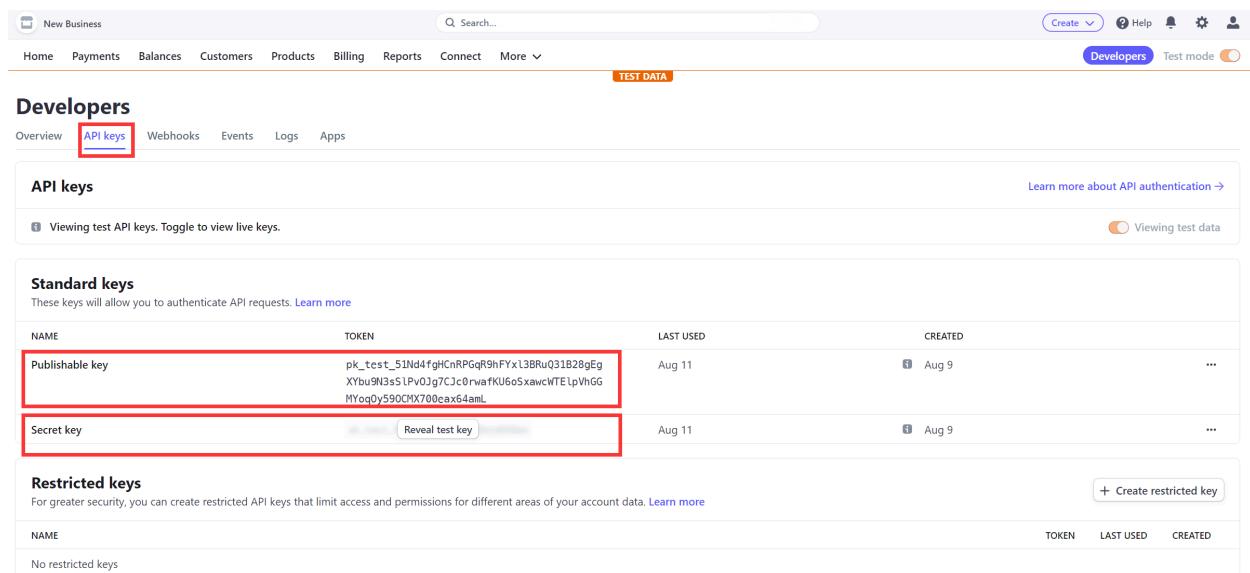
# Stripe

## ⓘ NOTE

This is an example of how to configure a Stripe payment provider.

## Step 1. Get Publishable Key and Secret Key

First, you need to have an account at [Stripe](#). After creating a Stripe account, log in to the [Developer Dashboard](#) using your account credentials. You can find the [Publishable key](#) and [Secret key](#) under the [API keys](#) tab.



The screenshot shows the Stripe Developer Dashboard. At the top, there's a navigation bar with links for Home, Payments, Balances, Customers, Products, Billing, Reports, Connect, More, and a Developers section. A 'TEST DATA' button is also present. Below the navigation, there's a search bar and a user profile icon. The main area is titled 'Developers' and has tabs for Overview, API keys (which is selected and highlighted with a red border), Webhooks, Events, Logs, and Apps. Under the API keys tab, there's a sub-section for 'Standard keys'. It says, 'These keys will allow you to authenticate API requests.' There are two entries: 'Publishable key' and 'Secret key'. The 'Publishable key' entry is highlighted with a red box around its token value. The 'Secret key' entry has a 'Reveal test key' button. Below this, there's a section for 'Restricted keys' with a note about greater security and a '+ Create restricted key' button. The entire screenshot is framed by a light gray border.

## Step 2. Create a Stripe Payment provider

Next, create a Stripe Payment provider in Casdoor by filling in the necessary

information.

Name	Name in Stripe
Category	choose <a href="#">Payment</a>
Type	choose <a href="#">Stripe</a>
Client ID	<a href="#">Publishable key</a> obtained from Step 1
Client secret	<a href="#">Secret key</a> obtained from Step 1

Edit Provider [Save](#) [Save & Exit](#)

Name [?](#): provider\_payment\_stripe

Display name [?](#): Stripe Payment Provider

Organization [?](#): admin (Shared)

Category [?](#): Payment

Type [?](#): **S** Stripe

Client ID [?](#): pk\_test\_51Nd4fgHCnRPGqR9hFYxl3BRuQ31B28gEgXYbu9N3sSIPvOJg7CJc0rwafKU6oSxawcWTElpVhGGMYoqOy59OCMX700eax64amL

Client secret [?](#): \*\*\*

Provider URL [?](#): [🔗](#)

[Save](#) [Save & Exit](#)

## Step 3. Add the Stripe Payment provider for your product

Finally, add the Stripe Payment provider for your product so that users can

purchase the product using Stripe.

Currency [?](#) :

Price [?](#) :

Quantity [?](#) :

Sold [?](#) :

Payment providers [?](#) :

Return URL [?](#) :

State [?](#) : Published

Preview [?](#) : [Test buy page.](#)

**Buy Product**

Name	Test Product	Detail	This is the detail of test product	Tag	Casdoor Summit 2022	SKU	test_product
Image							
Price	\$10.04 (USD)						
Pay	<a href="#"> PayPal</a> <a href="#"> Stripe</a>						

# Alipay

## Step 1. Preparation

First, you need to have a merchant account at Alipay Open Platform.

Before accessing the Alipay, there are some preparations that need to be done.

You can refer to the documentation [preparation before access](#) for more information.

### 1.1 Get APPID

Login the Alipay Open Platform Console and [create an application](#).

How to get the `APPID` : [Alipay APPID Query Guide](#)

### 1.2 Configure Cert

Generate an RSA2 certificate based on the [document](#) and then you can obtain the `appPrivateKey.txt` and `appPublicKey.txt`.

Upload the certificate to the applicaiton and then you can download three files: `alipayRootCert.crt`, `appCertPublicKey.crt`, `alipayCertPublicKey.crt`.

Create a Cert called `App Cert` at Casoor:

Name	Name in Alipay
Type	choose <code>Payment</code>

Name	Name in Alipay
Certificate	content of appCertPublicKey.crt
Private key	content of appPrivateKey.txt

Create a Cert called Root Cert at Casoor:

Name	Name in Alipay
Type	choose Payment
Certificate	content of alipayCertPublicKey.crt
Private key	content of alipayRootCert.crt

Organization: admin (Shared)

Name: cert\_alipay\_root

Display name: Alipay Root Cert

Scope: JWT

Type: Payment

Crypto algorithm: RS256

Bit size: 4096

Expire in years: 20

**Certificate:**

```
-----BEGIN CERTIFICATE-----
MIIBCCCApeBhAgQDIBhMmB0gZ4p2uJANBzkhk40BqfA4C9p2fADCBqfEIMAKGA1UE
BhMCQ24fAjAlBgIBVbAmMzDUDiudcBzGHNfbmNpWwDgBgNVBAsfF01lznj2uJnJ0p34gQXv0
pG0y0qjwLmBt...=-----END CERTIFICATE-----
```

**alipayCertPublicKey:**

```
-----BEGIN CERTIFICATE-----
MIIBCCCApeBhAgQDIBhMmB0gZ4p2uJANBzkhk40BqfA4C9p2fADCBqfEIMAKGA1UE
BhMCQ24fAjAlBgIBVbAmMzDUDiudcBzGHNfbmNpWwDgBgNVBAsfF01lznj2uJnJ0p34gQXv0
pG0y0qjwLmBt...=-----END CERTIFICATE-----
```

**alipayRootCert:**

```
-----BEGIN PRIVATE KEY-----
MIIBCCAwKgIwIwAgEAAQJ...=-----END PRIVATE KEY-----
```

## Step 2. Create an Alipay Payment provider

Next, create an Alipay Payment provider in Casdoor by filling in the necessary information.

Name	Name in Alipay
Category	choose <b>Payment</b>
Type	choose <b>Alipay</b>
Client ID	<b>APPID</b> obtained from Step 1.1
Cert	<b>App Cert</b> configured at Step 1.2
Root Cert	<b>Root Cert</b> configured at Step 1.2

Edit Provider
Save
Save & Exit

---

Name <small>②</small> :	provider_payment_alipay
Display name <small>②</small> :	Alipay Payment Provider
Organization <small>②</small> :	admin (Shared)
Category <small>②</small> :	Payment
Type <small>②</small> :	 Alipay
Client ID <small>②</small> :	2021003117621368
Client secret <small>②</small> :	
Cert <small>②</small> :	cert_alipay_app
Root Cert <small>②</small> :	cert_alipay_root
Provider URL <small>②</small> :	

---

Save
Save & Exit

## Step 3. Add the Alipay Pay Payment provider for your product

Finally, add the Alipay Payment provider for your product so that users can purchase the product using Alipay.

Quantity ②:
99

Sold ②:
10

Payment providers ②:

 provider\_payment\_paypal
  provider\_payment\_stripe
  provider\_payment\_wechat
  provider\_payment\_alipay

Return URL ②:


State ②:
Published

Preview ②:
[Test Buy page](#)

---

**Buy Product**

Name	Test Product	Detail	Tag	Casdoor Summit 2022	SKU	test_product
	<b>Casdoor</b>	This is the detail of test product				
Image						
Price	<b>¥ 0.01 (CNY)</b>	Quantity	99	Sold	10	
Pay	<input type="button" value="PayPal"/> <input type="button" value="Stripe"/> <input checked="" type="button" value="WeChat Pay"/> <input checked="" type="button" value="Alipay"/>					

Save
Save & Exit



# WeChat Pay

## Step 1. Preparation

First, you need to have a merchant account at [WeChat Merchant Platform](#).

Before accessing the WeChat Pay, there are some preparations that need to be done.

You can refer to the documentation [preparation before access](#) for more information.

### 1.1 Get API Key v3

Log in to WeChat Merchant Platform, select `Account Settings > API Security >Set APIv3 Secret`, and click `Set APIv3 secret` to get the `API Key v3`.

The screenshot shows the left sidebar with navigation options: Security Center, API Security (highlighted in green), Account Management, Staff Management, Settlement Info, and Agreement. The main content area has two sections: 'API certificate' and 'Set APIv3 Secret'.  
**API certificate:** This section contains a note about API certificates and a success message: 'You have successfully applied for the certificate at 2020-03-13 17:17'. It includes 'View' and 'Change' buttons.  
**Set APIv3 Secret:** This section contains a note about the secret key and a 'Set APIv3 Secret' button.

How to get API Key v3 : [APIv3 Key Settings](#)

## 1.2 Get Merchant Certificate

You can log in to WeChat Merchant Platform, and select [Account Settings > API Security > API Certificate](#) to download the certificate.

The screenshot shows the WeChat Pay API Security settings interface. On the left, there's a sidebar with links: Operating Certificate, API Security (which is highlighted in green), Staff Management, Settlement Info, Agreement, and Merchant Information. The main content area has a header 'API certificate'. Below it, there's a sub-section 'API certificate' with a note: 'API certificate are used to identify and define your ID; Some of the APIs with higher security lever will require the certificate to identify you to avoid the loss caused by possible ID theft.' An 'Apply' button is visible. Another section titled 'API certificate (CA issued)' notes: 'To better protect the security of merchant accounts, WeChat pays to provide merchants with an API certificate issued by an authoritative CA from June 2018.' At the bottom, there's another 'API security' section with a note: 'In the API call to the specified rules used to sign your request parameters, the server will receive your request for signature verification, both to define your identity can also prevent other people maliciously tamper with the request data. Some APIs are securely hardened using API key signing alone. Some APIs that require more security will require both AP key signature and API certificate to be securely consolidated.'

After download the certificate, get the [Certificate Serial Number](#) according to [How to view the Certificate Serial Number](#) and [Private Key](#) according to [How to get Private Key of Certificate](#).

Then, create a [Cert](#) at Casdoor and fill the necessary information.

The screenshot shows the 'Edit Cert' page in Casdoor. The left panel contains fields for certificate details: Organization (admin (Shared)), Name (cert\_wechatpay), Display name (Cert Wechatpay), Scope (JWT), Type (Payment, highlighted with a red box), Crypto algorithm (RS256), Bit size (4096), and Expiry in years (20). Below these are buttons for 'Copy certificate' and 'Download certificate', with the certificate URL highlighted in a red box. The right panel shows a 'Private key' section with a 'Copy private key' and 'Download private key' button, and a large text area containing a long string of characters representing the private key, also highlighted in a red box.

## 1.3 Get Merchant ID and App ID

How to get Merchant ID : [WeChat Pay Merchant ID Query Guide](#)

How to get App ID : [WeChat Pay APPID Query Guide](#)

## Step 2. Create a WeChat Pay Payment provider

Next, create a WeChat Pay Payment provider in Casdoor by filling in the necessary information.

Name	Name in WeChat Pay
Category	choose <a href="#">Payment</a>

Name	Name in WeChat Pay
Type	choose WeChat Pay
Client ID	Merchant ID obtained from Step 1.3
Client secret	API Key v3 obtained from Step 1.1
App ID	App ID obtained from Step 1.3
Cert	Cert configured at Step 1.2

Edit Provider
Save
Save & Exit

---

Name ?: provider\_payment\_wechat

Display name ?: Wechat Payment Provider

Organization ?: admin (Shared)

Category ?: Payment

Type ?:  WeChat Pay

Client ID ?: 1619999244

Client secret ?: \*\*\*

App ID ?: wxe933a9cd81c396d1

Cert ?: cert\_wechatpay

Provider URL ?: 

Save
Save & Exit

# Step 3. Add the WeChat Pay Payment provider for your product

Finally, add the WeChat Pay Payment provider for your product so that users can purchase the product using WeChat Pay.

Currency : CNY  
Price : 0.01  
Quantity : 99  
Sold : 10  
Payment providers : provider\_payment\_paypal x provider\_payment\_stripe x provider\_payment\_wechat x  
Return URL : dP  
State : Published  
Preview : [Test buy page.](#)

**Buy Product**

Name	Test Product
Detail	This is the detail of test product
Image	 Casdoor
Price	¥0.01 (CNY)
Pay	<a href="#">PayPal</a> <a href="#">Stripe</a> <a href="#">WeChat Pay</a>
Quantity	99
Sold	10

# Support for JSAPI payment

Currently, Casdoor supports [JSAPI payment](#) and [Native payment](#) in WeChat Pay.

To support JSAPI payment, you should configure a [WeChat OAuth Provider](#) which support [WeChat Media Platform](#). The `Client ID` of WeChat OAuth Provider and the `App ID` of WeChat Pay Payment Provider need to be same.

Edit Provider		Save	Save & Exit
Name ②:	provider_casdoor_wechat		
Display name ②:	Casdoor WeChat		
Organization ②:	admin (Shared)		
Category ②:	OAuth		
Type ②:	WeChat		
Client ID ②:	wx049c70e6c2027b0b		
Client secret ②:	***		
Client ID 2 ②:	wxе933а9cd81c396d1		
Client secret 2 ②:	***		
Enable QR code ②:	<input checked="" type="checkbox"/>		
Provider URL ②:	<a href="https://open.weixin.qq.com/">https://open.weixin.qq.com/</a>		
<input type="button" value="Save"/>		<input type="button" value="Save &amp; Exit"/>	

Edit Provider		Save	Save & Exit
Name ②:	provider_payment_wechatpay		
Display name ②:	Payment - WeChatPay		
Organization ②:	admin (Shared)		
Category ②:	Payment		
Type ②:	WeChat Pay		
Client ID ②:	1619999244		
Client secret ②:	***		
App ID ②:	wxе933а9cd81c396d1		
Cert ②:	cert_wechatpay		
Provider URL ②:	<a href="https://pay.weixin.qq.com/index.php/core/cert/api_cert/#/">https://pay.weixin.qq.com/index.php/core/cert/api_cert/#/</a>		
<input type="button" value="Save"/>		<input type="button" value="Save &amp; Exit"/>	

After log in via WeChat(in the mobile scenario: e.g. the WeChat built-in browser inside the WeChat mobile app), users can purchase product using WeChat Pay based on JSAPI payment.

# AirWallex

## ⓘ NOTE

This is an example of how to configure a AirWallex payment provider.

## Step 1. Get Client ID and API Key

First, you need to have an account at [AirWallex](#). After creating an AirWallex account, log in to the [Developer Dashboard](#) using your account credentials. You can find the `CLIENT ID` and `API KEY` under the `API Keys` tab, or add a new custom permission key.

The screenshot shows the AirWallex Developer Dashboard. On the left, there's a sidebar with various options like Dashboard, Wallet, Transfers, Cards, Expenses, Bills, Payments, Reports, Rewards, Account, and a Developer section which is currently selected. The main content area has tabs for Guides, API Keys (which is active), and Webhooks. It displays a table titled "Manage your API keys". The table has columns for NAME, CLIENT ID, API KEY, and CREATION DATE. A new row is shown for "casdoor\_test" with the CLIENT ID "test\_BLXd98nQWkj8K\$Tx1Bi5" and the API KEY "3296c48013cb1a80ffecfb285515854768272214040a585...". A red box highlights the CLIENT ID and API KEY columns. A blue button labeled "Create restricted API key" is visible in the top right of the table area. The top right corner of the dashboard shows the user's email "whisper@example.com" and a profile icon.

NAME	CLIENT ID	API KEY	CREATION DATE
casdoor_test	test_BLXd98nQWkj8K\$Tx1Bi5	3296c48013cb1a80ffecfb285515854768272214040a585...	2025-02-07 ...

## Step 2. Create an AirWallex Payment provider

Next, create an AirWallex Payment provider in Casdoor by filling in the necessary information.

Name	Name in AirWallex
Category	choose <code>Payment</code>
Type	choose <code>AirWallex</code>
Client ID	<code>CLIENT_ID</code> obtained from Step 1
Client secret	<code>API_KEY</code> obtained from Step 1

 Casdoor

Home User Management Identity Authorization Logging & Auditing Business & Payments Admin

Edit Provider Save Save & Exit

Name ?: airwallex\_test

Display name ?: AirWallex SandBox

Organization ?: admin (Shared)

Category ?: Payment

Type ?:  AirWallex

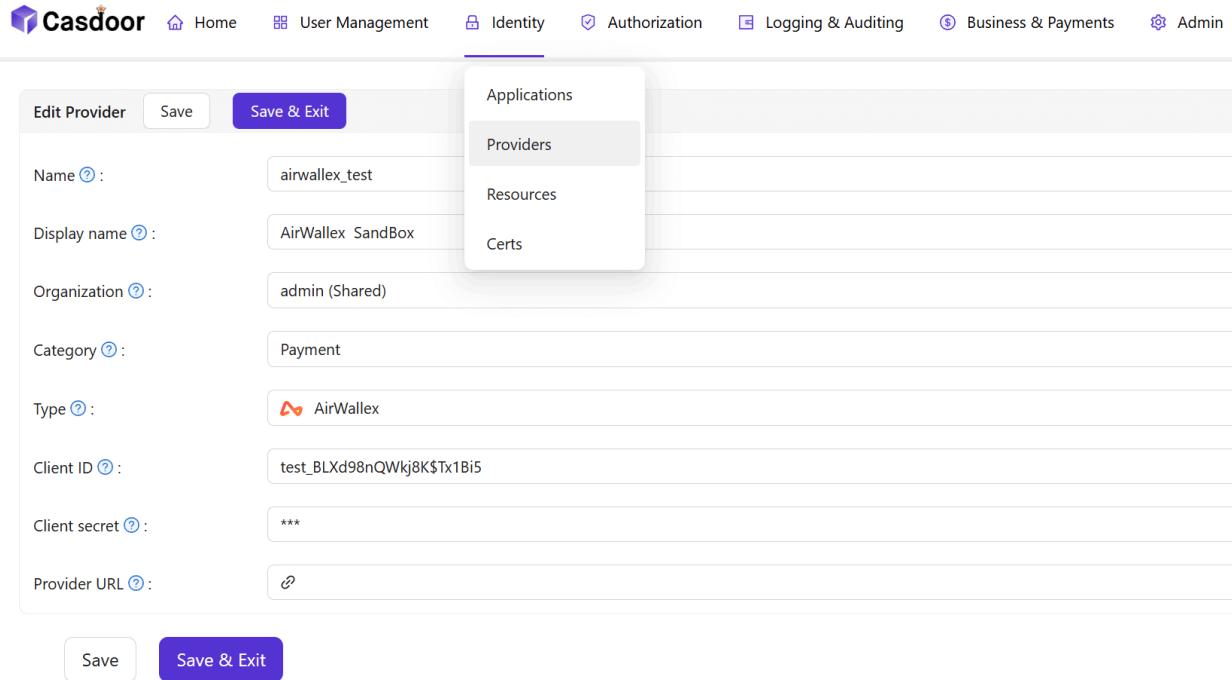
Client ID ?: test\_BLXd98nQWkj8K\$Tx1Bi5

Client secret ?: \*\*\*

Provider URL ?: 

Applications  
Providers  
Resources  
Certs

Save Save & Exit



## Step 3. Add the AirWallex Payment provider for your product

Finally, add the AirWallex Payment provider for your product so that users can purchase the product using AirWallex.

Currency [?](#):

Is recharge [?](#):

Price [?](#):

Quantity [?](#):

Sold [?](#):

Payment providers [?](#):  [X](#)

Return URL [?](#):

State [?](#):

Preview [?](#): [Test buy page...](#)

### Buy Product

Name	New Product - drxsq				
Detail	Tag	Casdoor Summit 2022	SKU	product_drxsq	
Image					
Price	\$80.59 (USD)	Quantity	99	Sold	10
Pay					

# Captcha

## Overview

Add a captcha to your application

## Default

Using Casdoor's default captcha in your application

## Cloudflare Turnstile

Add Cloudflare Turnstile to your application

## reCAPTCHA

Add reCAPTCHA to your application

 **hCaptcha**

Add hCaptcha to your application

 **Alibaba Cloud Captcha**

Add Alibaba Cloud Captcha to your application

 **Geetest**

Add Geetest Captcha to your application

# Overview

Casdoor can be configured to support different captchas to verify if the operation is performed by a human. By adding a captcha provider and applying it in the application, when users login, register, or forget their password and need to send a code, a captcha check dialog will appear to verify if the operation is performed by a human.

Currently, Casdoor supports multiple captcha providers. The following are the providers supported by Casdoor:

Default	Cloudflare Turnstile	reCAPTCHA	hCaptcha	Alibaba Cloud Captcha	Geetest

We will show you how to apply a captcha and add it to Casdoor.

## Add a captcha provider

1. Navigate to your Casdoor index page.
2. Click on `Providers` in the top bar.
3. Click on `Add`, then you will see a new provider in the top list.
4. Click on the new provider to modify it.
5. Select `Captcha` in the `Category`.

6. Choose the captcha provider you need in the `Type`.
7. Fill in the most important information. Different captcha providers may require different information to be filled in.

## Applying in the application

1. Click on `Application` in the top bar and choose one application to edit.
2. Click on the provider add button and select the provider you just added.
3. Done!

# Default

The default captcha implementation generates and verifies an image. In the default captcha image, a sequence of digits 0-9 is used with a defined length of 5.

## Configuring in Casdoor

To configure the default captcha in Casdoor, follow these steps:

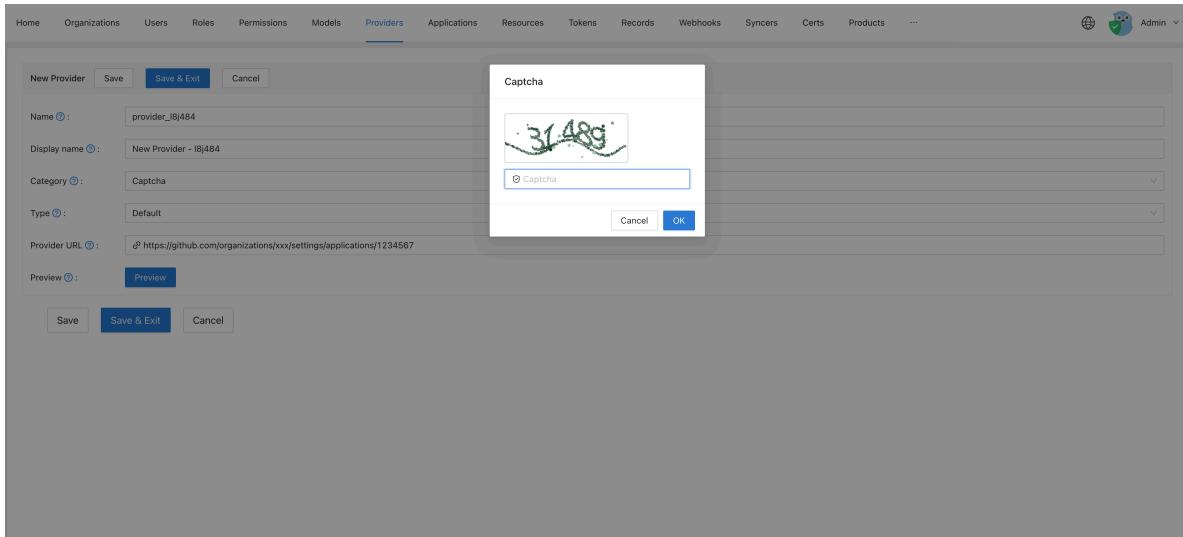
1. Create a new provider in Casdoor.
2. Select the category as Captcha, and the type as Default.

The screenshot shows the Casdoor web interface with the 'Providers' tab selected. A new provider is being created with the following details:

- Name: provider\_18j484
- Display name: New Provider - 18j484
- Category: Captcha
- Type: Default
- Provider URL: https://github.com/organizations/xxx/settings/applications/1234567

At the bottom of the form, there are three buttons: 'Save', 'Save & Exit', and 'Cancel'. The 'Save & Exit' button is highlighted in blue, indicating it is the active button.

3. Click on the Preview button to preview the style of this captcha.



# Applying in your application

To apply the default captcha in your application, do the following:

1. Edit the application you want to configure in Casdoor.
2. Select the provider that you just added. There are three types of rules available:
  - **Always**: Always requires human-machine verification during login.
  - **None**: Never requires human-machine verification. The account will be blocked if it attempts to login with the wrong password for the 5th time within 15 minutes. The block will be lifted after 15 minutes.
  - **Dynamic**: After 5 failed login attempts, human-machine verification will be required but the account will not be blocked.

Providers		Add	Name	Category	Type	canSignUp	canSignIn	canUnlink	prompted	Rule	Action		
provider_4olfdm				Captcha		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Always			
provider_casdoor_github				OAuth		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
provider_casdoor_google				OAuth		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

We also provide a demo video to demonstrate the differences in rules, which we hope will be helpful to you.

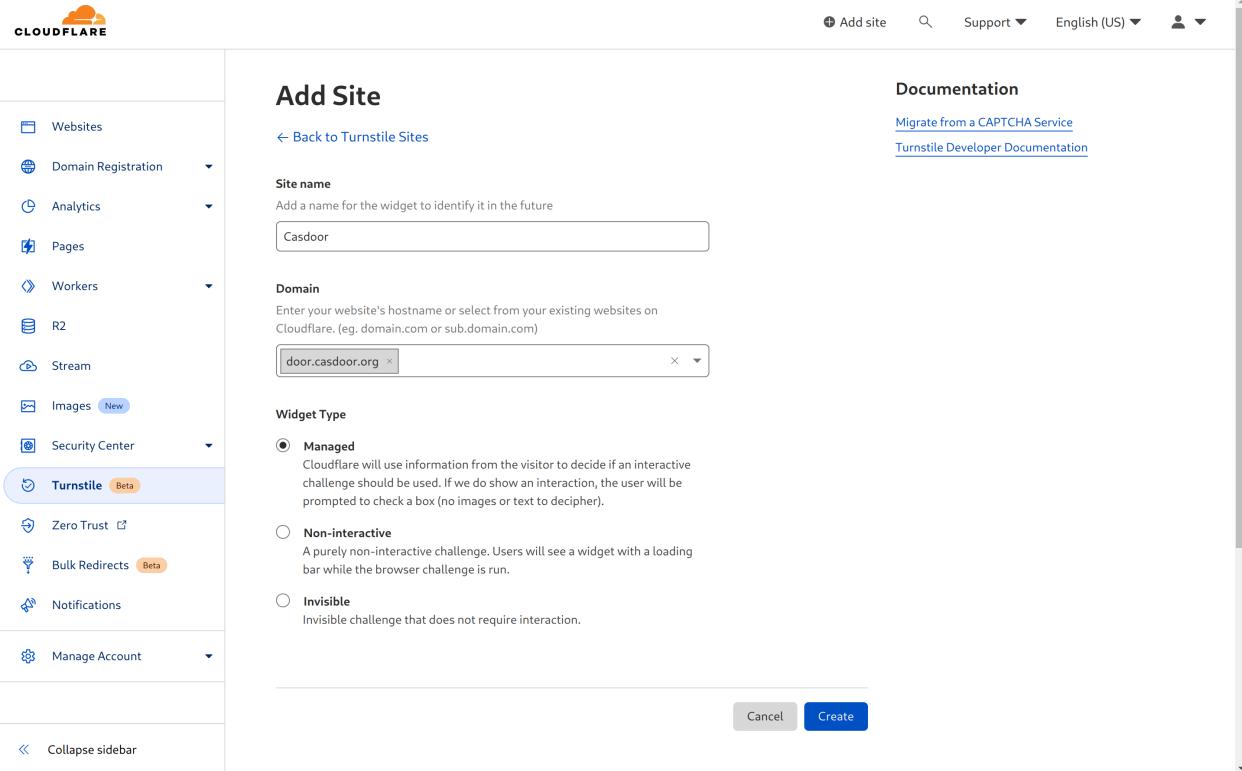
# Cloudflare Turnstile

Cloudflare Turnstile is a CAPTCHA service provided by Cloudflare, which is a user-friendly, privacy-preserving alternative to CAPTCHA. You can find more details in the [Turnstile Docs](#).

## Create an API key pair

To start using Cloudflare Turnstile, you need to [create a Cloudflare account](#), navigate to the `Turnstile` tab on the navigation bar, and obtain the Site Key and Secret Key.

First, add a name for the widget to identify it in the future and enter your website's hostname. Then choose the widget type. It is recommended to choose `Managed`. Finally, click `Create`.



The screenshot shows the Cloudflare dashboard with the sidebar collapsed. The main area is titled "Add Site" under the "Turnstile Sites" section. The "Site name" field contains "Casdoor". The "Domain" field contains "door.casdoor.org". Under "Widget Type", the "Managed" option is selected. At the bottom right are "Cancel" and "Create" buttons.

**Add Site**

← Back to Turnstile Sites

**Documentation**

[Migrate from a CAPTCHA Service](#)  
[Turnstile Developer Documentation](#)

**Site name**  
Add a name for the widget to identify it in the future  
Casdoor

**Domain**  
Enter your website's hostname or select from your existing websites on Cloudflare. (eg. domain.com or sub.domain.com)  
door.casdoor.org

**Widget Type**

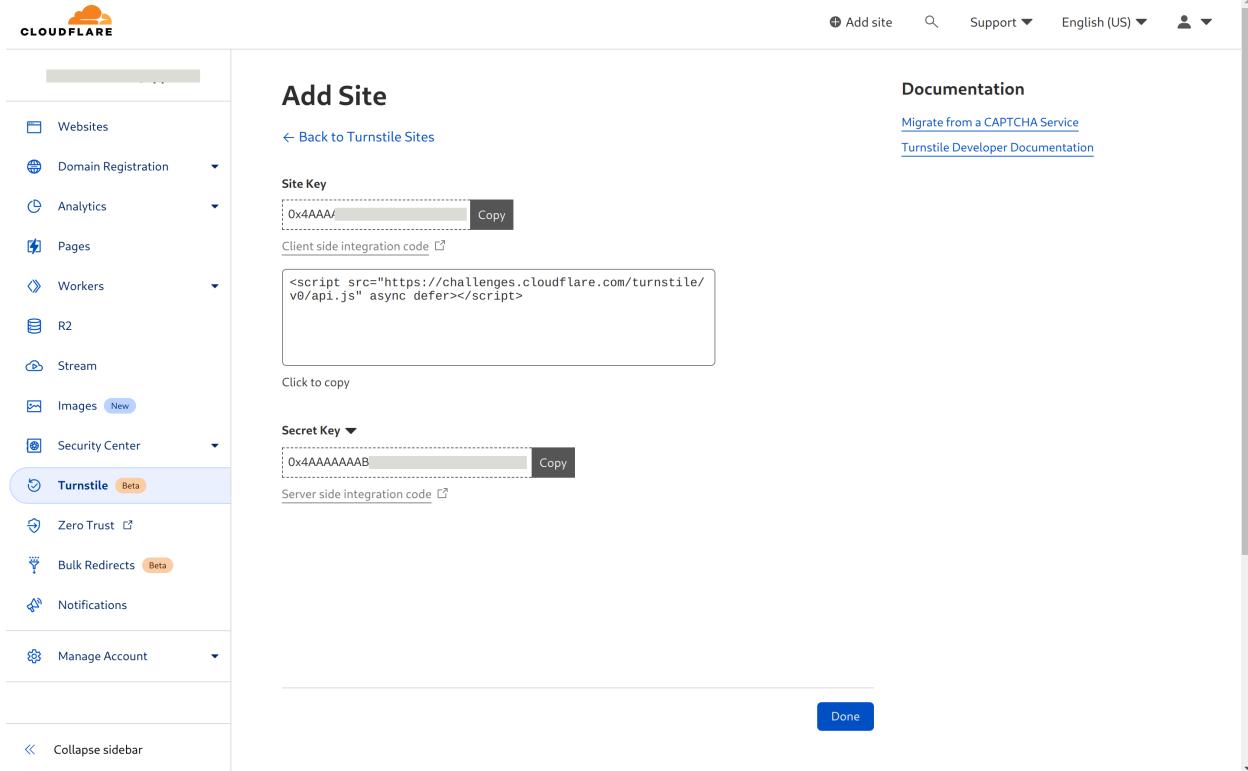
**Managed**  
Cloudflare will use information from the visitor to decide if an interactive challenge should be used. If we do show an interaction, the user will be prompted to check a box (no images or text to decipher).

**Non-interactive**  
A purely non-interactive challenge. Users will see a widget with a loading bar while the browser challenge is run.

**Invisible**  
Invisible challenge that does not require interaction.

Cancel Create

You will then be able to obtain a site key and a secret key.



The screenshot shows the Cloudflare dashboard with the sidebar expanded. The 'Turnstile' option under the 'Security Center' section is selected, indicated by a blue background and a 'Beta' badge. The main content area is titled 'Add Site' and contains fields for 'Site Key' (value: 0xAAAAA/), 'Client side integration code' (a script tag), and 'Secret Key' (value: 0xAAAAAAAB). A 'Done' button is at the bottom right.

Add Site

← Back to Turnstile Sites

Site Key

0xAAAAA/ Copy

Client side integration code

```
<script src="https://challenges.cloudflare.com/turnstile/v0/api.js" async defer></script>
```

Click to copy

Secret Key

0xAAAAAAAB Copy

Server side integration code

Done

Webs  
Domain Registration  
Analytics  
Pages  
Workers  
R2  
Stream  
Images (New)  
Security Center  
**Turnstile (Beta)**  
Zero Trust  
Bulk Redirects (Beta)  
Notifications  
Manage Account

Collapse sidebar

# Configure in Casdoor

Create a new provider in Casdoor.

Select the category as **Captcha** and the type as **Cloudflare Turnstile**. Fill in the site key and the secret key that you obtained in the previous step.

Casdoor Home Organizations Users Roles Permissions Models Adapters Applications Providers Resources ... Admin

Edit Provider Save Save & Exit

Name : Cloudflare Turnstile

Display name : Cloudflare Turnstile

Organization : admin (share)

Category : Captcha

Type : Cloudflare Turnstile

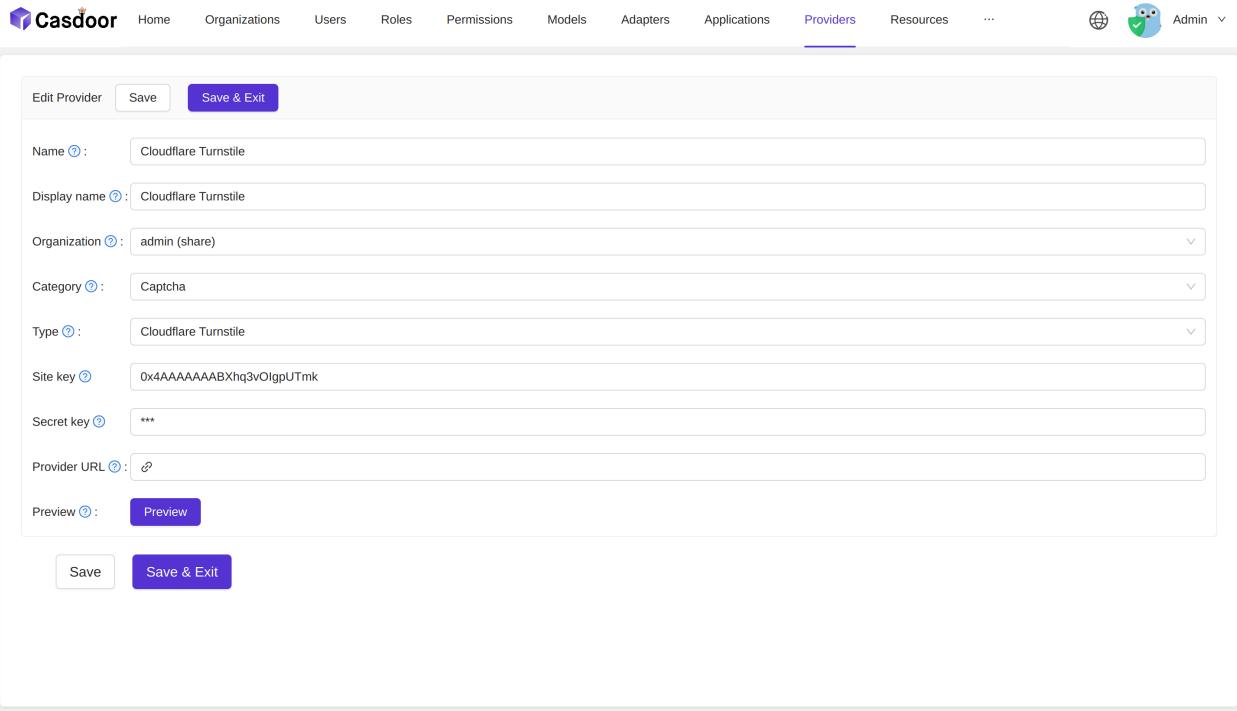
Site key : 0x4AAAAAAABXhq3vOlgpUTmk

Secret key : \*\*\*

Provider URL : [View](#)

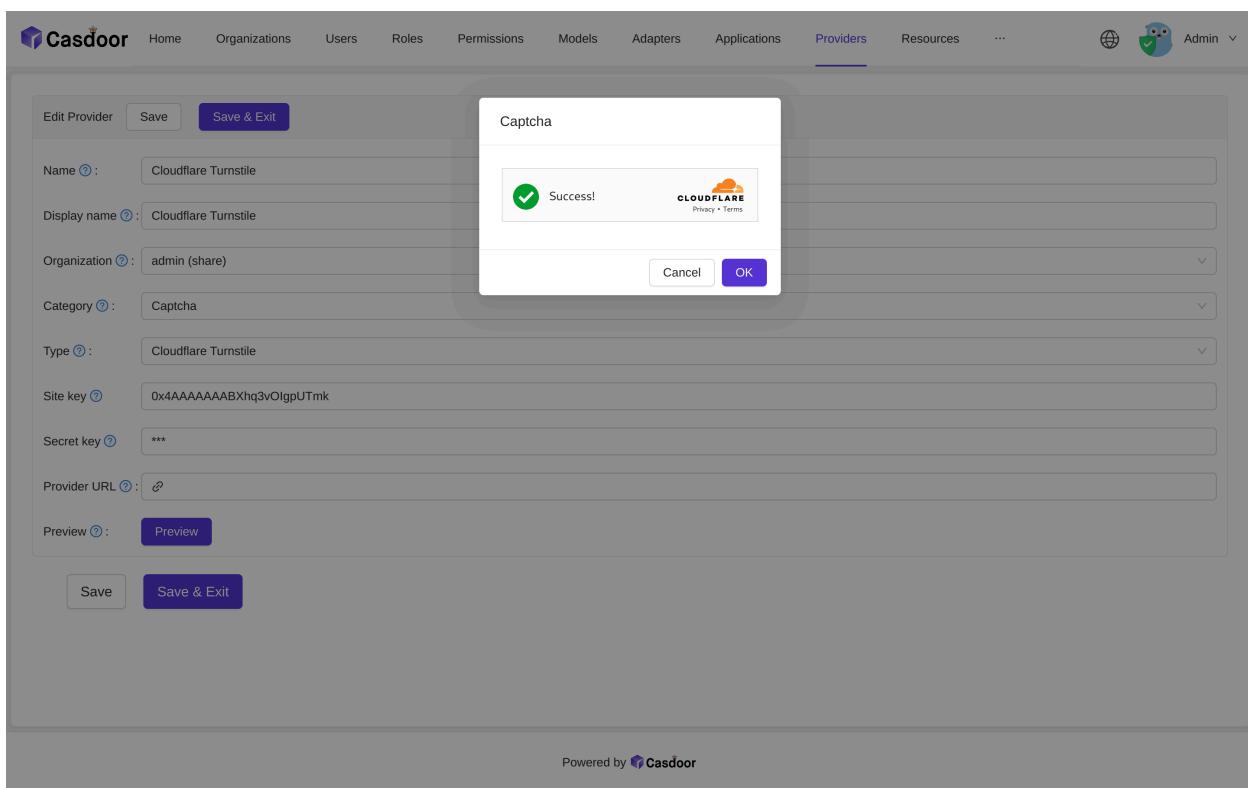
Preview : Preview

Save Save & Exit



Powered by  Casdoor

You can click the Preview button to see a preview of the style of this CAPTCHA.



# Application Integration

Edit the application you want to configure in Casdoor. Select the provider that you just added and click the **Save** button.

Providers <small>(?)</small>								
Name	Category	Type	Can signup	Can signin	Can unlink	Prompted	Rule	Action
Cloudflare Turnstile	Captcha						None	  

# reCAPTCHA

reCAPTCHA is provided by Google, and we use reCAPTCHA v2 Checkbox. You can find more details about it at this [link](#).

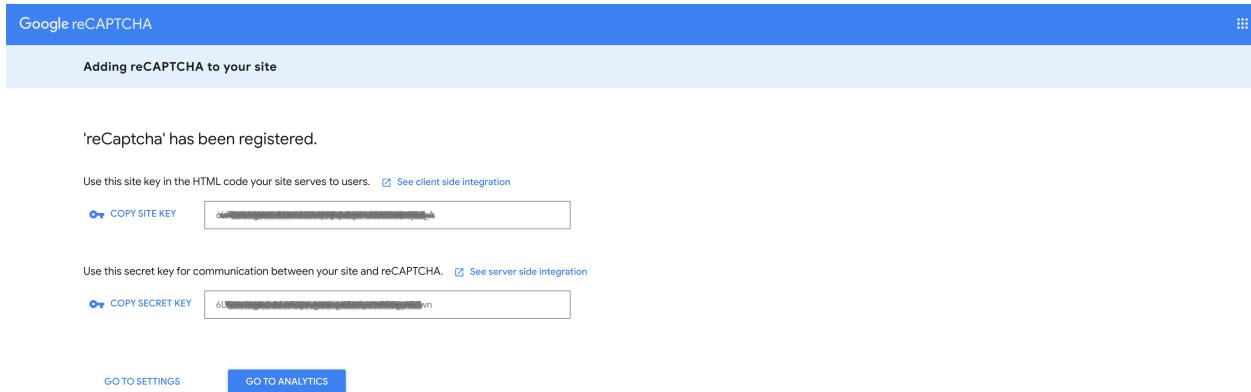
## Create an API key pair

To start using reCAPTCHA, you need to [sign up for an API key pair](#) for your site. The key pair consists of a site key and secret key. The site key is used to invoke the reCAPTCHA service on your site or mobile application. The secret key authorizes communication between your application backend and the reCAPTCHA server to [verify the user's response](#).

First, choose the [type of reCAPTCHA](#) and then fill in the authorized domains or [package names](#). After you have accepted the terms of service, click Register to obtain a new API key pair.

The screenshot shows the Google reCAPTCHA registration interface. At the top, there is a blue header bar with the text "Google reCAPTCHA". Below it, a white navigation bar has a back arrow and the text "Register a new site". A yellow banner below the navigation bar says "Get unlimited assessments using [reCAPTCHA Enterprise](#)". The main form area starts with a "Label" field containing "reCaptcha". In the "reCAPTCHA type" section, "reCAPTCHA v2" is selected, while "reCAPTCHA v3" and other options like "Invisible reCAPTCHA badge" and "reCAPTCHA Android" are unselected. The "Domains" section contains the entry "casdoor.org". Under "Owners", the email "resullee@gmail.com" is listed with "(You)" next to it, and there is a link to "Enter email addresses". At the bottom, a checked checkbox says "Accept the reCAPTCHA Terms of Service". A small note below it states: "By accessing or using the reCAPTCHA APIs, you agree to the Google APIs [Terms of Use](#), Google [Terms of Use](#), and to the Additional Terms below. Please read and understand all applicable terms and policies before accessing the APIs."

You will then receive a site key and a secret key.

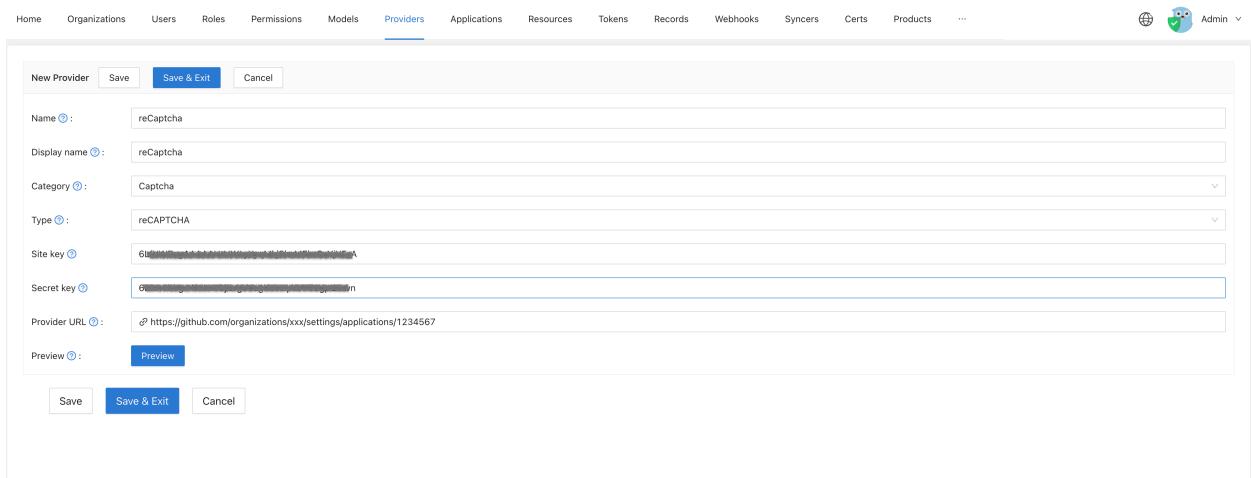


The screenshot shows the Google reCAPTCHA registration page. At the top, it says 'Adding reCAPTCHA to your site'. Below that, it states "'reCaptcha' has been registered.''. It provides instructions to 'Use this site key in the HTML code your site serves to users.' with a 'See client side integration' link. A 'COPY SITE KEY' button is next to a text input field containing a long string of characters. Below this, it says 'Use this secret key for communication between your site and reCAPTCHA.' with a 'See server side integration' link. A 'COPY SECRET KEY' button is next to another text input field containing a long string of characters. At the bottom, there are 'GO TO SETTINGS' and 'GO TO ANALYTICS' buttons.

## Configure in Casdoor

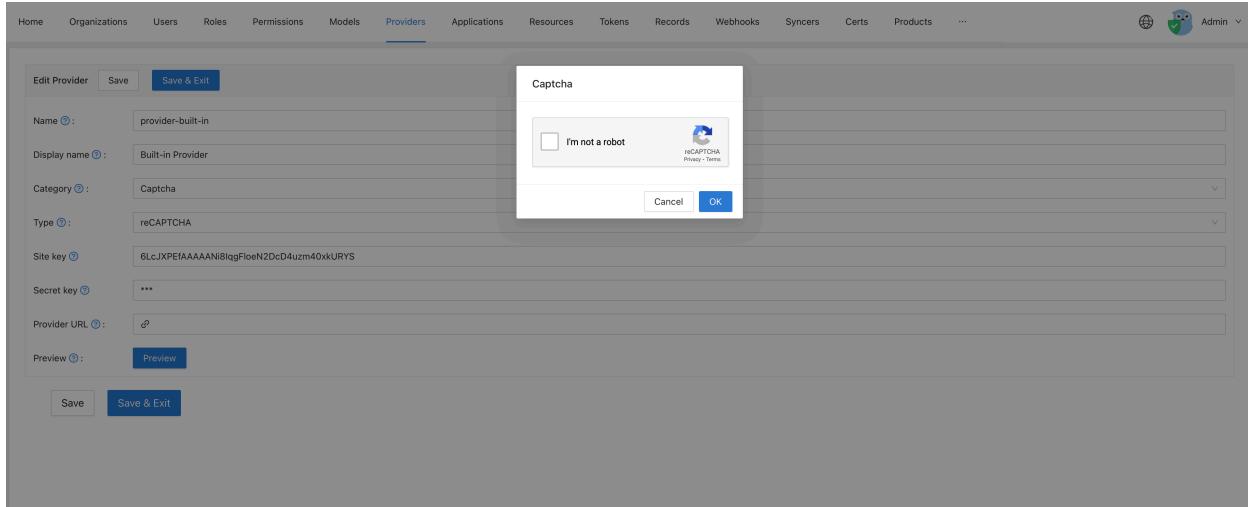
Create a new provider in Casdoor.

Select the category as Captcha and the type as reCAPTCHA. You need to provide the site key and secret key created in the previous step.



The screenshot shows the Casdoor 'New Provider' configuration page. The 'Providers' tab is selected. The form fields are as follows: Name: reCaptcha; Display name: reCaptcha; Category: Captcha; Type: reCAPTCHA; Site key: (redacted); Secret key: (redacted); Provider URL: https://github.com/organizations/xx/settings/applications/1234567; Preview: Preview. At the bottom, there are 'Save', 'Save & Exit', and 'Cancel' buttons.

You can click the Preview button to see the style of this captcha.



# Apply in the application

Edit the application you want to configure in Casdoor. Select the provider you just added and click the **Save** button.

Providers		Add	Category	Type	canSignUp	canSignIn	canUnlink	prompted	Action
Name	reCaptcha	✓	Captcha						

# hCaptcha

hCaptcha is a captcha service provider, similar to reCAPTCHA. You can find more details about hCaptcha [here](#).

## Create an API key pair

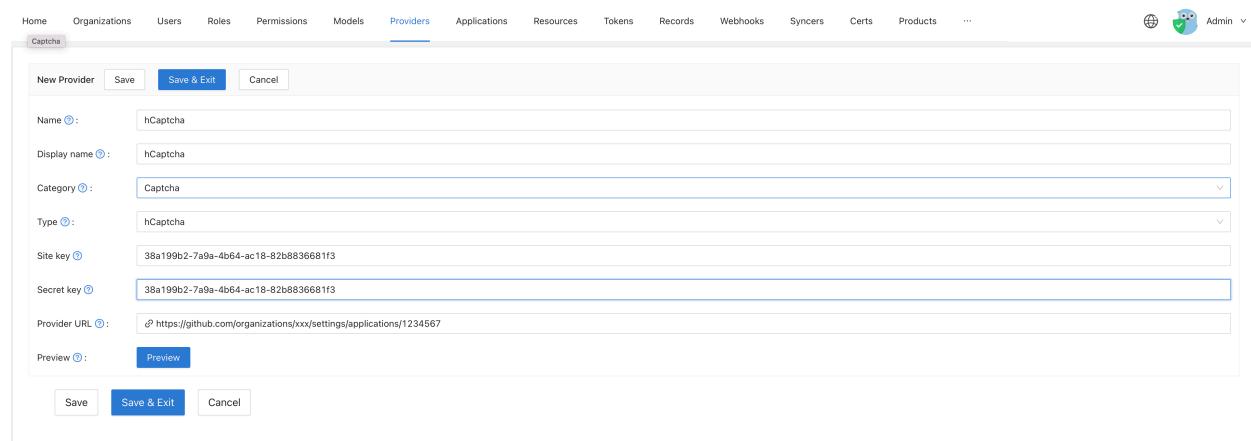
To start using hCaptcha, you need to sign up for an API key pair for your site. You can obtain your site key on your [profile page](#).

Once you have signed up, you will receive a site key and a secret key.

## Configure in Casdoor

To configure hCaptcha in Casdoor, create a new provider.

Select the category as Captcha and the type as hCaptcha. Fill in the site key and secret key obtained in the previous step.

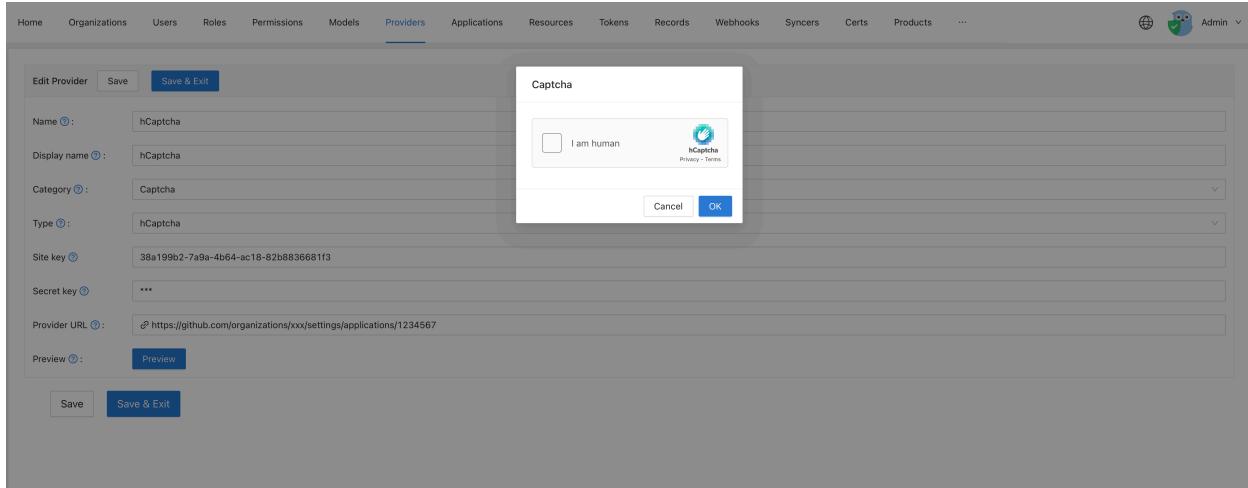


The screenshot shows the Casdoor web interface with the 'Providers' tab selected. A new provider is being created for 'hCaptcha'. The form fields are as follows:

- Name: hCaptcha
- Display name: hCaptcha
- Category: Captcha
- Type: hCaptcha
- Site key: 38a199b2-7a9a-4b64-ac18-82b8836681f3
- Secret key: 38a199b2-7a9a-4b64-ac18-82b8836681f3
- Provider URL: https://github.com/organizations/xxx/settings/applications/1234567
- Preview button: Preview

At the bottom of the form are three buttons: Save, Save & Exit, and Cancel.

You can click the Preview button to see how the captcha style will look.



# Apply in your application

Go to the application you want to configure in Casdoor. Select the provider you just added and click the **Save** button.

Providers	Add	Name	Category	Type	canSignUp	canSignIn	canUnlink	prompted	Action
		hCaptcha	Captcha						  

# Alibaba Cloud Captcha

Alibaba Cloud Captcha is a captcha service provided by Alibaba Cloud. It offers two ways to verify captcha: "Sliding Validation" and "Intelligent Validation". You can find more details about it in this [link](#).

## Add Captcha Configuration in Alibaba Cloud

To add the Captcha configuration, log in to the [Alibaba Cloud management console](#), search for and go to the Captcha Service. Then, click on Confirm Open to enable the Captcha Service.



Once you have entered the Captcha management console, click on Add configuration.

The screenshot shows the Alibaba Cloud Scene Management interface. On the left, there is a sidebar with various management options like Security Management, Custom Strategy, and White List Strategy. The main area is titled 'Scene Management' and shows a table of existing scenarios. A red arrow points to the 'New Scenario' button at the top left of the table. The table has columns for 'Scenario Name/ID', 'Access Method', 'Verification Code Shape', 'Strategy Status', 'Strategy Type', 'Data Statistics', and 'Operations'. One row is visible with the name 'test 1kyl...', access method 'Web/H5', shape 'Transient', status 'Formal', type 'Default', and statistics 'None'. On the right side, there are several circular icons for different actions: edit, delete, copy, settings, refresh, and user management.

Fill in all the required information and submit the form.

The screenshot shows the VerifyCode 2.0 console interface. On the left, there's a sidebar with navigation items like Overview, Scenario Management (highlighted), Security Management, Account Management, Version Management, Alert Notifications, and Others. The main area is titled "Scene Management". It has tabs for "New Scene" (selected), "Verification Type", and "Access Method". A table lists scenes: "test" (App ID: 1kyme847, Access Method: Web/H5, Verification Type: One Click). Below the table are sections for "Verification Type", "One Click Challenge Type", and "Strategy Status". A modal window titled "Create New Scene" is open, prompting for "Scene Name" (with placeholder "Please enter scene name"), "Access Method" (Web/H5 selected), "Verification Type" (One Click selected), "Challenge Type" (One Click selected), and "Strategy Status" (Production selected). At the bottom of the modal are "Confirm" and "Cancel" buttons.

Now, you can view the `Scene` and `App key` in your console.

验证码2.0 / 场景管理

## 场景管理

场景名称/ID	接入方式	验证码形态	策略状态	策略类型	数据统计	操作
test 1key	Web/H5	一点即过	● 正式	默认		<a href="#">接入引导</a>   <a href="#">编辑</a>   <a href="#">自定义策略</a>   <a href="#">删除</a>

每页显示 10 共 1 条数据 < 上一页 1 下一页 >

帮助文档

场景管理

新建场景 验证码形态 接入方式 名称/ID 搜索

安全管理

自定义策略 白名单策略 NEW

账单管理 版本管理 告警通知

其他 实人认证

daconghd 主账号

验证码2.0 / 概览

## 概览

今日汇总指标 (全量) 时间周期: 00:00 - 18:00

初始化量	验证量	验证拦截量	验证通过量
0	0	0	0

累计开通时间 96 天 身份标 gc

开通包年包月 购买资源包 AppKey 展开详情

全量 场景名称 验证码形态 近7天 2025-09-09 - 2025-09-15 按小时查看

验证趋势

Also, the `Access key` and `Secret access key` can be found in your profile.

# Configure in Casdoor

Create a new provider in Casdoor.

Select the category as **Captcha**, and the type as **hCaptcha**. Then, choose the sub-type: "Sliding Validation" or "Intelligent Validation". Make sure to fill in the `Access key`, `Secret access key`, `Scene`, and `App key` that you created in the previous step.

New Provider Save Save & Exit Cancel

Name : Aliyun\_Captcha

Display name : Aliyun\_Captcha

Category : Captcha

Type : Aliyun Captcha

Sub type : Sliding Validation

Access key :

Secret access key :

Scene : nc\_other

App key :

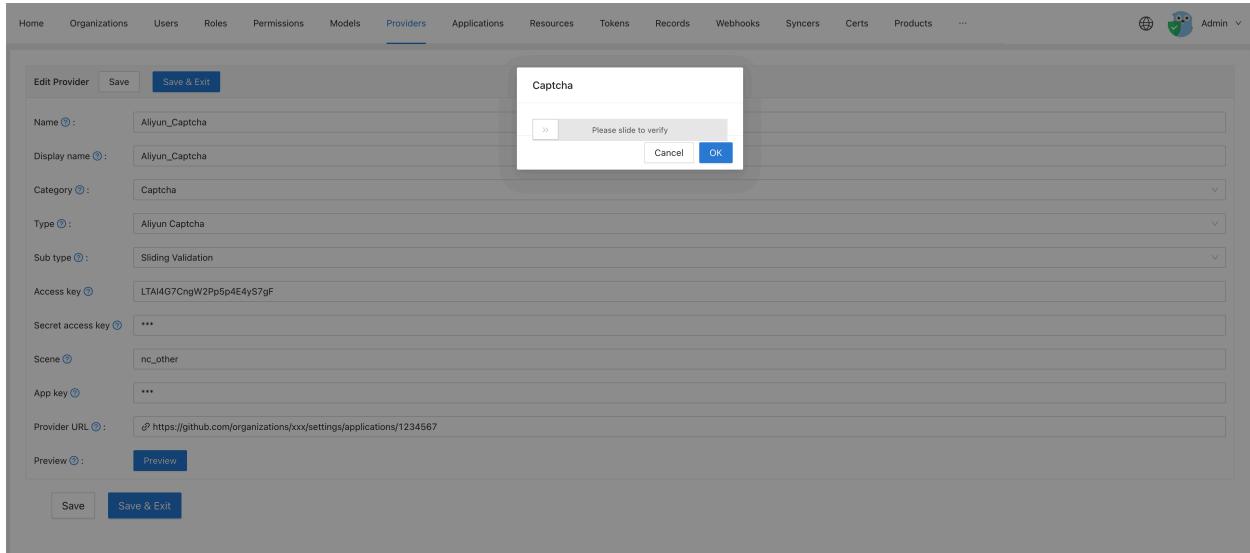
Provider URL : https://github.com/organizations/xxx/settings/applications/1234567

Preview : Preview

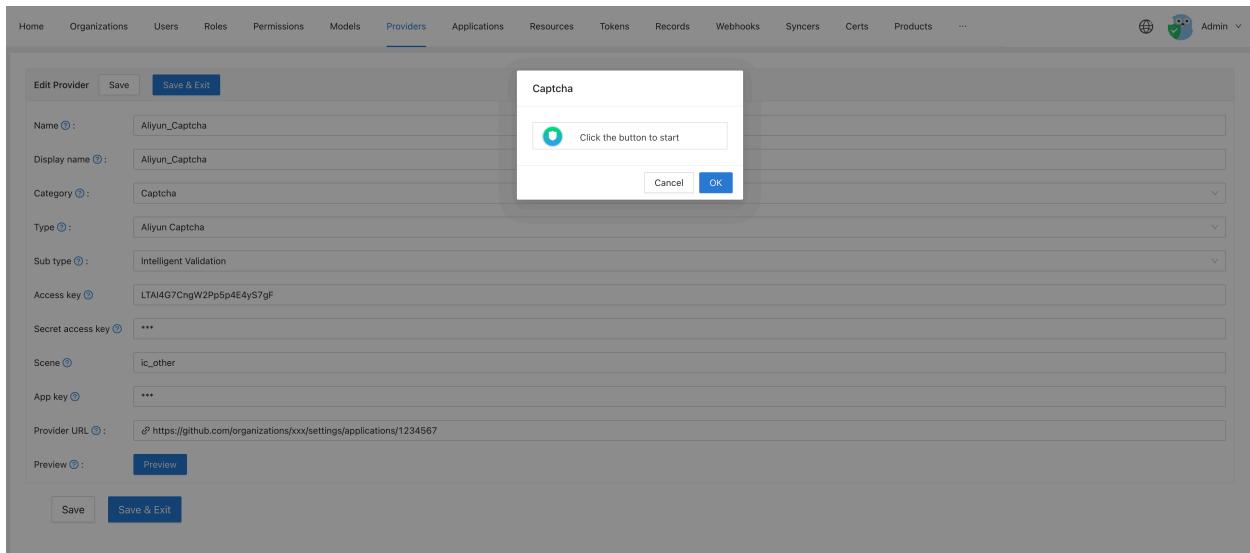
Save Save & Exit Cancel

You can click on the **Preview** button to see the style of this captcha.

The following image shows the preview of "Sliding Validation":



And this image shows the preview of "Intelligent Validation":



# Application Integration

Edit the application in which you want to configure Casdoor. Select the newly added provider and click on the Save button.

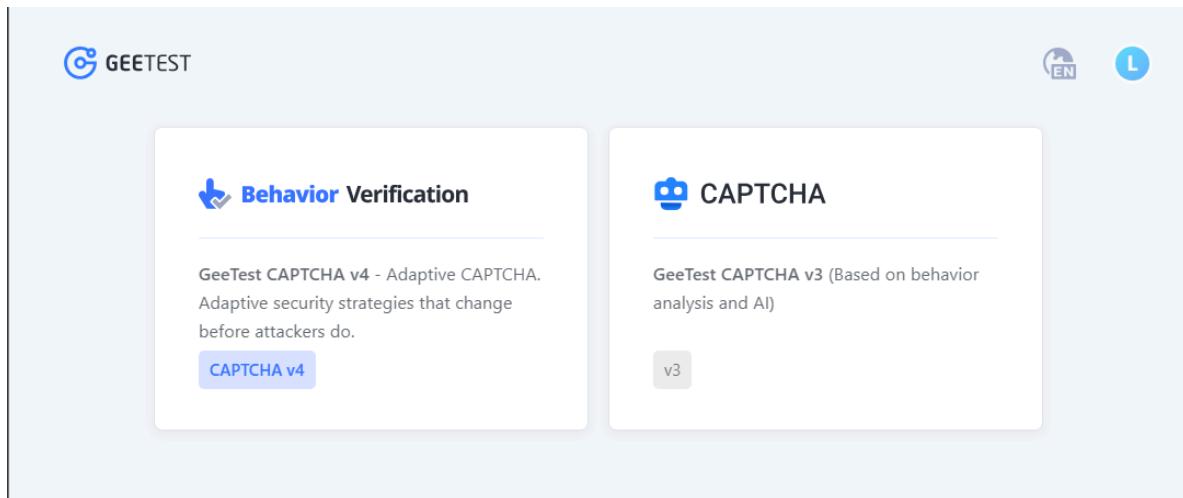
Providers	Add	Category	Type	canSignUp	canSignIn	canUnlink	prompted	Action
Name		Captcha	➡️					⤒ ⤑ ⌂

# Geetest

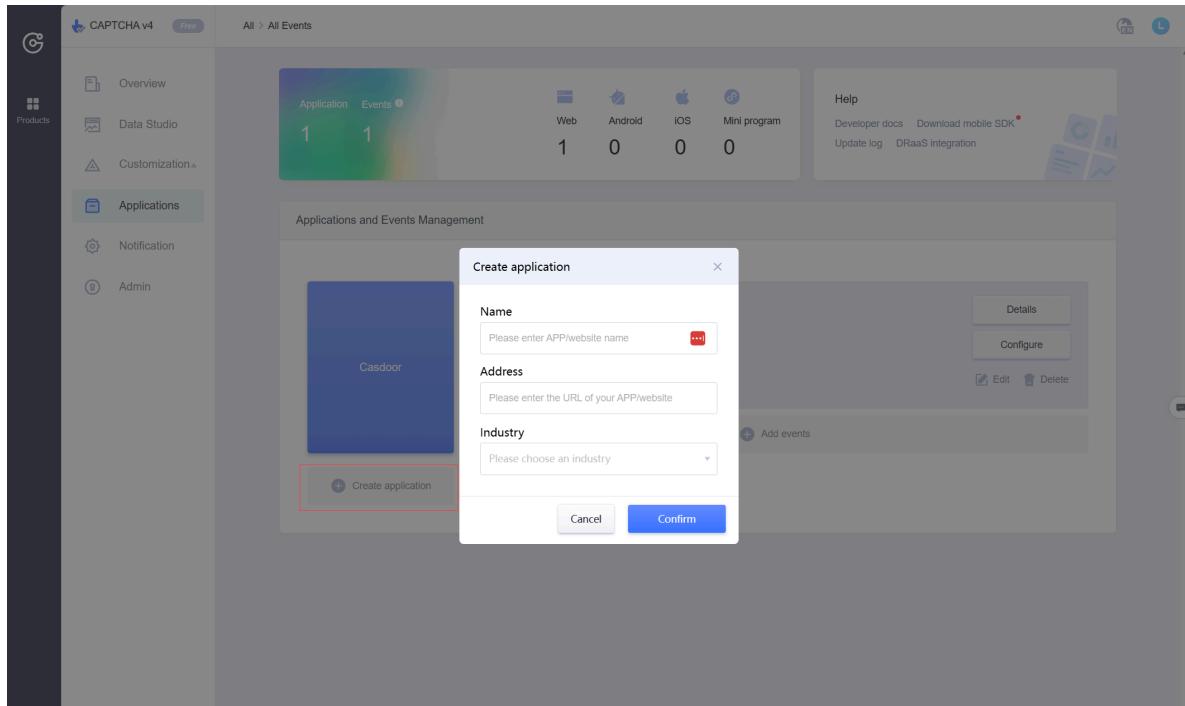
## Configure Geetest

To configure Geetest and obtain the public and secret key, follow these steps:

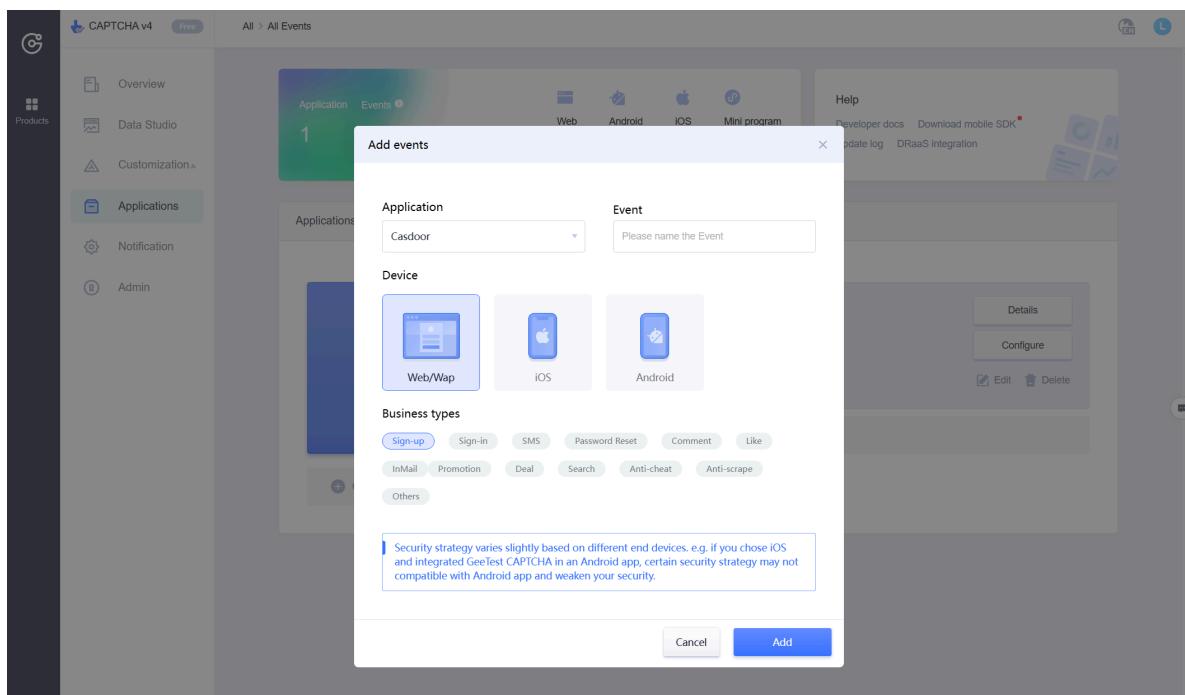
1. Go to the Geetest CAPTCHA V4 section on the [Geetest product page](#).



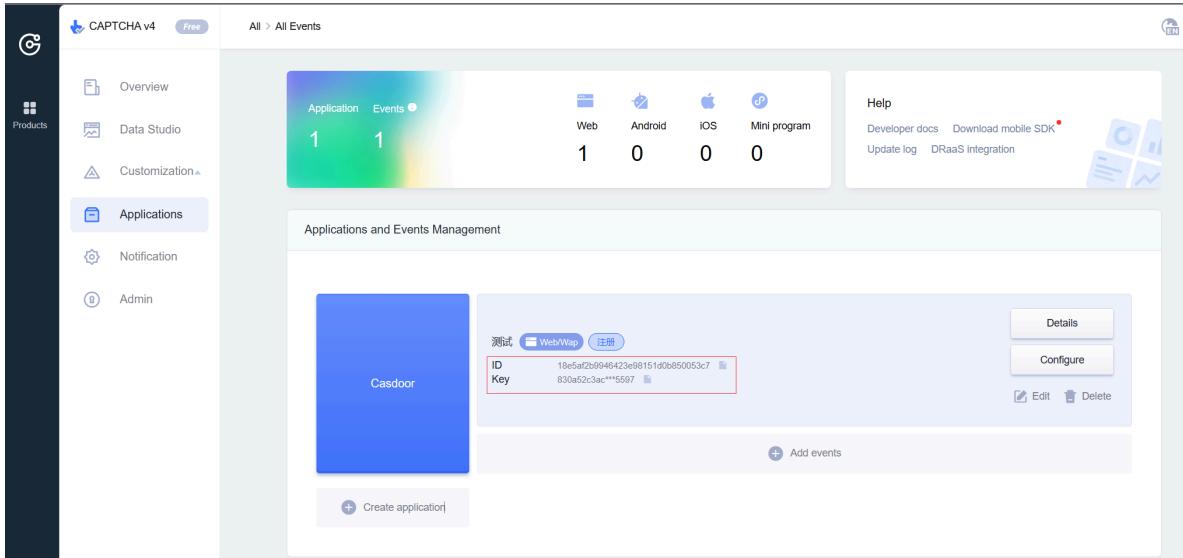
2. Create an application by entering the name and address for your application.



### 3. Add events and choose "web" for the device.



### 4. Retrieve the `ID` and `Key`.



# Configure Casdoor

Follow these steps to configure Casdoor:

1. Create a new provider in Casdoor.

Set the category as Captcha and the type as Geetest. Fill in the `Site key` and `Secret key` with the ID and Key obtained from Geetest.

2. Click the Preview button to preview the style of this captcha.

The screenshot shows the Casdoor web interface for managing providers. The top navigation bar includes links for Home, Organizations, Users, Roles, Permissions, Models, Providers (which is the active tab), Applications, Resources, Tokens, Records, and Admin. The main content area is titled "Edit Provider" and contains fields for Name, Display name, Category, Type, Site key, Secret key, and Provider URL. Buttons for Save, Save & Exit, Preview, and another Save button are visible. At the bottom right, it says "Made with ❤ by Casdoor".

Name	Display name	Category	Type	Can signup	Can signin	Can unlink	Prompted	Rule	Action
geetest	provider_geetest	Captcha	GEETEST						

# Apply in your application

To apply the Geetest configuration in your application:

Edit the application you want to configure in Casdoor. Select the provider you just added and click the Save button.

The screenshot shows a table of providers. A single row is selected, showing the provider details: Name (geetest), Category (Captcha), Type (GEETEST), and Action buttons. The table has columns for Name, Category, Type, Can signup, Can signin, Can unlink, Prompted, Rule, and Action.

Name	Category	Type	Can signup	Can signin	Can unlink	Prompted	Rule	Action
geetest	Captcha	GEETEST						

# Web3

## MetaMask

Adding the MetaMask Web3 provider to your application

## Web3-Onboard

Add the Web3-Onboard Web3 provider to your application

# MetaMask

 NOTE

This is an example of how to configure MetaMask as a Web3 provider.

MetaMask is a browser extension and app that functions as both a cryptocurrency wallet and a gateway to blockchain apps. Casdoor allows you to use MetaMask as an identity provider and enables Web3 login with MetaMask.

## Step 1: Create a MetaMask Web3 provider

To start, you need to create a MetaMask Web3 provider in Casdoor.

Name	Description
Category	Choose <button>Web3</button>
Type	Choose <button>MetaMask</button>

Edit Provider
Save
Save & Exit

---

Name <span>?</span> :	metamask_provider
Display name <span>?</span> :	MetaMask Provider
Organization <span>?</span> :	admin (Shared)
Category <span>?</span> :	Web3
Type <span>?</span> :	MetaMask
Provider URL <span>?</span> :	<a href="#">🔗</a>

---

Save
Save & Exit

## Step 2: Add the provider to your application

Next, add the MetaMask Web3 provider to your application.

The screenshot shows a provider configuration interface with the following details:

- Providers:** A list of providers including "provider\_storage\_minio\_s3", "provider\_oauth\_lark", "provider\_email\_qq", and "metamask\_provider". The "metamask\_provider" is highlighted with a red box.
- Preview:** Buttons for "Copy SAML metadata URL" and "Copy sign-in page URL".
- Table:** A table showing provider settings:
 

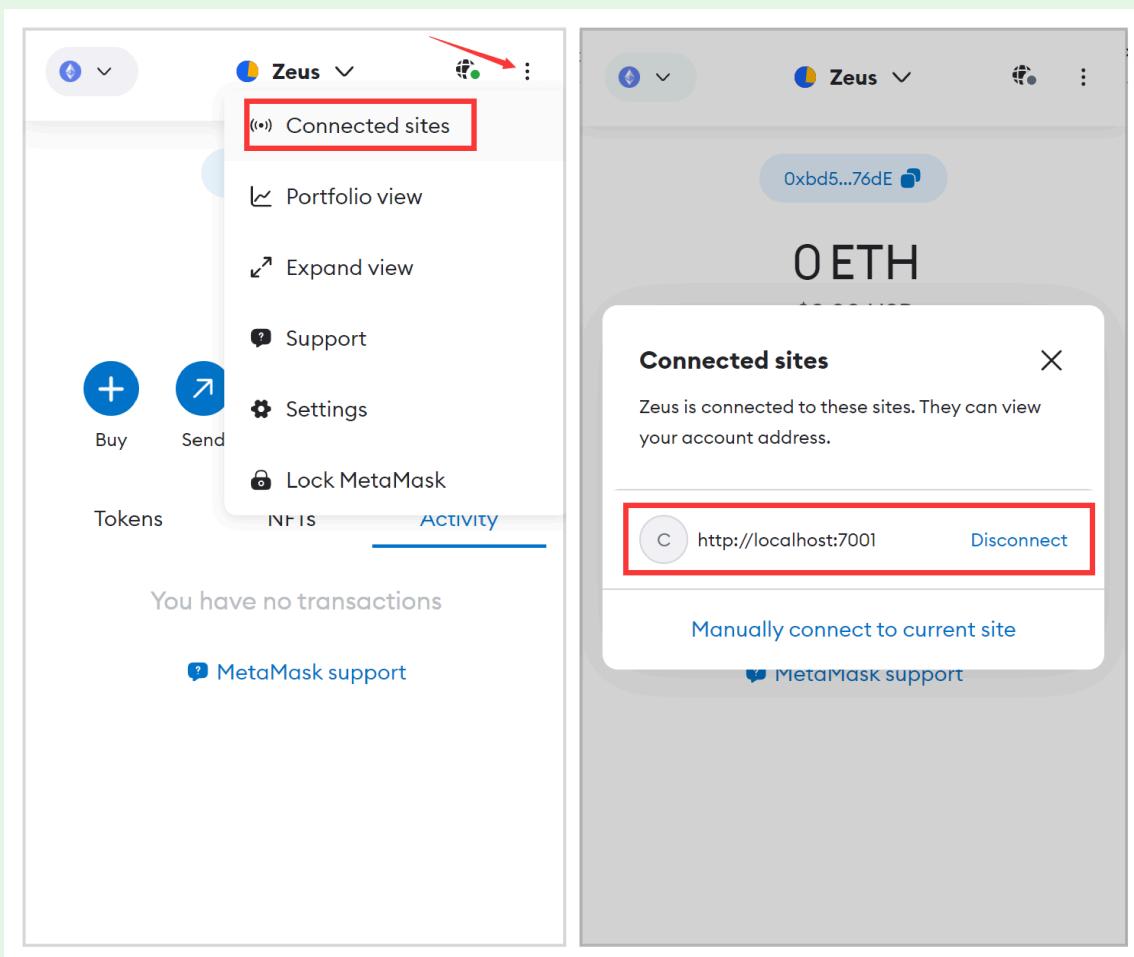
Name	Category	Type	Can sign-up	Can sign-in	Can un-link	Prompted	Rule	Action
metamask_provider	Web3	MetaMask	On	On	On	Off		Up/Down

## Step 3: Login with MetaMask

You can now log in with MetaMask. Here is a demo video.

 TIP

1. When logging in with MetaMask, please authorize only one Ethereum address. Casdoor will only bind one Ethereum address per user.
2. If you want to switch to another Ethereum address for login, please disconnect the connection between the current Ethereum address and Casdoor first.

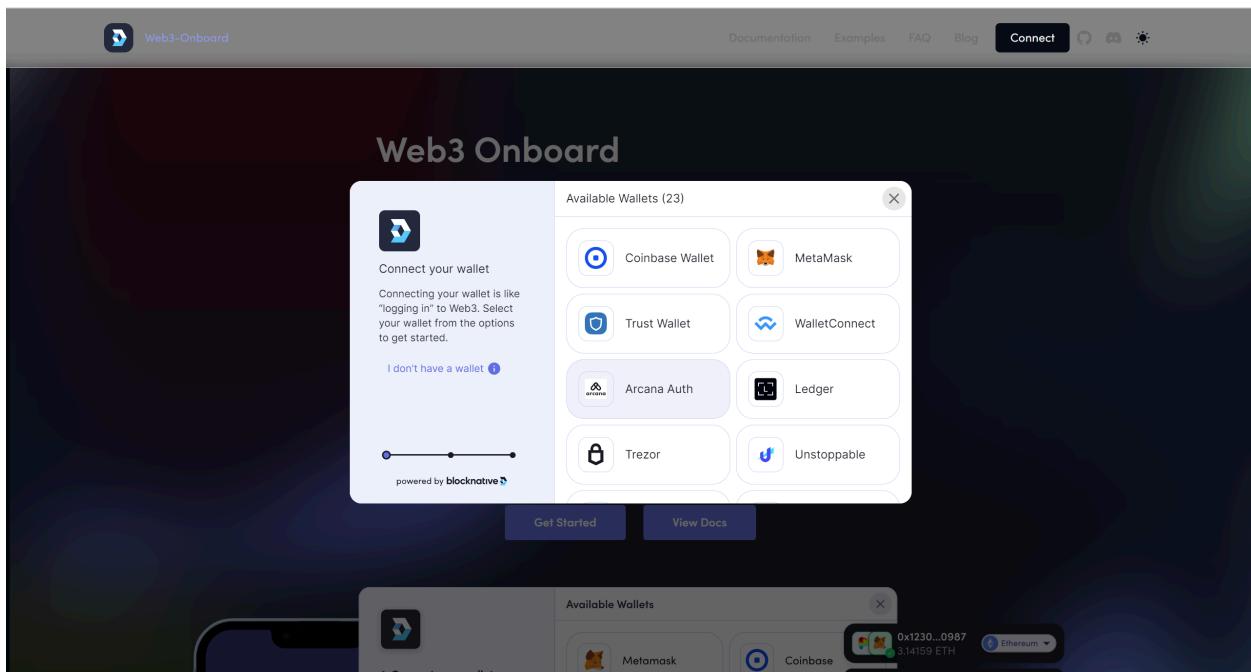


# Web3-Onboard

## NOTE

This is an example of how to configure Web3-Onboard as a Web3 provider.

[Web3-Onboard](#) can help users use different wallets for Web3 login. Casdoor allows using Web3-Onboard as an identity provider and enables Web3 login with Web3-Onboard.



## Step 1: Create a Web3-Onboard Web3 provider

First, you need to create a Web3-Onboard Web3 provider in Casdoor.

Name	Description
Category	Choose <code>Web3</code>
Type	Choose <code>Web3-Onboard</code>
Wallets	Choose the wallets that are allowed to log in

Edit Provider
Save
Save & Exit

---

Name ? :

Display name ? :

Organization ? :

Category ? :

Type ? :  `Web3-Onboard`

Wallets ? :  Injected  Coinbase  Trust  Gnosis  Sequence  Taho  Frontier  Infinity Wallet

Provider URL ? :

---

Save
Save & Exit

Currently, Casdoor only supports the wallets shown in the image above. The `Injected` wallets represent browser-injected wallets such as `MetaMask` or `Coinbase`.

## Step 2: Add the provider to your application

Second, add the Web3-Onboard Web3 provider to your application.

Providers [?](#) [Add](#)

Name	Category	Type	Can signup	Can signin	Can unlink	Prompted	Rule	Action
provider_storage_minio_s3	Storage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">▲</a> <a href="#">▼</a> <a href="#">trash</a>
provider_oauth_lark	OAuth		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">▲</a> <a href="#">▼</a> <a href="#">trash</a>
provider_email_qq	Email		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">▲</a> <a href="#">▼</a> <a href="#">trash</a>
provider_web3_metamask	Web3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">▲</a> <a href="#">▼</a> <a href="#">trash</a>
provider_google_oauth	OAuth		<input checked="" type="checkbox"/> One Tap	<a href="#">▲</a> <a href="#">▼</a> <a href="#">trash</a>				
provider_web3_onboard	Web3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<a href="#">▲</a> <a href="#">▼</a> <a href="#">trash</a>

## Step 3: Login with Web3-Onboard

Now you can log in through Web3-Onboard. Here is a demo video.

# Face ID

## Overview

Using Face ID for authentication

## Alibaba Cloud FaceBody

Add libaba Cloud FaceBody as a third-party faceid service to complete authentication

# Overview

Casdoor allows for the use of Face ID as a sign-in method.

We only recommend enabling Face ID if you can ensure that the hardware and requests cannot be tampered with.

## Adding an Face ID provider

1. Go to your Casdoor index page.
2. Click on `Providers` in the top bar.
3. Click on `Add`, and you will see a new provider added to the list at the top.
4. Click on the new provider to make changes to it.
5. In the `Category` section, select `Face ID`.
6. Choose the specific Face ID provider that you require from the `Type` dropdown.
7. Fill in the necessary information, such as `Client ID` and `Client Secret`.

# Alibaba Cloud FaceBody

## Introduction

Based on face detection, analysis/comparison technology in images or videos, and human body detection technology, it provides independent modules for face/human body detection and localization, face attribute recognition and face comparison. It can provide developers and enterprises with high-performance online API services for various scenarios such as face AR, biometric identification and authentication, large-scale face retrieval, and photo management.

## How to use?

The steps to use alibaba cloud facebody are shown below.

### Step 1: Register alibaba cloud facebody

First, visit [Alibaba Cloud Facebody website](#) and open a facebody account.

The screenshot shows the Alibaba Cloud Visual Intelligence Open Platform homepage. At the top, there is a navigation bar with links for '能力广场 New' (Ability Square New), '场景广场' (Scenario Square), '文档中心' (Document Center), '开发者社区' (Developer Community), and '控制台' (Control Panel). The main heading '人脸人体' (Face and Body) is displayed prominently. Below it, a brief description states: '基于图像或视频中的人脸检测、分析/比对技术，以及人体检测技术，提供人脸/人体的检测定位、人脸属性识别和人脸比对等独立模块。可以为开发者和企业提供高性能的在线API服务，应用于人脸AR、生物识别和认证、大规模人脸检索、照片管理等各种场景。' A large image of two women's faces with bounding boxes around them illustrates the facial detection feature. A blue button labeled '立即开通' (Activate Now) is visible. In the middle section, there is a summary: 'AI能力体验 技术能力150+, 开发者接近1000万' (AI Ability Experience, Technical capabilities 150+, Developers nearly 10 million) and a link '查看全部能力' (View all abilities). The bottom section shows a grid of service cards under the heading '人脸编辑' (Facial Editing). The services listed are: 人脸检测 (Facial Detection), 人脸属性 (Facial Attributes), 人脸识别 (Facial Recognition), 活体检测 (Liveness Detection), 金融级人脸检测 (Financial-grade Facial Detection), 智能美肤 (Smart Skin Care), 智能瘦脸 (Smart Face Slimming), 图像人脸融合 (Image Facial Fusion), 人像素描风格化 (Portrait Sketch Style), 人物动漫化 (Character Animation), 人脸修复增强 (Facial Repair Enhancement), 人脸美颜 (Facial Beauty), and 人脸美型 (Facial Modeling). Each card includes a small preview image and a brief description.

## Step 2: Buy CompareFace resource pack

Visit [Face body page](#) and buy CompareFace resource pack

## Step 3: Create a client secret

Go to console and create AccessKey and AccessSecret

已开通能力  
1 个  
能力总使用量  
最近一天 - 2025-03-21 - 2025-03-21  
查询

未开通能力  
文字识别  
商品理解  
分割识别  
图像生产  
图像识别  
视频理解  
视频分割  
视频生产  
图像分析处理  
创新专区  
基础SDK  
服务管理与开通  
监控统计  
帮助文档  
进阶查询

商品理解  
通过图像或视频的商品检测、分析/比对技术，为用户提供对商品类目、标签、属性的识别以及置信度信息等能力。[立即开通](#)

图像识别  
为用户提供色情、暴恐、涉政、广告、垃圾信息等违规图片、视频和文字的识别能力，既可降低内容违规风险，又可大幅降低人工审核成本。[立即开通](#)

图像生产  
图像生产提供图像增强、图像编辑与图像评分等能力。图像生产服务可广泛应用于摄影、艺术、广告、媒体等行

热门API  
口算人脸对比1:1  
人脸属性识别  
红外人脸识别  
人像比对1:1  
体验测试  
体验测试  
体验测试  
体验测试  
更多能力体验 >

最新动态  
视觉识别能力上新——视觉人像卡进化  
2023-03-13 能力上新  
视觉理解能力上新——视频画面评估  
2023-03-13 能力上新  
人脸识别产品上新——人脸识别1:1  
2023-02-07 产品上新

AccessKey ID	状态	最后使用	已创建时间	操作
LTAI5H7yjst7LqfjhNjghzY	已启用	VisualInt... 2025年3月	6 天	<a href="#">编辑访问限制策略</a>   <a href="#">禁用</a>   <a href="#">查看操作记录</a>

● 创建云账号 AccessKey  
仔细阅读下方的安全提示，并确认知悉潜在的风险  
云账号 AccessKey 具有账号的安全权限，且不能进行限制。因保管和使用不当，导致云账号 AccessKey 被他人利用，将会对账号资源造成巨大的安全隐患。  
• 云账号最多可创建 5 个 AccessKey。  
• 确认当前创建的 AccessKey 可用于轮转。  
 我确认认知云账号 AccessKey 安全风险  
[继续使用云账号 AccessKey](#) | [使用 RAM 用户 AccessKey](#)

## Step 4: Find Endpoint

You can find your endpoint ID in [Aliyun doc](#)

for example, if your region id is cn-shanghai, then the endpoint is [facebody.cn-shanghai.aliyuncs.com](https://facebody.cn-shanghai.aliyuncs.com)

## Step 5: Create Alibaba Cloud Facebody provider in Casdoor

The last step is to add an Alibaba Cloud Facebody Face ID provider and fill in the `Client ID`, `Client Secret` and `Endpoint` in your Casdoor.

# MFA

## Push Notification

Configure push notification provider for MFA

## RADIUS

Configure RADIUS provider for MFA

# Push Notification

Push notification MFA enables users to receive verification codes through mobile push services during authentication. This method leverages Casdoor's existing notification provider infrastructure, supporting services like Duo, Pushover, Telegram, and 20+ other providers.

## Configure Notification Provider

Push notification MFA uses notification providers to send verification codes. To add a notification provider:

1. Navigate to the **Providers** page and click **Add**.
2. Set the **Category** to **Notification** and choose your preferred **Type** (e.g., Telegram, Pushover, Custom HTTP).
3. Configure the provider-specific settings based on your chosen notification service.
4. Click **Save** to create the provider.

## Use in Application

After creating the notification provider, add it to your application:

1. Go to your application's edit page.
2. Add the notification provider to the **Providers** list.

3. Users can now select push notification as their MFA method when configuring multi-factor authentication.

## User Setup Flow

During MFA setup, users will:

1. Select "Use Push Notification" as their MFA method.
2. Enter their push notification receiver (device token or user ID).
3. Select the notification provider from the configured options.
4. Receive a verification code via push notification.
5. Enter the verification code to complete setup and receive recovery codes.

## Authentication Flow

When push notification MFA is enabled, users will receive a verification code via push notification during login. They must enter this code to complete authentication.

# RADIUS

RADIUS (Remote Authentication Dial-In User Service) providers allow Casdoor to authenticate users against external RADIUS servers during multi-factor authentication.

## Configure RADIUS Provider

To add a RADIUS provider for MFA:

1. Navigate to the Providers page and click Add.
2. Set the Category to MFA and Type to RADIUS.
3. Configure the following fields:
  - Host: The IP address or hostname of your RADIUS server (e.g.,  
`10.10.10.10`)
  - Port: The RADIUS server port (default is `1812`)
  - Client Secret: The shared secret configured on your RADIUS server for authenticating requests
4. Click Save to create the provider.

## Use in Application

After creating the RADIUS provider, add it to your application:

1. Go to your application's edit page.

2. Add the RADIUS provider to the Providers list.
3. Users can now select RADIUS as their MFA method when configuring multi-factor authentication.

During MFA setup and authentication, users will be prompted to enter their RADIUS username and password, which will be verified against the configured RADIUS server.

# Resources

## Overview

Upload resources in Casdoor

# Overview

You can upload resources in Casdoor. Before uploading resources, you need to configure a storage provider. Please refer to the [Storage Provider](#) section for more information.

Once you have configured at least one storage provider and added it to your application, you can proceed.

Providers <a href="#">?</a> :			
Providers	Add		
Name	Category	Type	ca
Provider_azure	Storage	A	
Github_1	OAuth	G	
provider_Alipay	Payment	支	

Great! Now let's take a look at an example of how to [upload](#) and [delete](#) resources.

## Uploading Resources

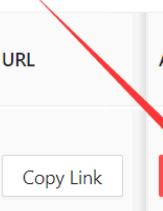
Users can upload various types of resources, such as files and images, to the [cloud storage](#) that you have configured.



Resources		<a href="#">Upload a file...</a>			
Provider	File Name	Content	Created time	Tag	
provider_storage_aliyun_oss	source/casbin/leo220yuyaodog/2022_ICM_Problem_D.pdf		2022-05-18 17:25:21	custom	
provider_storage_aliyun_oss	source/built-in/admin/美的2021&22Q1交流.pdf		2022-05-18 12:28:01	custom	
provider_storage_aliyun_oss	source/casbin/admin/solo.svg		2022-05-17 16:25:39	custom	

## Deleting Resources

If you no longer need a particular resource, you can choose to delete it by clicking the "Delete" button.



Created time	Tag	Type	Format	File size	Preview	URL	Action
2022-05-19 23:16:55	custom	image	.jpg	70.3 KB		<a href="#">Copy Link</a>	<a href="#">Delete</a>

# SaaS Management

## Overview

Casdoor Pricing Overview

## Product

Add products that you want to sell

## Payment

View the transaction information of the products in Payment

## Plan

Casdoor Plan Overview



## Pricing

An Overview of Casdoor Pricing



## Subscription

Casdoor Subscription Overview



## Transaction

Casdoor Transaction Overview

# Overview

Casdoor can be used as a subscription management system through its [Product](#), [Payment](#), [Plan](#), [Pricing](#), [Subscription](#), and [Transaction](#) features.

You can choose which plans to include in your price list, as shown in the pictures below:

## Casdoor Pricing

Casdoor hosting services provided by Casbin Inc.

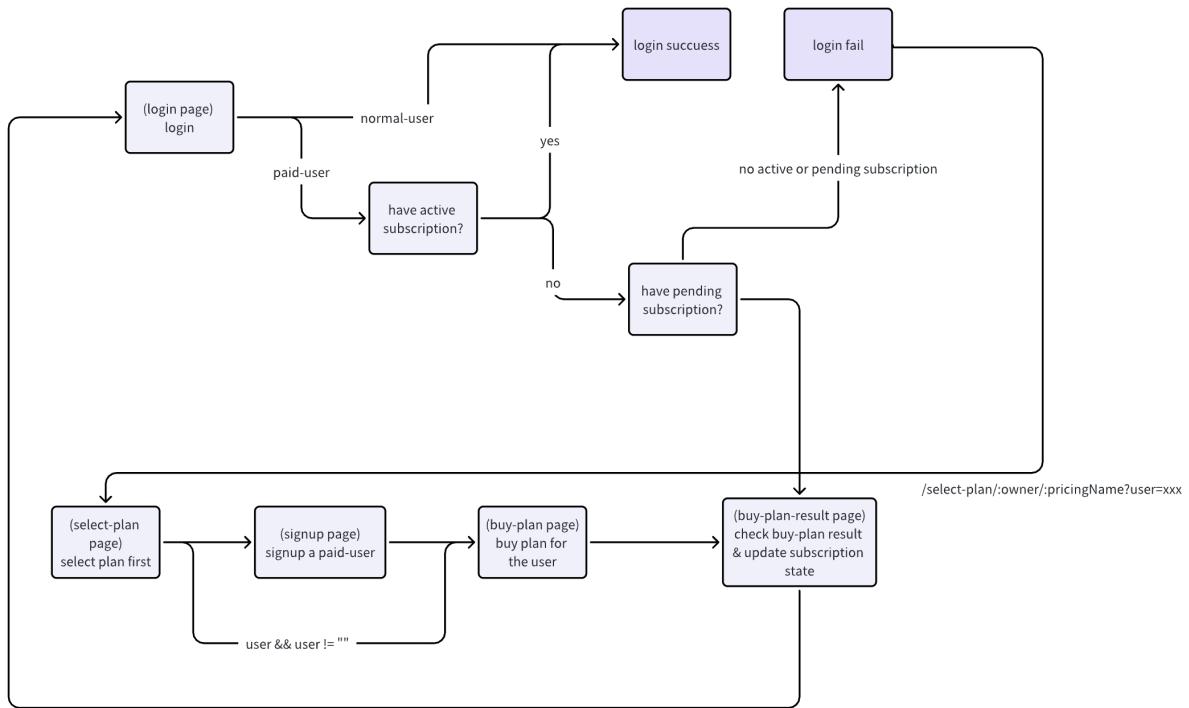
Basic Plan	Premium Plan	Enterprise Plan
<b>\$ 10.01</b> per month	<b>\$ 20.02</b> per month	<b>\$ 30.03</b> per month
For small teams, with limited technical support	For fast growing start-ups, with full technical support	For large & medium-sized enterprise, with full technical support
<a href="#">Getting started</a>	<a href="#">Getting started</a>	<a href="#">Getting started</a>

*Free 7-days trial available!*

Each [Pricing](#) belongs to a specific [Application](#). Users can select a plan and sign up as a [paid-user](#) through the corresponding [pricing page URL](#) of the [Pricing](#).

## General flow

The general flow looks like this:



1. Users enter the select-plan page of the `Pricing` by accessing the `pricing page URL` shared by the admin.

**Pricing Configuration:**

Setting	Value
Organization	built-in
Name	pricing_casdoor
Display name	Casdoor Pricing
Description	Casdoor hosting services providered by Casbin Inc.
Application	app-built-in
Plans	plan_basic X plan_premium X plan_enterprise X
Trial duration	7
Is enabled	Enabled (checkbox)
Preview	<a href="#">Copy pricing page URL</a> (button)

**Casdoor Pricing Preview:**

## Casdoor Pricing

Casdoor hosting services providered by Casbin Inc.

Basic Plan	Premium Plan	Enterprise Plan
<b>\$ 10.01</b> per month For small teams, with limited technical support	<b>\$ 20.02</b> per month For fast growing start-ups, with full technical support	<b>\$ 30.03</b> per month For large & medium-sized enterprise, with full technical support
<a href="#">Getting started</a>	<a href="#">Getting started</a>	<a href="#">Getting started</a>

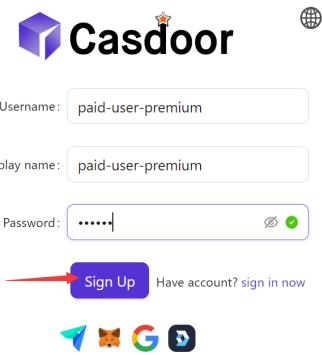
2. Users select a Plan to subscribe and complete the signup process, becoming a paid-user.

## Casdoor Pricing

Casdoor hosting services provided by Casbin Inc.

Basic Plan	Premium Plan	Enterprise Plan
<b>\$ 10.01</b> per month For small teams, with limited technical support	<b>\$ 20.02</b> per month For fast growing start-ups, with full technical support	<b>\$ 30.03</b> per month For large & medium-sized enterprise, with full technical support
<a href="#" style="background-color: #007bff; color: white; padding: 5px 10px; text-decoration: none; border-radius: 5px;">Getting started</a>	<a href="#" style="background-color: #007bff; color: white; padding: 5px 10px; text-decoration: none; border-radius: 5px;">Getting started</a>	<a href="#" style="background-color: #007bff; color: white; padding: 5px 10px; text-decoration: none; border-radius: 5px;">Getting started</a>

Free 7-days trial available!



3. After signing up, users will be redirected to the buy-plan page for the selected Plan to proceed with the payment.

### Buy Product

Name	Auto Created Product for Plan built-in/plan_premium(Premium Plan)	Tag	auto_created_product_for_plan	SKU	product_6g2mcm
Detail	This Product was auto created for Plan built-in/plan_premium(Premium Plan)				
Image					
Price	\$20.02 (USD)	Quantity	999	Sold	0
Pay	 Stripe  PayPal				

- Once the payment is successfully completed, the user's **Subscription** for the **Plan** is activated. Now, users can log in to Casdoor as a **paid-user**.



You have successfully completed the payment: Auto Created Product for Plan built-in/plan\_premium(Premium Plan)

Please click the below button to return to the original website

[Return to Website](#)

Here is a demo video:

# Product

You can add the product (or service) you want to sell. The following will guide you through the process of adding a product.

## Configuring Product Attributes

First, you need to understand the basic properties of the product:

- Tag
- Detail
- Currency
- Price
- Quantity
- Sold

Tag <a href="#">?</a> :	Casdoor Summit 2022
Detail <a href="#">?</a> :	This is a description
Currency <a href="#">?</a> :	USD
Price <a href="#">?</a> :	19
Quantity <a href="#">?</a> :	100
Sold <a href="#">?</a> :	10

## Payment Provider

In addition to setting these properties, you also need to add payment providers to the product. Multiple payment providers can be added to a product.

To learn how to configure a payment provider, refer to [Payment Provider](#)

Payment providers

provider_Alipay	x
provider_Alipay	

Return URL [?](#) :

<a href="http://localhost:8000/products/callback">http://localhost:8000/products/callback</a>
---

Finally, fill in the **Return URL**. This is the URL to which the payment provider page will redirect after the payment is completed.

## Success URL (Optional)

If you need the provider to redirect users directly to a custom URL instead of the Casdoor callback page, you can fill in the **Success URL** field. When configured, Casdoor will append the payment owner and transaction name as query parameters to your provided URL.

For example, if you set the Success URL to `http://example.com/payment/success`, users will be redirected to:

```
http://example.com/payment/  
success?transactionOwner={paymentOwner}&transactionName={paymentName}
```

You can include additional query parameters in your Success URL, such as:

```
http://example.com/payment/  
success?customParam=value&transactionOwner={paymentOwner}&transactionName={paymentName}
```

### ⚠ CAUTION

**Important:** If you configure the Success URL field, you must manually call the `NotifyPayment` API to complete the transaction, otherwise the payment will fail.

Call the API endpoint: `api/notify-payment/{paymentOwner}/{paymentName}` using the parameters provided in the Success URL query string.

## Preview the Product

You're done! Review the details and save:

Preview  :

[Test buy page..](#)

**Buy Product**

Name	Product				
Detail	This is a subscription.	Tag	Casdoor Summit 2022	SKU	product
Image					
Price	\$300 (USD)	Quantity	99	Sold	10
Pay	 Alipay				

# Payment

After the payment is successfully processed, you will be able to view the transaction information of the products in the **Payment** section. This information will include details such as the organization, user, purchase time, and product name.

## Invoice

To issue an invoice, navigate to the edit screen:

Type	Product	Price	Curren	Action
	A notebook computer	300	USD	<button>Result</button> <button>Edit</button> <button>Delete</button>

On the edit screen, you will need to fill in the relevant invoice information. There are two invoice types available: `individual` and `organization`.

To complete the process, simply click on the "issue invoice" button.

Please let us know if you have any further questions or concerns.

# Plan

The `Plan` describes a list of features for an application, each with its own name and price.

The features of a `Plan` depend on the Casdoor `Role`, which comes with a set of `Permissions`.

This allows for the independent description of a `Plan`'s features, regardless of naming and pricing.

For example, a `Plan` may have different prices depending on the country or date.

The following picture illustrates the relationship between a `Plan` and a `Role`.

## Plan

- Display Name
  - Price per month
- ...

## Role

- permission 1
  - permission 2
- ...
- permission N

# Plan Properties

Every `Plan` has the following properties:

- `Organization`
- `Name`
- `CreatedTime`
- `DisplayName`
- `Role`
- `PricePerMonth`
- `Currency`
- `PaymentProviders`: Users can purchase the `Plan` through the Payment providers. For information on how to configure a Payment provider, see [Payment provider](#).
- `IsEnabled`

The screenshot shows a user interface for editing a plan. At the top, there are three buttons: 'Edit Plan' (light gray), 'Save' (light gray), and 'Save & Exit' (purple). Below these are several input fields and dropdown menus:

- Organization**: A dropdown menu showing 'built-in'.
- Name**: An input field containing 'plan\_enterprise'.
- Display name**: An input field containing 'Enterprise Plan'.
- Role**: An empty input field.
- Description**: An input field containing 'For large & medium-sized enterprise, with full technical support'.
- Price per month**: An input field containing '30.03'.
- Price per year**: An input field containing '100'.
- Currency**: A dropdown menu showing 'USD'.
- Payment providers**: A dropdown menu showing 'provider\_payment\_stripe x provider\_payment\_paypal x'.
- Is enabled**: A toggle switch that is turned on (blue).

At the bottom, there are two buttons: 'Save' (light gray) and 'Save & Exit' (purple).

When a **Plan** is created through Casdoor, a related **Product** is automatically created.

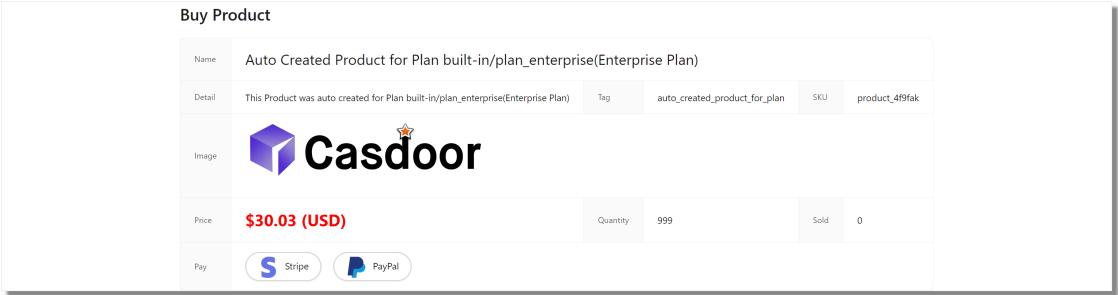
The information configured for the **Plan** will be automatically synchronized to the **Product**.

When users buy a **Plan**, they are essentially purchasing the related **Product** of the selected **Plan**.

Product Configuration:

Name (必填):	product_4f9fak
Display name (必填):	Auto Created Product for Plan built-in/plan_enterprise(Enterprise Plan)
Organization (必填):	built-in
Image (必填):	URL: https://cdn.casbin.org/img/casdoor-logo_1185x236.png
Preview:	
 Casdoor	
Tag (必填):	auto_created_product_for_plan
Detail (必填):	This Product was auto created for Plan built-in/plan_enterprise(Enterprise Plan)
Description (必填):	
Currency (必填):	USD
Price (必填):	30.03
Quantity (必填):	999
Sold (必填):	0
Payment providers (必填):	provider_payment_stripe   provider_payment_paypal
Return URL (必填):	http://
State (必填):	Published
Preview (必填):	<a href="#">Test buy page.</a>

Buy Product Page Preview:

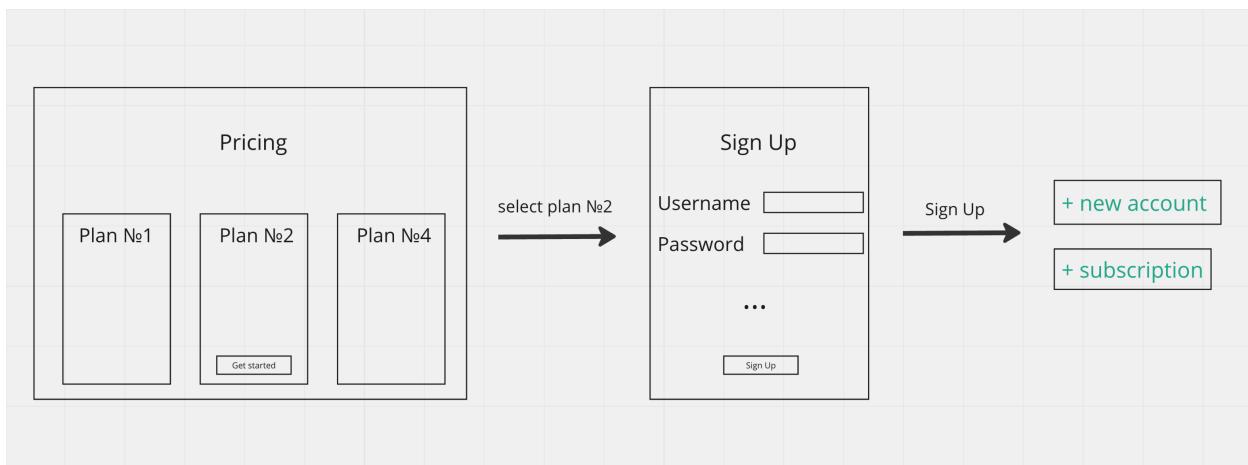


The preview shows the 'Buy Product' page with the following details:  
Name: Auto Created Product for Plan built-in/plan\_enterprise(Enterprise Plan)  
Detail: This Product was auto created for Plan built-in/plan\_enterprise(Enterprise Plan)  
Image: Casdoor logo  
Price: \$30.03 (USD)  
Quantity: 999  
Sold: 0  
Pay: Stripe, PayPal

# Pricing

The **Pricing** feature contains one or more **Plan** options, allowing users to sign up for **Applications** at different price-points.

The general flow of pricing options is depicted in the image below:



## Pricing Properties

Every **Pricing** subscription has the following properties:

- **Organization**
- **Name**
- **CreatedTime**
- **DisplayName**
- **Description**
- **Plans**: An array of Plans.
- **Enabled**
- **Application**

To see an example of the pricing interface, refer to the image below:

Edit Pricing Save Save & Exit

Organization : built-in

Name : pricing\_casdoor

Display name : Casdoor Pricing

Description : Casdoor hosting services provided by Casbin Inc.

Application : app-built-in

Plans : plan\_basic x plan\_premium x plan\_enterprise x

Trial duration : 7

Is enabled :

Preview : [Copy pricing page URL](#)

## Casdoor Pricing

Casdoor hosting services provided by Casbin Inc.

Basic Plan	Premium Plan	Enterprise Plan
<b>\$ 10.01</b> per month	<b>\$ 20.02</b> per month	<b>\$ 30.03</b> per month
For small teams, with limited technical support	For fast growing start-ups, with full technical support	For large & medium-sized enterprise, with full technical support
<a href="#">Getting started</a>	<a href="#">Getting started</a>	<a href="#">Getting started</a>

# Subscription

The `Subscription` feature helps in managing a user's selected `Plan`, making it easy to control the access to `Application` features.



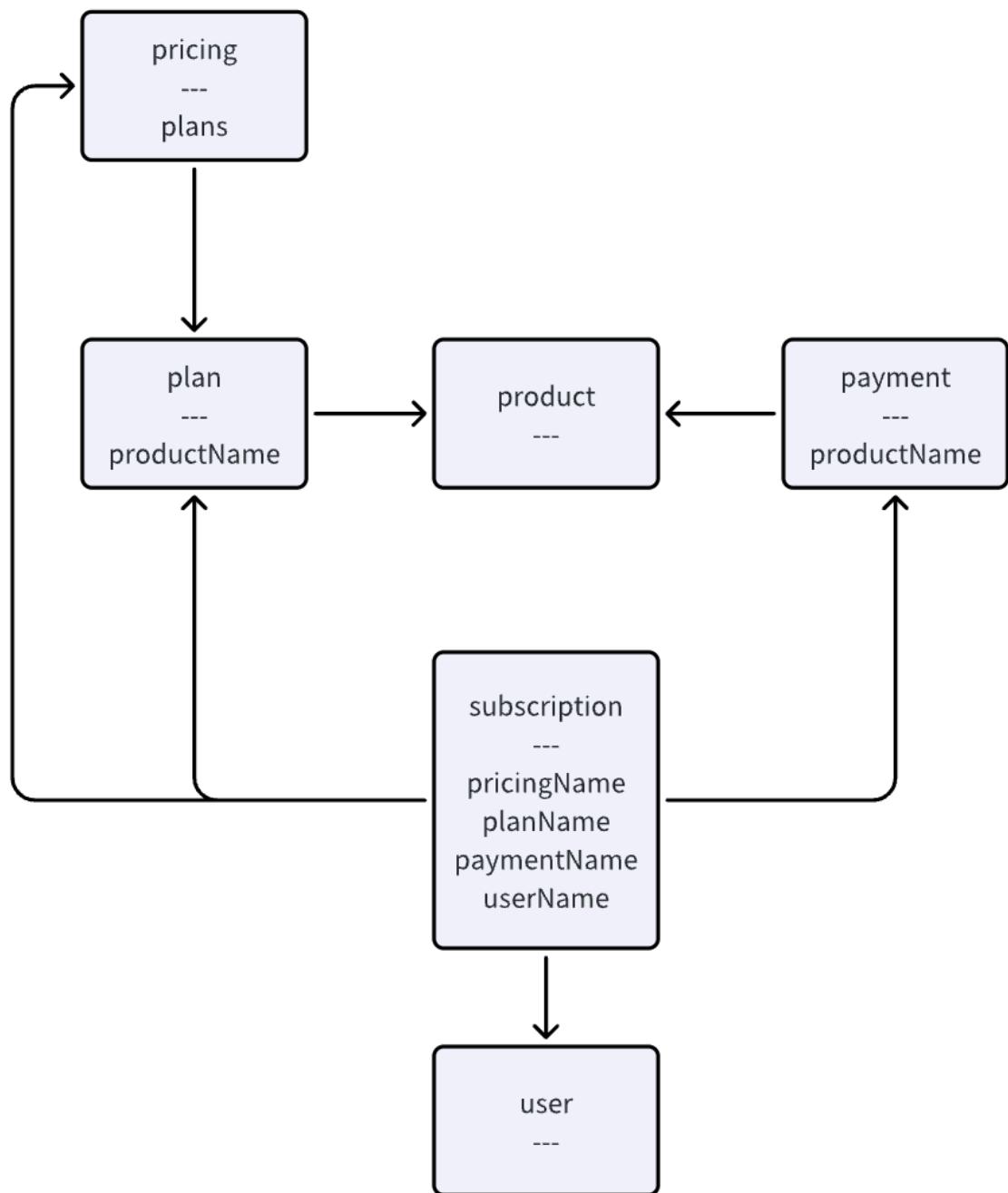
Since each `Plan` is based on a `Role`, you can assign the Plan's Role to a user and use the enforce API for permission checking.

A `Subscription` can be created in three ways:

- Manually by an admin
- Via the Pricing flow when purchasing a product with pricing and plan information (available for all user types)
- Via API

Any user can create a subscription when purchasing a product, enabling flexible conversion from free to paid tiers. Subscription enforcement (requiring an active subscription for access) only applies to users with `type = "paid-user"`.

The relationship between `Pricing`, `Plan`, `Subscription`, `Product`, and `Payment` is as follows:



# Subscription properties

Every Subscription has these properties:

- Owner
- Name
- CreatedTime
- DisplayName
- Description
- Duration: The duration of the Subscription.
- StartTime: The starting time for the Subscription to take effect.
- EndTime: The end time for the Subscription to take effect.
- Pricing: The related Pricing.
- Plan: The related Plan.
- Payment: The related Payment.
- User: The user who holds this Subscription.
- State: Currently, the Subscription has the following states: Pending, Error, Suspended, Active, Upcoming, Expired.

Edit Subscription

Organization <small>②</small> :	built-in
Name <small>②</small> :	sub.e719e2
Display name <small>②</small> :	New Subscription - e719e2
Duration <small>②</small> :	30
Start time <small>②</small> :	2023-08-25 <input type="button" value=""/>
End time <small>②</small> :	2023-09-24 <input type="button" value=""/>
User <small>②</small> :	paid-user-x
Pricing <small>②</small> :	pricing_casdoor
Plan <small>②</small> :	plan_premium
Payment <small>②</small> :	payment_20230825_160124_2d18867
Description <small>②</small> :	
State <small>②</small> :	<input checked="" type="radio"/> Active <input type="radio"/> Pending <input type="radio"/> Upcoming <input type="radio"/> Expired <input type="radio"/> Error <input type="radio"/> Suspended

# Transaction

The `Transaction` feature tracks financial activities for users and organizations in Casdoor, enabling balance management and transaction history.

Transactions are automatically created when users make purchases or recharge their balance. Each transaction updates the corresponding user or organization balance in real-time.

## Transaction Categories

Transactions in Casdoor fall into two categories:

**User Transactions** track individual user balances. When a user transaction is created, it updates both the user's balance and the organization's total user balance sum.

**Organization Transactions** track the organization's own operational balance, separate from user balances.

## Transaction Properties

Every Transaction has these properties:

- `Owner`
- `Name`
- `CreatedTime`
- `Category`: Either "User" or "Organization"
- `Type`: The transaction type (e.g., "Recharge", "Purchase")

- `User`: Required for User category transactions
- `Amount`: Transaction amount (positive for income, negative for expenses)
- `Currency`: The currency code (e.g., "USD", "CNY")
- `State`: Transaction state (e.g., "Pending", "Paid", "Failed")
- `Payment`: Related Payment record (if applicable)

## Balance Tracking

Casdoor maintains separate balance fields:

User Balance is stored on individual user records and tracks each user's available funds.

Organization Balances include two fields: `orgBalance` for the organization's own funds, and `userBalance` for the sum of all user balances within that organization.

Balances are automatically updated when transactions are created, modified, or deleted, ensuring consistency across the system.

## Viewing Transactions

Transaction history is displayed in two locations:

When editing a user account, all transactions for that user appear in a dedicated table below the user details.

When editing an organization, all organization-level transactions are shown in the organization edit page.

Both views provide a chronological record with transaction details including name, creation time, category, type, amount, and state.



# Users

## Overview

Managing Users in Casdoor

## MFA / 2FA

Secure your account with MFA / 2FA

## User Impersonation

Using master password to impersonate users in Casdoor

## User Roles

Roles assigned to users

 **Permissions**

User Permissions

 **Forms**

A tool for customizing list page displays of system entities.

# Overview

## User Properties

As an authentication platform, Casdoor is able to manage users. Every user has the following properties:

- `Owner`: The organization that owns the user
- `Name`: The unique username
- `CreatedTime`
- `UpdatedTime`
- `Id`: Unique identifier for each user
- `Type`
- `Password`
- `PasswordSalt`
- `PasswordOptions`: Password complexity options
- `DisplayName`: Displayed in the user interface
- `FirstName`
- `LastName`
- `Avatar`: A link to the user's avatar
- `PermanentAvatar`
- `Email`
- `Phone`
- `Location`
- `Address`
- `Affiliation`
- `Title`

- `IdCardType`
- `IdCard`
- `Homepage`
- `Bio`
- `Tag`
- `Region`
- `Language`
- `Gender`
- `Birthday`
- `Education`
- `Score`
- `Karma`
- `Ranking`
- `IsDefaultAvatar`
- `IsOnline`
- `IsAdmin`: Indicates whether the user is an admin of their organization
- `IsGlobalAdmin`: Indicates whether the user has permission to manage the Casdoor
- `IsForbidden`
- `IsDeleted`: When a user is soft-deleted (`IsDeleted = true`), they cannot sign in through any authentication method, including OAuth providers. This prevents deleted users from re-registering via third-party login.
- `SignupApplication`
- `Hash`
- `PreHash`
- `CreatedIp`
- `LastSigninTime`

- `LastSignInIp`
- `Roles`: An array of the user's roles (extended field, read-only via User API)
- `Permissions`: An array of the user's permissions (extended field, read-only via User API)

Unique IDs for social platform logins:

- `Github`
- `Google`
- `QQ`
- `WeChat`
- `Facebook`
- `DingTalk`
- `Weibo`
- `Gitee`
- `LinkedIn`
- `Wecom`
- `Lark`
- `Gitlab`
- `Adfs`
- `Baidu`
- `Casdoor`
- `Infoflow`
- `Apple`
- `Azure AD`
- `Azure AD B2C`
- `Slack`
- `Steam`

- Ldap

## Email Normalization

Casdoor normalizes all email addresses to lowercase to ensure uniqueness and prevent duplicate accounts. This means that `user@example.com`, `User@Example.com`, and `USER@EXAMPLE.COM` are treated as the same email address, complying with RFC 5321 standards.

This normalization happens automatically during:

- User signup and account creation
- User login and authentication
- Email duplicate checking

## Understanding Roles and Permissions Fields

The `Roles` and `Permissions` fields in the User object are extended fields that are dynamically populated when retrieving user data. These fields are not stored directly in the User table but are collected from the Roles and Permissions resources through the `ExtendUserWithRolesAndPermissions()` function.

**Important:** You cannot update roles and permissions through the `/api/update-user` endpoint, even when using the `columns` parameter. To manage user roles and permissions, you must use the dedicated APIs for Roles and Permissions resources.

To assign roles or permissions to users:

- Roles: Use the Roles API endpoints to create and assign roles. Visit the Roles management page (e.g., <https://door.casdoor.com/roles>) or use the [roles API](#).
- Permissions: Use the Permissions API endpoints to create and assign permissions. Visit the Permissions management page (e.g., <https://door.casdoor.com/permissions>) or use the [permissions API](#).

## Using the Properties Field

The `Properties` field is a flexible key-value map (`map[string]string`) that allows you to store custom attributes for users beyond the predefined fields in the User schema. This is particularly useful when you need to:

- Store organization-specific user attributes
- Add custom metadata that doesn't fit into standard fields
- Extend user profiles without modifying the core schema

## Importing Users from XLSX File

You can add new users or update existing Casdoor users by uploading an XLSX file containing user information.

In the Admin Console, go to Users and click the Upload (.xlsx) button.

The screenshot shows the Casdoor web application's user management page. At the top, there is a navigation bar with links for Home, Organizations, Users, Roles, Permissions, Providers, Applications, Resources, Tokens, Records, Webhooks, Syncers, Certs, and Swagger. On the far right, there is a user icon labeled "Admin". Below the navigation bar is a search bar with placeholder text "Search users" and a "Clear" button. Underneath the search bar is a table with columns: Organization, Application, Name, Created time, Display name, Avatar, Email, Phone, Affiliation, Country/Region, Tag, and Action. A single user row is visible: "built-in" under Organization, "app-built-in" under Application, "admin" under Name, "2022-03-20 20:07:23" under Created time, "Admin" under Display name, a blue owl icon under Avatar, "admin@example.com" under Email, "12345678910" under Phone, "Example Inc." under Affiliation, "United States of America" under Country/Region, and "staff" under Tag. There are "Edit" and "Delete" buttons in the Action column. At the bottom of the table, it says "1 in total" and has navigation links for "1" and "10 / page".

Made with ❤ by Casdoor

Select your XLSX file and click Open. The users will be imported.

We provide a template XLSX file named `user_test.xlsx` in the `xlsx` folder. The template includes 5 test users and headers for some required user properties.

The screenshot shows the same Casdoor user management interface as the previous one, but with a success message at the top: "Users uploaded successfully, refreshing the page". The user table now contains six rows of data, each representing a test user imported from the template. The columns and data are identical to the first screenshot, showing the successful import of the template users.

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# Bypass password encryption

When migrating users from an external database to Casdoor, there might be situations where you want to bypass or control the default encryption method provided by `organization` default Password type method.

This can be achieved by using the `passwordType` field during user import.

## ⓘ USER WITH BYCRYPT PASSWORD

Below is an example of a POST body request for the API route `/api/add-user`.

```
{  
  "owner": "organization",  
  "signupApplication": "first-app",  
  "email": "dev@dev.com",  
  "name": "dev",  
  "displayName": "developper",  
  "password": "$2a$10$.o/  
iVyDE9Xk8iowyHDnQRu72Rvi0i6FPa1ujhusbSCZeg7V0a6MY6",  
  "passwordType": "bcrypt",  
}
```

Here, the user's password is already encrypted using the bcrypt algorithm, so we specify the `passwordType` as "bcrypt" to inform Casdoor not to encrypt it again.

# MFA / 2FA

## About multi-factor authentication

MFA (Multi-Factor Authentication) is a security measure that can enhance the security of users and systems. It requires users to provide two or more factors of authentication to verify their identity when logging in or performing sensitive operations.

Casdoor supports multiple second-factor authentication methods including SMS codes, email codes, TOTP authenticator apps, and RADIUS authentication.

Once you enable MFA, Casdoor requires an authentication code every time someone attempts to sign in to your account. The only way someone can sign in to your account is if they know both your password and have access to the authentication code.

## Configuring MFA

1. On the user profile page, you can see the configuration of multi-factor authentication. If you cannot see it, make sure the organization has added the multi-factor authentication item in the account items table.

Managed accounts (2)

Application	Username	Password	Action
No data			

Multi-factor authentication (2):

Multi-factor methods	
Type : sms	Setup
Type : email	Setup

ID card (0):

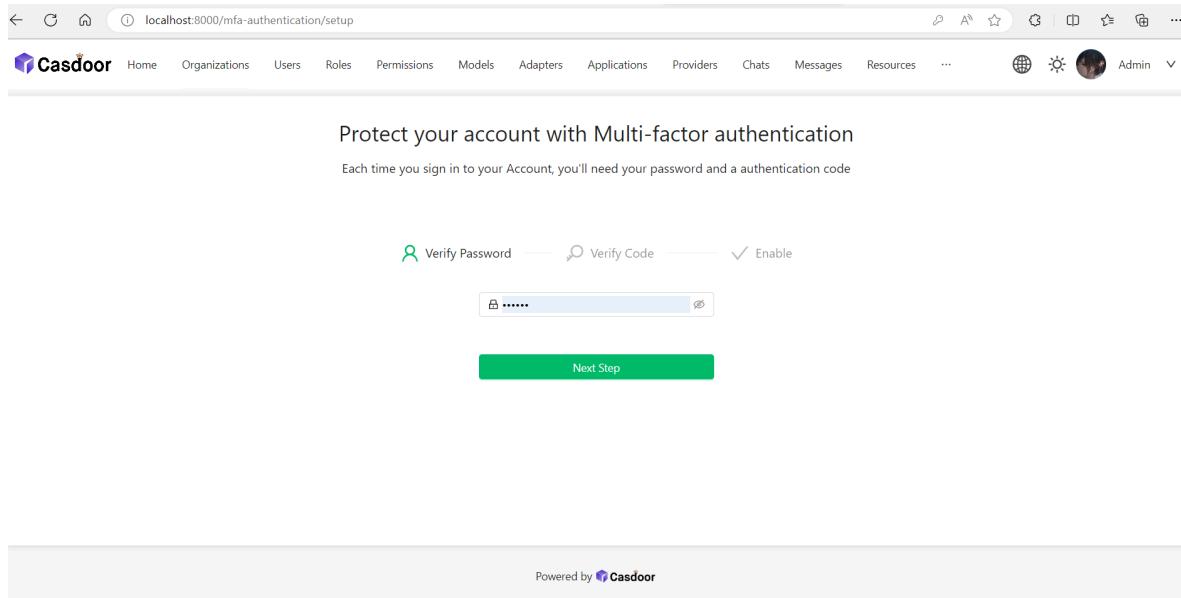
2. Click the "setup" button.

Multi-factor authentication (2):

Multi-factor methods

Type : sms	Setup
Type : email	Setup

3. Type your password and click "Next Step".



## Configuring multi-factor authentication using a TOTP mobile app

A time-based one-time password (TOTP) application automatically generates an authentication code that changes after a certain period of time. We recommend using:

- [Google Authenticator](#)
- [Microsoft Authenticator](#).



To configure authentication via TOTP on multiple devices, during setup, scan the QR code using each device at the same time. If 2FA is already enabled, and you want to add another device, you must reconfigure your TOTP app from the user profile page.

## Protect your account with Multi-factor authentication

Each time you sign in to your Account, you'll need your password and a authentication code

 Verify Password —  Verify Code —  Enable



Scan the QR code with your authenticator app

Or copy the secret to your authenticator app

P757K7XT5MIO5RPZQYSC



 Passcode

Next Step

[Use email](#)    [Use SMS](#)

1. In the "Verify Code" step, do one of the following:

- Scan the QR code with your mobile device's app. After scanning, the app displays a six-digit code that you can enter on Casdoor.
- If you cannot scan the QR code, you can manually copy and enter the secret in your TOTP app instead.

2. The TOTP mobile application saves your account on Casdoor and generates a new authentication code every few seconds. On Casdoor, type the code into the "Passcode" field and click "Next Step".

3. Above the "Enable" button, copy your recovery codes and save them to your device. Save them to a secure location because your recovery codes can help

you regain access to your account if you lose access.

## Protect your account with Multi-factor authentication

Each time you sign in to your Account, you'll need your password and a authentication code

 Verify Password —  Verify Code —  Enable

Please save this recovery code. Once your device cannot provide an authentication code, you can reset mfa authentication by this recovery code

ad30de29-3ce0-4e39-a97f-ceff1d503d3c

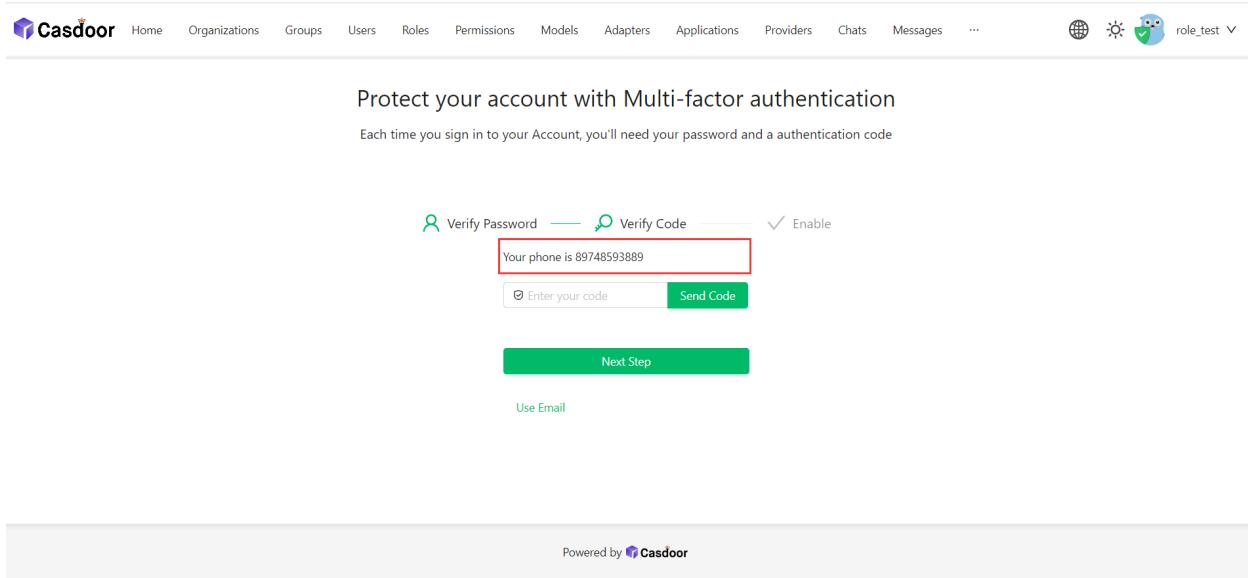
Enable

### CAUTION

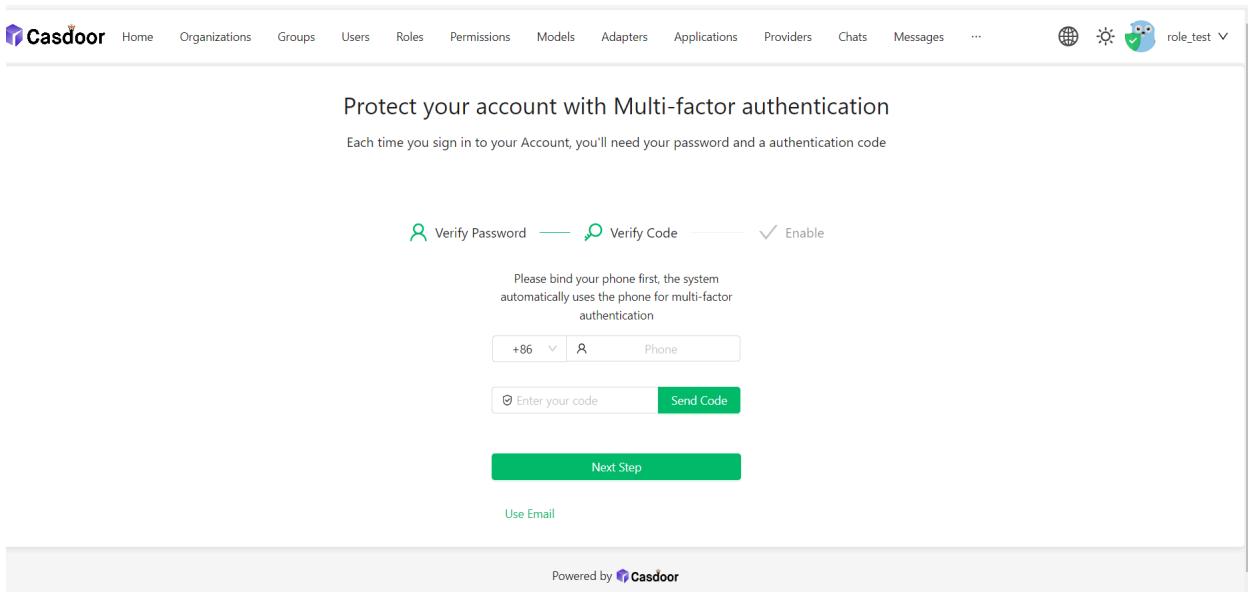
Each recovery code can only be used once. If you use a recovery code to sign in, it will become invalid.

## Configuring multi-factor authentication using text messages

If you have added your mobile phone number, Casdoor will use it to send you a text message.



If you have not added your mobile phone number, you need to add it first.



1. Select your country code and enter your mobile phone number.
2. Check if your information is correct and click "Send Code".
3. You will receive a text message with a security code. Then enter the code into the "Enter your code" field and click "Next Step".

- 
- 
- 
4. Above the "Enable" button, copy your recovery codes and save them to your device. Save them to a secure location because your recovery codes can help you regain access to your account if you lose access.

## Configuring multi-factor authentication using email

Configuring email as your multi-factor authentication method is similar to using text messages.

1. Use your current email or enter your email address and click "Send Code".
2. Then enter the code into the "Enter your code" field and click "Next Step".
3. Above the "Enable" button, copy your recovery codes and save them to your device. Save them to a secure location because your recovery codes can help you regain access to your account if you lose access.

## Configuring multi-factor authentication using RADIUS

RADIUS MFA allows you to authenticate against an external RADIUS server for the second authentication factor. This is useful when integrating with existing authentication infrastructure.

Before using RADIUS MFA, your administrator must configure a RADIUS provider in the application. Once configured:

1. Enter your RADIUS username when prompted during setup.
2. Enter your RADIUS password to verify the setup. This password will be verified against the configured RADIUS server. During subsequent logins, you'll enter this same RADIUS password as your second factor.
3. Above the "Enable" button, copy your recovery codes and save them to your

device. Save them to a secure location because your recovery codes can help you regain access to your account if you lose access.

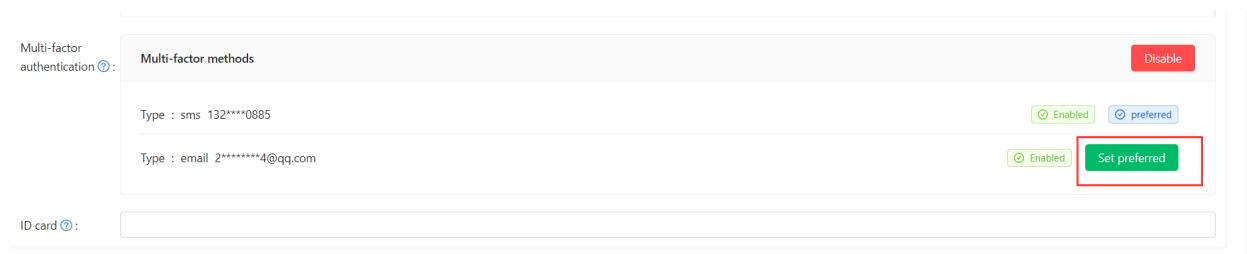
**ⓘ NOTE**

The RADIUS authentication communicates with the external RADIUS server configured by your administrator. Make sure you have the correct username and password for your RADIUS account.

## Changing your preferred MFA method

You can add multiple MFA methods. Only the preferred method will be used when you sign in.

If you want to set a preferred MFA method, click the "Set preferred" button.



A "Preferred" label will be displayed on your preferred method.

## Disabling multi-factor authentication

If you want to disable multi-factor authentication, click the "Disable" button. All your multi-factor authentication settings will be deleted.

Multi-factor authentication [②](#):

Multi-factor methods	
Type : sms 132****0885	<input checked="" type="checkbox"/> Enabled <a href="#">Set preferred</a>
Type : email 2*****4@qq.com	<input checked="" type="checkbox"/> Enabled <a href="#">Set preferred</a>

[ID card \[②\]\(#\)](#):

# User Impersonation

User impersonation allows administrators to temporarily sign in as another user within their organization. This feature is useful for troubleshooting user-specific issues, testing permissions, or providing support without requiring the user's actual password.

## Overview

Casdoor supports user impersonation through the **Master Password** feature. When an organization's master password is configured, administrators can use it to sign in as any user within that organization.

## How It Works

When you attempt to sign in as a user, Casdoor checks the password in the following order:

1. First, it checks if the entered password matches the organization's master password
2. If not, it checks if the password matches the user's actual password

If either check succeeds, the authentication is successful. This means that when a master password is set, administrators can use it to sign in as any user account.

## Setting Up Master Password

To enable user impersonation in your organization:

1. Navigate to your Organization settings in the Casdoor admin console
2. Go to the Organizations page
3. Click on your organization to edit it
4. Find the Master Password field
5. Enter a strong, secure password
6. Save the changes



#### SECURITY IMPORTANT

The master password is extremely sensitive. Anyone with access to the master password can sign in as any user in the organization. It should be:

- Known only to trusted administrators
- Stored securely (e.g., in a password manager)
- Changed immediately if compromised
- Sufficiently complex and unique

## Using Master Password for Impersonation

To sign in as a user using the master password:

1. Go to the login page for your organization: `/login/<organization_name>`



#### EXAMPLE

For an organization named "my-company", use: `https://your-casdoor-domain.com/login/my-company`

2. Enter the username of the user you want to impersonate

3. Enter the organization's master password (not the user's password)
4. Sign in

You will be authenticated as that user and have access to their account with their permissions and settings.

## Use Cases

Common scenarios where user impersonation is helpful:

- **Technical Support:** Troubleshoot user-specific issues by viewing exactly what the user sees
- **Testing:** Verify that permissions and roles are working correctly for different user types
- **Emergency Access:** Access critical information when a user is unavailable
- **Demonstration:** Show features or workflows from a specific user's perspective
- **Audit:** Investigate suspicious activity or verify user actions

## Disabling User Impersonation

To disable user impersonation:

1. Navigate to your Organization settings
2. Find the **Master Password** field
3. Clear the master password field
4. Save the changes

Once removed, administrators will no longer be able to use a master password to sign in as other users.

# Related Features

- **Default Password:** Organizations can also set a default password that is assigned to new users when they are created
- **Password Complexity:** Configure password requirements to ensure all passwords (including master password) meet security standards
- **Multi-Factor Authentication (MFA):** Even when using master password, MFA requirements will still apply if enabled for the user

# User Roles

Each user can have multiple roles. You can view the roles assigned to a user on their profile.

Bio [?](#) :

Tag [?](#) :

Signup application [?](#) :

Roles [?](#) :   (highlighted)

Permissions [?](#) :

3rd-party logins [?](#) :

Is admin [?](#) :

Is global admin [?](#) :

Is forbidden [?](#) :

Is deleted [?](#) :

## Role Properties

Every role has the following properties:

- `Owner`
- `Name`
- `CreatedTime`
- `DisplayName`
- `Enabled`
- `Users`: An array of sub users belonging to this role
- `Roles`: An array of sub roles belonging to this role

# Managing Roles via API

Roles are managed as separate resources in Casdoor. When you retrieve a user object, the `Roles` field is populated dynamically by extending the user data with information from the Roles resource.

To assign or update roles for users, use the Roles API endpoints rather than the User API. You can manage roles through:

1. Web UI: Navigate to the Roles management page (e.g.,  
<https://door.casdoor.com/roles>)
2. API: Use the role-specific endpoints documented in the [Casdoor API reference](#)

The Role resource allows you to define roles with specific users assigned to them. When a user is added to a role's `Users` array, that role will automatically appear in the user's `Roles` field when retrieving user data.

# Permissions

Each user may have multiple permissions. You can view the user's permissions on their profile.

The screenshot shows a user profile form with various fields. At the top, there are fields for Bio, Tag, Signup application, and Roles, each with a single input field. Below these, the 'Permissions' field is highlighted with a red box, containing a single input field labeled 'permission\_test'. Underneath this section, there is a heading '3rd-party logins' followed by four toggle switches labeled 'Is admin', 'Is global admin', 'Is forbidden', and 'Is deleted', all of which are currently off (grayed out).

Bio ? :	<input type="text"/>
Tag ? :	staff
Signup application ? :	app-built-in
Roles ? :	<input type="button" value="role_test"/> <input type="button" value="role_test2"/>
Permissions ? :	<input type="button" value="permission_test"/>
3rd-party logins ? :	
Is admin ? :	<input type="checkbox"/>
Is global admin ? :	<input type="checkbox"/>
Is forbidden ? :	<input type="checkbox"/>
Is deleted ? :	<input type="checkbox"/>

## Permission Properties

Permissions have the following properties:

- `Owner`
- `Name`
- `CreatedTime`
- `DisplayName`
- `Enabled`
- `Model`
- `Users`: An array of users belonging to this permission

- `Roles`: An array of roles belonging to this permission
- `ResourceType`
- `Resources`: An array of the resources
- `Actions`: An array of actions
- `Effect`

## Managing Permissions via API

Permissions are managed as separate resources in Casdoor. When you retrieve a user object, the `Permissions` field is populated dynamically by extending the user data with information from the Permissions resource.

To assign or update permissions for users, use the Permissions API endpoints rather than the User API. You can manage permissions through:

1. Web UI: Navigate to the Permissions management page (e.g.,  
<https://door.casdoor.com/permissions>)
2. API: Use the permission-specific endpoints documented in the [Casdoor API reference](#)

The Permission resource allows you to define permissions with specific users and roles assigned to them. When a user is added to a permission's `Users` array or belongs to a role in the permission's `Roles` array, that permission will automatically appear in the user's `Permissions` field when retrieving user data.

# Forms

The Forms feature is a tool, built to customize the display and configuration of list pages for the system's core entities. Administrators use the Forms feature to configure list page layouts and preview their final appearance.

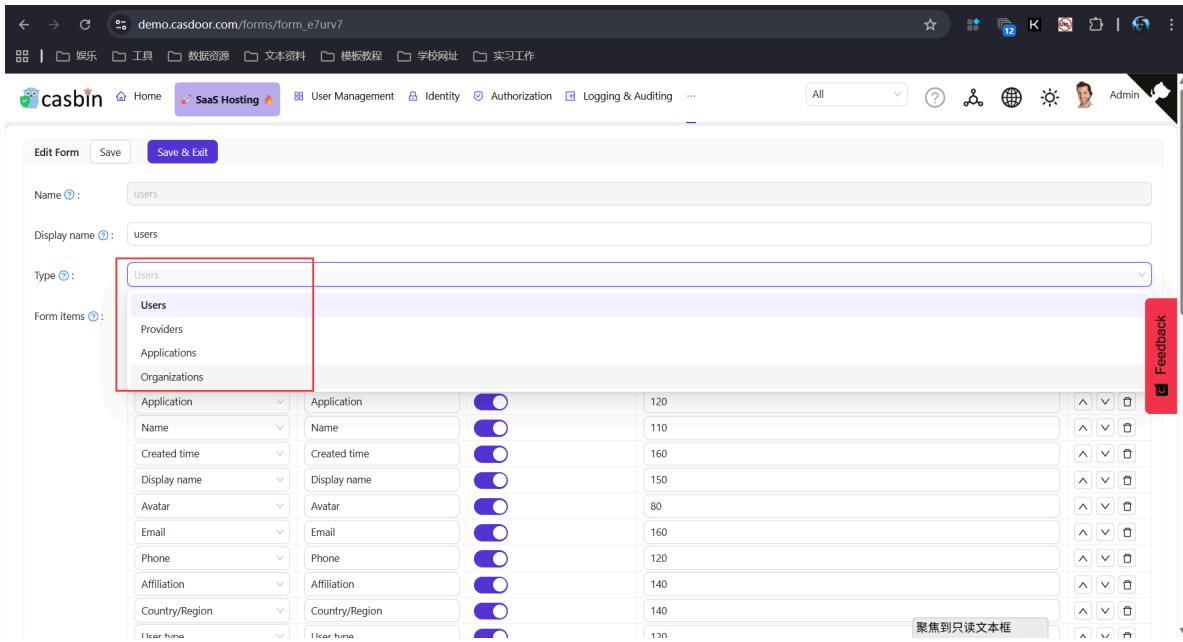
## 1. Forms Overview

The initial landing page of the Forms feature provides a comprehensive overview of all existing Forms in the system.

The screenshot shows the Casdoor Forms feature. At the top, there is a navigation bar with links like Home, SaaS Hosting, User Management, Identity, Authorization, Logging & Auditing, etc. Below the navigation bar, there is a search bar and a user profile icon for 'Admin'. The main area has a title 'Forms' with a 'Add' button. There is a table with columns: Name, Display name, Type, and Form items. One row is selected, showing 'form\_e7urv7' with 'New Form - e7urv7' as the display name, 'Users' as the type, and a list of form items: Organization, Name, Display name, Email, Affiliation, User type, Is admin, and Is deleted. To the right of the table, there is a sidebar titled 'System Info' with sections for Business & Payments, Admin, Application, Syncers, Webhooks, and Swagger. A red box highlights the 'Forms' section in the sidebar. At the bottom, there is a footer with the text 'Powered by Casdoor'.

## 2. Form Type Selection

To customize a specific list page, administrators first select the relevant **Form Type**—a classification that maps directly to the entity's list page (e.g., "User List Page", "Provider List Page").



### 3. Form Items Management

- **Modify Existing Form Items:** Update properties like `Label` (e.g., rename "User ID" to "Employee ID"), `Width` (adjust pixel column width), and `Visible` (toggle column display on/off).
- **Delete Unneeded Form Items:** Remove irrelevant columns to declutter the list page.
- **Reorder Form Items:** Use "Move Up" or "Move Down" controls to adjust the left-to-right sequence of columns on the list page.

The screenshot shows the Casdoor form configuration interface. At the top, there's a navigation bar with links like 'demo.casdoor.com', 'Form items', 'Reset to Default', and 'Add'. Below this is a table titled 'Form items' with columns: Name, Label, Visible, Width, and Action. A red border highlights the first row, which contains 'Organization' as the name, 'Big Organization' as the label, a visible switch (on), a width of 250, and an action column with edit and delete icons. The table also includes other fields like Application, Name, Created time, Display name, Avatar, Email, Phone, Affiliation, Country/Region, User type, Tag, Is admin, Is forbidden, and Is deleted.

## 4. Form Preview

The preview page mirrors the live system's list page layout, ensuring that column order, labels, widths, and visibility align with requirements before finalizing changes.

The screenshot shows the Casdoor form preview interface. At the top, there's a navigation bar with links like 'demo.casdoor.com', 'Users', 'Add', 'Upload (xlsx)', and 'Preview'. Below this is a search/filter section with fields for 'Is deleted' and a toggle switch. The main area is a table titled 'Preview' with columns: Users, Application, Name, Created time, Display name, Avatar, and Action. The table lists several user entries, each with an 'Edit' and 'Delete' button. The columns correspond to the form items defined in the configuration table above. The preview interface also includes a 'Feedback' button on the right side.



# Invitations

## Overview

Managing invitations in casdoor

# Overview

Currently casdoor already supports a more flexible invitation code method for user registration. Once the administrator opens the registration page with the invitation code as a mandatory option, users can only register if they have a valid invitation code.

Signup items								
Name	Visible	Required	Prompted	Label	Placeholder	Regex	Rule	
ID							Random	
Username	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Display name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					None	
Password	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Confirm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Email	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Normal	
Phone	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					None	
Agreement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Only signup	
Invitation code	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						

There are two main ways to use invitation codes, the default added is a random string code, composed of random numbers and letters. In order to be more flexible, the invitation code also supports regular matching to match multiple different invitation codes.

Invitations									
Name	Organization	Updated time	Display name	Code	Quota	Used count	Application	Action	
invitation_794tdt	built-in	2024-02-04 20:52:15	New Invitation - 794tdt	319jed4tjk	1	0	All	<button>Edit</button> <button>Delete</button>	
invitation_147y39	built-in	2024-02-04 20:47:47	New Invitation - 147y39	[a-zA-Z]2333	1	0	All	<button>Edit</button> <button>Delete</button>	

## Invitation Properties

Casdoor manages invitations through the following properties

- **Organization**: The organization that owns the invitation

- **Name**: The unique invitation name
- **Display name**: Displayed Invitation Name
- **Code**: Invitation code, you can fill in the specific invitation code string, you can also fill in the regular expression
- **Default code**: Used to populate the default invitation code in the invitation link. For randomly generated invitation codes, the default code is the same as the invitation code. For code in regular expression form, you need to fill in the default code by yourself that matches the regular expression rule in the code
- **Quota**: Maximum number of times an invitation code can be used
- **Used count**: Number of times the invitation code has been used
- **Application**: Allow applications that use this invitation code. Selecting **ALL** makes it available to all apps under the organization
- **Username**: Specific username required when registering with this invitation
- **Email**: Specific email required when registering with this invitation
- **Phone**: Specific phone required when registering with this invitation
- **State**: Status of invitation

## Default Invitation

The invitation code in the default invitation is a randomly generated string of numbers and letters, and with **Quota** set to 1, it can only be used once. Application are set to **ALL** by default, which means that all apps under the organization corresponding to this invitation can use this invitation code.

New Invitation	Save	Save & Exit	Copy signup page URL	Cancel
Organization <small>?</small> :	built-in			
Name <small>?</small> :	invitation_lxxgdh			
Display name <small>?</small> :	New Invitation - lxxgdh			
Code <small>?</small> :	yo8hrfa7sf			
Default code <small>?</small> :	yo8hrfa7sf			
Quota <small>?</small> :	1			
Used count <small>?</small> :	0			
Application <small>?</small> :	All			
Username <small>?</small> :				
Email <small>?</small> :				
Phone <small>?</small> :				
State <small>?</small> :	Active			

If the invitation code is set for a specific user and you want the user to register with the given `username`, `email`, `phone` and `invitation code`, you can restrict the user's registration by filling in the corresponding fields. If the fields are empty or if they are not configured on the registration page, casdoor does not force validation of these fields

Username <small>?</small> :	Bob
Email <small>?</small> :	bob@qq.com
Phone <small>?</small> :	15295959595

When it is necessary to reuse an invitation code, you can set `Quota` to a larger value, for example, if you want this invitation code to be used 10 times, then you can set `Quota` to 10. When you wish to stop registering with this invitation code, you can also do this by modifying the status of the invitation to `Suspended`.

Quota ⓘ :	<input type="text" value="10"/>
Used count ⓘ :	<input type="text" value="0"/>
Application ⓘ :	<input type="text" value="application_phs9si"/>
Username ⓘ :	<input type="text"/>
Email ⓘ :	<input type="text"/>
Phone ⓘ :	<input type="text"/>
State ⓘ :	<input type="text" value="Suspended"/>

### ⚠ CAUTION

When `username`, `email`, or `phone` is configured in the invitation, the `quota` should not be greater than one. This is because the user's `username`, `email`, and `phone` should be unique, and multiple users should not be able to register using the same `username`, `email`, or `phone`.

## Regular Match Invitation

Sometimes there is a need for a large number of invitation codes for user registration, and generating invitation codes one by one can be very inefficient. Casdoor supports validating invitation codes through regular expression matching. For example, by setting the `Code` as `"[a-z]2333"`, any invitation code that matches this regular expression will be successfully matched as a valid invitation code.

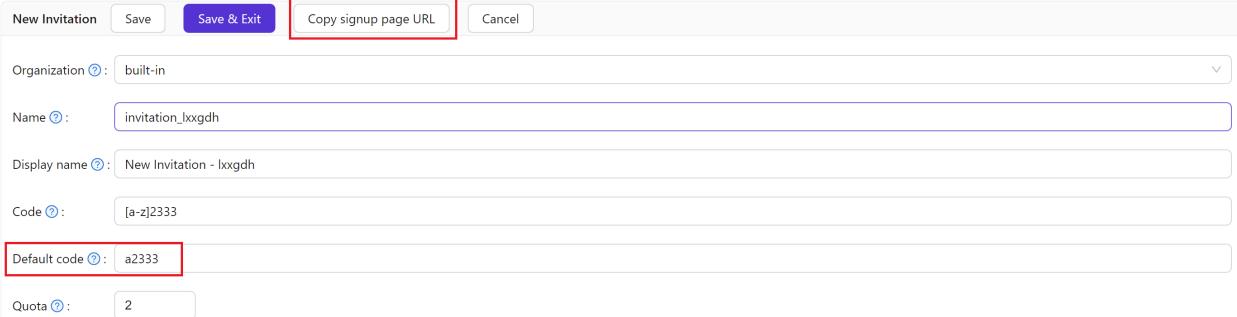
Code ⓘ :	<input type="text" value="[a-z]2333"/>
Default code ⓘ :	<input type="text" value="a2333"/>
Quota ⓘ :	<input type="text" value="2"/>
Used count ⓘ :	<input type="text" value="0"/>

### ⓘ NOTE

When using regular expressions to validate invitation codes, each invitation code that matches the regular expression can only be used once, and the Quota can still limit the number of usages. For example, when the Code is "[a-z]2333" and the Quota is 2, only a maximum of two invitation codes that match the regular expression can be successfully used.

## Invitation Link

Casdoor supports copying the invitation link corresponding to an invitation. The invitation code in the invitation link corresponds to the Default code field. Therefore, for invitations that use regular expressions, the Default code must be manually filled in to generate the correct invitation link. Additionally, when registering using an invitation link, the registration page will automatically populate certain field information set by the invitation corresponding to the invitation code.



The screenshot shows the 'New Invitation' form in Casdoor. The fields are as follows:

- New Invitation (button)
- Save (button)
- Save & Exit (button)
- Copy signup page URL (button, highlighted with a red box)
- Cancel (button)
- Organization: built-in
- Name: invitation\_lxxgdb
- Display name: New Invitation - lxxgdb
- Code: [a-z]2333
- Default code: a2333 (highlighted with a red box)
- Quota: 2



\* Username:

\* Password:

\* Email:

\* Phone:

\* Invitation code:

[Sign Up](#) Have account? [sign in now](#)

Powered by Casdoor

# Demo

# IP Whitelist



## Overview

Support IP limitation for user entry pages.

# Overview

Casdoor supports the ip whitelist function of the entry page. When a user accesses the entry page (login/signup/forget-password), Casdoor will decide whether to allow the user to access the entry page based on whether the client IP is in the whitelist. Here, we will show you how to enable the option to specify the ip whitelist function of the entry page at the user, application and organization levels.

## Configuration

### User Level

Casdoor will first determine whether the client address meets the user-level ip whitelist requirements.

If you want to specify user-level ip whitelist, you first need to add the "IP whitelist" account item on the edit page of the organization to which the user belongs. Then specify your ip whitelist by filling in the comma separated CIDR list, such as 192.168.1.0/24,25.112.0.0/16. If the ip whitelist is empty, it means there is no restriction on the client IP address.

The screenshot shows a user edit form with the following fields:

- Is forbidden :** A toggle switch is turned off.
- IP whitelist :** The value is 10.201.146.108/16.

At the bottom, there are two buttons: **Save** (white background) and **Save & Exit** (purple background).

### ⓘ INFO

If you forget how to customize users' account items, Please refer to the [Account Customization](#)

## Application Level

If the client IP address passes the user-level check, Casdoor will proceed to perform application-level check. You can specify the ip whitelist through the [IP whitelist](#) configuration option on the application edit page.

Affiliation URL [?](#) :



IP whitelist [?](#) :

192.168.1.0/24

Terms of Use [?](#) :



## Organization Level

Organization-level check will be performed last. You can use the [IP whitelist](#) configuration option on the organization edit page to specify organization-level ip whitelist.

Master verification code [?](#) :



IP whitelist [?](#) :

192.168.1.0/24

Init score [?](#) :

2000

Here is a demo video that shows how to use ip whitelist:



# Syncer

## Overview

Synchronizing users in Casdoor

## Database

Using Database Syncer to synchronize databases

## Azure AD

Using Azure AD Syncer to synchronize users from Azure Active Directory

## Keycloak

Using Keycloak Syncer to synchronize Keycloak

## WeCom

Using WeCom Syncer to synchronize users from WeCom



# Overview

As an authentication platform, Casdoor can easily manage users stored in databases.

## Syncer

Casdoor stores users in the `user` table. So, when you plan to use Casdoor as an authentication platform, there is no need to worry about migrating your application's user data into Casdoor. Casdoor provides a **syncer** to quickly help you synchronize user data to Casdoor.

Casdoor supports multiple syncer types to import users from different sources:

- **Database:** Synchronize users from any database supported by Xorm (MySQL, PostgreSQL, SQL Server, Oracle, SQLite). See [database syncer](#).
- **Azure AD:** Synchronize users from Azure Active Directory using Microsoft Graph API. See [Azure AD syncer](#).
- **Keycloak:** Import users directly from Keycloak databases. See [Keycloak syncer](#).
- **WeCom:** Fetch users from WeCom organizations via API. See [WeCom syncer](#).

## Synchronization hash

Casdoor uses a hash function to determine how to update a user. This hash value is calculated for each user in the table, using information such as the password or mobile phone number.

If the calculated hash value of a user with a specific `Id` changes compared to the original value, Casdoor confirms that the user table has been updated.

Subsequently, the database updates the old information, thereby achieving **bilateral synchronization** between the Casdoor user table and the original user table.

# Database

## Database Syncer

The users table we created as a demo is imported from the [template XLSX file](#).

owner	name	created_time	updated_time	id	type	password	password_salt	display_name	first_name	last_name	avatar	permanent_avatar_email
built-in	einstein	2022-03-20T20:46:29+08:00		1c57cc37-37f5-4def-9e9f-082189ef63d2	normal-user	123		Albert Einstein			https://casbin.org	z6mive@
built-in	euler	2022-03-20T20:47:08+08:00		bb7831b4-0d24-4e96-b043-18fd8cf15eb	normal-user	123		Leonhard Euler			https://casbin.org	3dzw4j@
built-in	galileo	2022-03-20T20:47:58+08:00		7920eb6c-f9f5-40ef-8e18-3ac99f49bdff	normal-user	123		Galileo Galilei			https://casbin.org	8p4f38@
built-in	gauss	2022-03-20T20:48:33+08:00		f0c288f6-2c0d-479b-b545-cb4cf96db36	normal-user	123		Carl Friedrich G��s			https://casbin.org	vqdsan@
built-in	tesla	2022-03-20T20:49:03+08:00		687c3068-fd21-4d32-b2ba-e13e0b369ax	normal-user	123		Nikola Tesla			https://casbin.org	9v73hn@

To create a new syncer, go to the **Syncers** tab and fill in all the required information as shown below. Then, save the changes.

Organization : built-in

Name : syncer\_qmpox9

Type : Database

Host : localhost

Port : 3306

User : root

Password : password

Database type : MySQL

Database : auth

Table : user

Table columns :

Column name	Column type	Casdoor column	Is key	Is hashed	Action
name	string	Name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
id	string	Id	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
first_name	string	FirstName	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



In general, you need to fill in at least the **ID** and **Name** in the Casdoor columns. Other important fields include **createdTime**, **Password**, and **DisplayName**.

The following fields are required:

- `Organization`: The organization that the user will be imported to
- `Name`: The syncer name
- `Type`: Select "database"
- `Host`: The original database host
- `Port`: The original database port
- `User`: The original database username
- `Password`: The original database password
- `Database type`: All Xorm-supported databases such as MySQL, PostgreSQL, SQL Server, Oracle, and SQLite
- `Database`: The original database name
- `Table`: The original user table name
- `Table columns`
- `Column name`: The original user column name
- `Column type`: The original user column type
- `Casdoor Column`: The Casdoor user column name

Optional fields:

- `Is hashed`: Whether to calculate hash value. When this option is enabled, the syncer will only synchronize the user if the field of the user in the origin table is updated. If this option is disabled, the syncer will still synchronize the user even if only the field is updated. In short, the user will not be synchronized until the fields involved in the hash calculation (enabled "Is hashed") are updated.
- `Is key`: Whether it is the primary key of the user in the origin table and the user in the Casdoor table. When synchronizing the database, it is determined based on the field whose "Is key" option is selected. At least one of the "Is key" buttons for fields should be selected. If none are selected, the first "Is

"key" option is selected by default.

- **Avatar base URL**: When syncing users, if the **Avatar base URL** is not empty and the origin `user.avatar` does not have the prefix "http", the new `user.avatar` will be replaced by **Avatar base URL + user.avatar**.
- **Affiliation table**: It is used to sync the affiliation of the user from this table in the database. Since the affiliation may be a code of type int in the "Affiliation table", it needs to be mapped to a string. Refer to [getAffiliationMap\(\)](#). Casdoor has some redundant fields to borrow, so [here](#) we use `score` to map the int code to a string name.

Once you have configured the syncer, enable the **Is enable** option and save. The syncer will start working.

Name	Organization	Created time	Type	Host	Port	User	Password	Database type	Database	Action
syncer_qmpox9	built-in	2023-08-09 18:57:36	Database	localhost	3306	root	password	mysql	auth	<button>Sync</button> <button>Edit</button> <button>Delete</button>

You can also use the "Sync" button for database synchronization.

## Update

When the **Table columns** are set as shown in the following figure, the update operation is performed.

Table columns <small>(2)</small>						
Column name	Column type	Casdoor column	Is key	Is hashed	Action	Action
name	string	Name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
id	string	Id	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
first_name	string	FirstName	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
password	string	Password	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

If the data in the two tables is different for the key, you can synchronize the data between the two tables based on the primary key.

- Update user in the original table

- Update user in the Casdoor table

## Add

When the `Table columns` are set as shown in the following figure, the add operation is performed.

Table columns <small>(1)</small>		Add	Column type	Casdoor column	Is key	Is hashed	Action		
Column name									
name	string	▼	Name	▼	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
id	string	▼	Id	▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
first_name	string	▼	FirstName	▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
password	string	▼	Password	▼	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

If the number of data between the two tables is different, add the data to the table with the lower number of data based on the primary key.

- Add user in the original table
- Add user in the Casdoor table

# Azure AD

Azure AD Syncer enables automatic user synchronization from Azure Active Directory (Microsoft Entra ID) to Casdoor. The syncer uses the Microsoft Graph API to fetch user information and keeps your user directory up to date.

## Prerequisites

Before configuring the Azure AD syncer, you need to set up an application registration in Azure Portal with the appropriate permissions.

### Step 1: Register an Application

Navigate to [Azure Portal](#) and register a new application:

1. Go to Azure Active Directory → App registrations → New registration
2. Enter a name for your application
3. Select the appropriate account type (typically "Accounts in this organizational directory only")
4. Click Register

### Step 2: Create a Client Secret

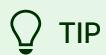
After registration, create a client secret:

1. In your application, go to Certificates & secrets
2. Click New client secret
3. Add a description and select an expiration period
4. Click Add and copy the secret value immediately (it won't be shown again)

## Step 3: Grant API Permissions

Configure the required Microsoft Graph API permissions:

1. Go to API permissions → Add a permission
2. Select Microsoft Graph → Application permissions
3. Add the `User.Read.All` permission
4. Click Grant admin consent for your organization



The `User.Read.All` permission allows the syncer to read all user profiles in your Azure AD tenant.

## Configuration

To create an Azure AD syncer in Casdoor:

1. Navigate to the Syncers tab
2. Click Add to create a new syncer
3. Fill in the following required fields:

Field	Description
Organization	The Casdoor organization where users will be imported
Name	A unique identifier for this syncer

Field	Description
Type	Select "Azure AD"
Tenant ID	Your Azure AD tenant ID (found in Azure Portal → Azure Active Directory → Overview)
Client ID	The Application (client) ID from your app registration
Client Secret	The client secret value you created earlier

Other database-related fields (Database type, Port, Database, Table) are not used for Azure AD syncer and can be left empty.

## Field Mappings

The syncer automatically maps Azure AD user attributes to Casdoor user fields:

Azure AD Field	Casdoor Field	Description
id	Id	User's unique identifier
userPrincipalName	Name	User principal name
displayName	DisplayName	User's display name
givenName	FirstName	First name

Azure AD Field	Casdoor Field	Description
surname	LastName	Last name
mail	Email	Email address
mobilePhone	Phone	Mobile phone number
jobTitle	Title	Job title
officeLocation	Location	Office location
preferredLanguage	Language	Preferred language
accountEnabled	IsForbidden	Account status (inverted)

 INFO

The `accountEnabled` field is inverted when mapped to `IsForbidden`.

When a user is disabled in Azure AD (`accountEnabled: false`), they will be marked as forbidden in Casdoor (`IsForbidden: true`).

## Running the Syncer

After configuration:

1. Click **Test Connection** to verify your credentials and permissions
2. Enable the syncer by toggling **Is enabled**
3. Click **Sync** to trigger an immediate synchronization

4. The syncer will automatically fetch all users from your Azure AD tenant

The syncer handles pagination automatically, retrieving all users regardless of the total count.

# Keycloak

## Keycloak Syncer

The Keycloak syncer is essentially the same as the [database syncer](#), with the added functionality of automatic configuration for Keycloak [Tables](#) and [Table columns](#).

Furthermore, the Keycloak syncer will fetch data from the [credential](#) table, [keycloak\\_group](#) table, and [user\\_group\\_membership](#) table, as user information in Keycloak is stored across multiple tables.

Organization : built-in

Name : keycloak

Type : Keycloak

Host : localhost

Port : 3306

User : root

Password : root

Database type : MySQL

Database : keycloak

Table : **user\_entity** configured automatically after selecting Keycloak as syncer type

Table primary key :

Table columns :

Table columns	Add	Column name	Column type	Casdoor column	Is hashed	Action
ID		string	Id	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
USERNAME		string	Name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
EMAIL		string	DisplayName	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
EMAIL_VERIFIED		boolean	Email	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
FIRST_NAME		string	EmailVerified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
LAST_NAME		string	FirstName	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
CREATED_TIMESTAMP		string	LastName	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
ENABLED		boolean	CreatedTime	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>
			IsForbidden	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<span>↑ ↓ ⏚</span>

# WeCom

WeCom Syncer allows you to automatically import users from your WeCom (???) organization into Casdoor. The syncer fetches user information from all departments in your WeCom organization through the WeCom API and keeps the user data synchronized.

## Configuration

The following fields are required:

- **Organization:** The Casdoor organization where users will be imported
- **Name:** A unique name for this syncer
- **Type:** Select "WeCom"
- **Corp ID:** Your WeCom organization's Corp ID
- **Corp Secret:** The secret for your WeCom application

## Setup Steps

### Step 1: Obtain WeCom Credentials

In your WeCom management platform, navigate to **My Company**, get Corp ID in **Company Information**.

WeCom

Service Provider Console | API Documentation | CSR | Quit

Homepage Contacts Collaboration App Management Customers and Partners Advanced Features Security and Management My Company

Company Information

Permissions

Chat Management

Contacts Management

Workspace Management

WeChat Workplace

External Communication Management

Security and Confidentiality

Setting

Company Information

Company Logo  Recommended size: 702\*180 [Go to verify](#)

Company short name **usher** (未认证) [Modify](#) Company not verified. After verification, the number of users can be increased.

Company address [Add](#)

Phone No. [Add](#)

Company Domain Na... [Add](#)

Company member **1 member(s)** [Statistics](#)

Company Department **1 dept(s)**

Added/Max. **1/1000** [Verify now to increase the limit](#)

Invoice Title [Add](#) Set VAT invoice titles for company members [?](#)

Industry Type **Internet and Related Services** [Modify](#)

Company Size **1-50** [Modify](#)

Creation time **2023-6-18**

Company ID **ww752595f99d89b1ca**

Already a WeCom service provider. [Go to Service Provider Platform](#)

In your Self-build App, get App secret (Corp Secret).

WeCom

Service Provider Console | API Documentation | CSR | Quit

Homepage Contacts Collaboration App Management Customers and Partners Advanced Features Security and Management My Company

Casdoor

« Back

 Casdoor ↴  
No app info Enabled

AgentId **1000003** [Edit](#)

Secret [View](#)

Allowed users 

Optionally, in Sync of Contacts Management Tool, you can get Sync of Contacts secret for advanced configurations.

The screenshot shows a web-based management tool for WeCom. At the top, there's a navigation bar with links for 'Homepage', 'Contacts', 'Collaboration', 'App Management', 'Customers and Partners', 'Advanced Features', 'Security and Management' (which is underlined), and 'My Company'. Below the navigation is a header titled 'Sync of Contacts'. On the left, there's a green icon representing 'Sync of Contacts'. The main content area has two tabs: 'Sync method' (selected) and 'API Sync'. Under 'Sync method', there's a 'Permission' section with a 'Read and edit Contacts' button and a 'View Permission Details' link. A red box highlights the 'Secret' field, which contains a 'View' and a 'Send again' button. Below this, there's a section for 'Company's Trusted IP' with a note that 3 IP address(es) are configured, along with a 'Settings' link and a note about only configured IP addresses having access via API. There's also a section for 'Set event receiving server' with a note about pushing data to a URL and a 'Learn More' link. At the bottom, there's a 'Disable API sync' link.

## Step 2: Configure the Syncer in Casdoor

Go to Syncers tab, select WeCom type and fill in the required information:

- Enter your WeCom Corp ID in the Corp ID field
- Enter your application Secret (App secret) in the Corp Secret field

Then save the changes.

Edit Syncer
Save
Save & Exit

---

Organization [?](#) : built-in

Name [?](#) : wecom\_syncer

Type [?](#) : WeCom

Database type [?](#) : MySQL

Host [?](#) :

Port [?](#) :

User [?](#) :  Company ID

Password [?](#) :  App secret

Client secret [?](#) :  Sync of contacts secret

Database [?](#) :

Table [?](#) :

Click **Test Connection** to verify your credentials before enabling the syncer.

## Field Mappings

The syncer automatically maps WeCom user fields to Casdoor user fields:

WeCom Field	Casdoor Field	Description
userid	Id	User's unique identifier
name	DisplayName	User's display name
email	Email	Email address
mobile	Phone	Phone number

WeCom Field	Casdoor Field	Description
avatar	Avatar	Profile picture URL
position	Title	Job title
gender	Gender	Gender (1=Male, 2=Female)
status/enable	IsForbidden	Account status

The syncer automatically handles user account status based on WeCom's status and enable fields:

- Activated users (status=1, enable=1): Normal Casdoor users
- Disabled, not activated, or quit users (status=2/4/5 or enable=0): Marked as forbidden in Casdoor

## Running the Syncer

After configuration, you can:

- Enable `Is enabled` to allow automatic synchronization on schedule
- Use the `Sync` button to manually trigger a synchronization
- The syncer will fetch users from all departments and deduplicate them automatically

# Certificates

## Overview

Managing Certificates in Casdoor

# Overview

Certificates (Certs) in Casdoor are used for signing and verifying tokens, as well as for securing communications in various integrations. They contain cryptographic keys that are essential for authentication and encryption processes.

## Certificate Properties

Each certificate in Casdoor has the following properties:

- **Owner:** The organization that owns the certificate
- **Name:** The unique name of the certificate
- **CreatedTime:** When the certificate was created
- **DisplayName:** A human-readable name for the certificate
- **Scope:** The scope of the certificate (e.g., `JWT`, `SAML`, `Payment`)
- **Type:** The type of certificate (e.g., `x509`, `Payment`)
- **CryptoAlgorithm:** The cryptographic algorithm used (e.g., `RS256`, `RSA`)
- **BitSize:** The key size in bits (e.g., 2048, 4096)
- **ExpiresInYears:** The expiration period of the certificate in years
- **Certificate:** The public certificate content
- **PrivateKey:** The private key content (stored securely)

## Certificate Scopes

Certificates in Casdoor serve different purposes based on their scope:

# JWT Certificates

JWT certificates are used to sign and verify JSON Web Tokens (JWT) for authentication. When a user logs in through Casdoor, the access token is signed using the private key of the JWT certificate.

## Use cases:

- Signing access tokens for OAuth/OIDC authentication
- Verifying tokens in backend applications
- Securing API communications

The JWT public key is required when configuring Casdoor SDK in your application. You can find and download the public key from the certificate edit page.

Name	Created time	Display name	Scope	Type	Crypto algorithm	Bit size	Expire in years	Action
cert_rjeegc	2022-02-16 11:04:10	New Cert - rjeegc	JWT	x509	RSA	4096	20	<button>Edit</button> <button>Delete</button>
cert-built-in	2022-02-15 12:31:46	Built-in Cert	JWT	x509	RSA	4096	20	<button>Edit</button> <button>Delete</button>

Public key [?](#)

[Copy public key](#)
[Download public key](#)

```
-----BEGIN CERTIFICATE-----
MIIEltCAUgBgAwAgIBAeJAMA0GCSqGSIb3DQEBCwUAUMLYxHTAbBgNVBAoTFENh
c2Rvb3IgT3JnYX5pemF0uW9uMRUewYDVQVQDewvYXNkb2y9EnCnQwHvNjMjEx
MDExMDgxMTUwWhNNDEmADE1MDgxMTUwJA2MRowGwxDVQKExrDXNkb29yIE9
Z2FuaxPhdGbjEVMBMGAAUEAxMMQzFzZG9vcIBDZXJ0MIIcJlANBgkqhkiG9w0B
AQEEAOCgAg8AMICCGkCAgEAsinpb5E1/ymlt1RISDSSEIRy+lw-Rjje4e5ej
rq4b82Myk7heCzrhmNEVeVxnhXuP0mBq5ypp/Qgo8vgEmjAEiTmz2k1NjQOQ
CjCyvUras0f/MmltC0j13x6mY1KhzJnsKsMhYY1vaxTEP3+VB8Hjg3MHFWb07
uvFMCleSw-0KErZCKTR8+9VB3janeBz//zQePPVh79bfZate/hLirPKOG9P1g
OwlioCTASasHTP4Qm/LQR0tHqZfbdySpVAQvhnaDFEtmTstRSB/wuJNCUDPTSLVjC
PTSLVjC
-----END CERTIFICATE-----
```

Private key [?](#)

[Copy private key](#)
[Download private key](#)

```
-----BEGIN PRIVATE KEY-----
MIUKQBAAKCgAgEAlnpb5E1/ymlt1RISDSSEIRy+lw-Rjje4e5ejrq4b8zMY
k7HeCzrhnNewEVXhXu1P0mBe5ypp/Qgo8vgEmjAEiTmz2k1NjQOQjCywUra
sO/fMnlC0j13x6mY1KhzJnsKsMhYY1vaxTEP3+VB8Hjg3MHFWb07uvMcje5
W8+0KErZCKTR8+9VB3janeBz//zQePPVh79bfZate/hLirPKOG9P1gOvwloC1A
3sarHTP4Qm/LQR0tHqZfbdySpVAQvhnaDFEtmTstRSB/wuJNCUDPTSLVjC
4WlISf6nkfko27kmPstj+btvcqsRAgtwdsB9h62kptjs1Yn7Auol3qt4zo
KblURyXkQjXivwCqzEtUuk5ew5zuPSIDLoByQTlx0jLAFNw3g/pzSDjg/
60d6HtmwZn45mjdyfxCdb1Kn7N+xtjnfahkewp2REV+RMcof4GuhsLsmk
mtUDeyZ9aBLsgj11YEQfMj2/ZEq+RVtU+wB84yK/D1bCY+IfrG5fpwDpS26b
oq4SRsvbz27tbw04ZxvOf/1UOrfjhjlblf0hfr/AeZMHPiK0Xvz4y+hqz6
8wfD0V9xYcRbsAT72320sYnjyEgn1RohnRgCplj/Mt2k84BkDwn8CawEA
AQKCAgAHPTjxVINRvYdctF21Ytd+IMlMjmpQH9wao86e04Upuxselpbx1Cp0Yu
npf7xjLtzrC/u6FDqz82bkt6GOT71xitFymNy4zWkn75gIgw5rmqTr0wwxb
AltXp4ZVM8t53W72MVbhabHAu50s0RvBNVn+zrl7/JVdm5wX6ah3uFL0W
aYEltQVn3WWk/Pf2A8WFDF49HKAATgUSk40eccccbaclL6CQ1FnrySb6/pBBG
khadtAkooGwVkcEmldkRzuaax48gBs7dzJkaW7jBW+IK5fRwpHmmySAKLah
bu9Mrr6hdHzlxrhbmD0ahoTwEFmsobuJ26caGEhufo4YIMk+Ba6E6QsmNsNR9
MsauqkSlprY06MjtQ7y1q3Sh18Sz2Ba3kkhby8Zs9Jkj+Dbtq2akQWzDG
JLEttbgdeYUMS2yc/C/FUVUN/PCdnt765kw7lmOrR2k156wpbFwR9jYgnQzbjd
4AOrgsR3AdavXw1o178ce324WVuuvNCjIVruBY/Dk0/W7jxjlvXevHGrhe
1Gc+FkKeBnFq6DzDlkx6n80nyzUzLyvnuRuvn9yVcrab5Xh55jCEOHOWo0gH
5GdesqMugTSOeve1R1UmcFCWVMMvvPeEushWjBjL38Bh4wLsQKCAQEAy4x+c+F8
IcbaktsrnHPRMYUJWve39tOvHdtm/3sx60ysrElxLsjagQ27nOlJF7Xj0H+
vc0GGAAojwA6J+QdeEf8lev04t56uMaes3dWPW4J0000HVClrgAo9GC2H0c940/n
6EqWYqz2Axu156RA3P/XetgsixVCFjGzpxFylbzqk871Yb9hc5zz26G3k8+FVZ
dp+DfYfB6dLrVuXdkX/GqUx7fR72fqvkGhrf5ZqvcKXfWSp4H71kQAUTQE
cJ8lgvqFlouOpID6DB10P/Btg5g9a+jSnnxcpcJ9yjchGsj1Tz5Dmqd
ha/rkyN4dNhY20CKCAgEA3gekrRODgjcooamedrvlprrxyK1SMRhAgjBeJidp
98HhNj08wra5XuMS6ZC7R0xOkikSQLp4gtT22W59lq/nPQ7PNSPdN2RzOlrmHcS
```

[Save](#)
[Save & Exit](#)

Once you have created a JWT certificate, you can select it in your application settings:

Edit Application
[Save](#)
[Save & Exit](#)

Name [?](#): app-built-in

Display name [?](#): Casdoor

Logo [?](#): URL: [https://cdn.casbin.com/logo/logo\\_1024x256.png](https://cdn.casbin.com/logo/logo_1024x256.png)

Preview: 

Home [?](#): <https://casdoor.org>

Description [?](#):

Organization [?](#): built-in

Client ID [?](#): c2ab05e8460fd3ff9ddc

Client secret [?](#): c9199f102508f089d253638f1a72b4c3e926d05

Cert [?](#): cert-built-in (highlighted)

Redirect URLs [?](#): cert\_rjeqc  
cert-built-in  
Redirect URL

## SAML Certificates

SAML certificates are used for signing and encrypting SAML assertions in Single Sign-On (SSO) integrations.

#### Use cases:

- SAML-based SSO integrations
- Signing SAML responses
- Encrypting SAML assertions for security

When configuring SAML, you need to create certificates for both the Identity Provider (IdP) and Service Provider (SP) to ensure secure communication.

For more information about SAML configuration, see the [SAML documentation](#).

## Payment Certificates

Payment certificates are used to secure payment transactions with payment providers like Alipay and WeChat Pay.

#### Use cases:

- Securing API communications with payment gateways
- Signing payment requests
- Verifying payment callbacks

For example, when integrating with Alipay, you need to create certificates for:

- App Cert: Contains the application's public certificate and private key
- Root Cert: Contains the payment provider's certificates

Organization : admin (Shared)

Name : cert\_alipay\_app

Display name : Cert Alipay

Scope : JWT

Type : Payment

Crypto algorithm : RS256

Bit size : 4096

Expire in years : 20

**Certificate**

-----BEGIN CERTIFICATE-----  
MIIEyCAgAwIBAgIBATQGICDCEwDwYDQGIANBgjwIwGwOBaQfPADCBgjLMAAGAUUE...  
-----END CERTIFICATE-----

**appCertPublicKey**

Ry+jW/BxkmOsVg1tSH15KL0LAtqA49LWn3n2zT1y50MhxozCjwvZeed5OpPhoP01+TU  
qnDAIn+cusefP3m3uJgb+hjYz2-N7d4lNT-hw3rbl0ltcwRjUjhgtisBfJfTuF...  
-----END PUBLIC KEY-----

**appPrivateKey**

M1EYQiBADANBgkqhkiGvB6AQFFASCBKwggSjAgEAOBAQCClQg8m7hVmtn8NhvtzqjQhNGbik+5IfymGINM6vXai4SkciftQcsSpk  
m1YE+rUyC7QEcHouf7z/1z9jZ3RFE1ed0c8d0c0c7CfCvXn0nefTa7nq...  
-----END PRIVATE KEY-----

For more details, refer to the [Alipay Payment Provider](#) and [WeChat Pay Provider](#) documentation.

# Creating a Certificate

To create a new certificate in Casdoor:

1. Navigate to the **Certs** page in the Casdoor admin console
2. Click the **Add** button to create a new certificate
3. Fill in the required fields:
  - **Name:** A unique identifier for the certificate
  - **Display Name:** A human-readable name
  - **Scope:** Select the appropriate scope (JWT, SAML, Payment)
  - **Type:** Select the certificate type
  - **Crypto Algorithm:** Choose the cryptographic algorithm (e.g., RS256 for JWT)
  - **Bit Size:** Set the key size (typically 2048 or 4096 bits)
  - **Expire In Years:** Set the expiration period

4. You can either:
  - Generate a new certificate automatically by saving the form
  - Upload an existing certificate and private key

# Using Certificates

## In Applications

After creating a JWT certificate, you need to associate it with your application:

1. Go to the Applications page
2. Edit your application
3. In the Cert field, select the certificate you created
4. Save the application

The certificate will now be used to sign all tokens issued by that application.

## In SDK Configuration

When configuring Casdoor SDK in your backend application, you need to provide the public key from the JWT certificate:

```
var CasdoorEndpoint = "https://door.casdoor.com"
var ClientId = "541738959670d221d59d"
var ClientSecret = "66863369a64a5863827cf949bab70ed560ba24bf"
var CasdoorOrganization = "casbin"
var CasdoorApplication = "app-casnnode"

//go:embed token_jwt_key.pem
var JwtPublicKey string
```

You can download the public key from the certificate edit page in Casdoor.

For more information about SDK configuration, see the [SDK documentation](#).

## In Payment Providers

When setting up payment providers, you need to configure the appropriate certificates:

1. Create the required certificates (e.g., App Cert and Root Cert for Alipay)
2. Go to the Providers page
3. Edit or create your payment provider
4. In the Cert field, select the certificate you created
5. Save the provider

## Best Practices

- **Key Size:** Use at least 2048-bit keys for RSA certificates. For higher security, consider 4096-bit keys.
- **Expiration:** Set appropriate expiration periods. For production environments, 1-5 years is typical.
- **Security:** Keep private keys secure and never expose them in client-side code or public repositories.
- **Rotation:** Regularly rotate certificates before they expire to maintain security.
- **Backup:** Keep secure backups of your certificates and private keys.
- **Separate Certificates:** Use different certificates for different purposes (JWT, SAML, Payment) to limit the impact of potential key compromise.

# Certificate Management

You can manage certificates through:

- **Web UI:** The Casdoor admin console provides a user-friendly interface for certificate management
- **API:** Use the [Casdoor REST API](#) to programmatically manage certificates
- **Data Initialization:** Certificates can be included in initialization files for automated deployments

For more information about data initialization, see the [Data Initialization documentation](#).

# Tokens

## Overview

Introduction to tokens in Casdoor

# Overview

Casdoor is built on OAuth and utilizes tokens as users' OAuth tokens.

## Access Token and ID Token

In Casdoor, the `access_token` and `id_token` are identical. Both tokens contain the same JWT payload with user information and claims. This is a design choice in Casdoor that simplifies token management.

This approach means:

- Both tokens contain the same user information and custom claims
- Both tokens can be used interchangeably for authentication and authorization
- The token format and expiration settings apply to both tokens equally
- You cannot configure separate claims for `access_token` and `id_token`

## Token Fields

The following are the available token fields in Casdoor:

- `Owner`
- `Name`
- `CreatedTime`
- `Application`
- `Organization`
- `User`
- `Code`

- `AccessToken`
- `ExpireIn` (Tokens will expire in hours)
- `Scope` (Scope of authorization)
- `TokenType` (e.g., `Bearer` type)

After logging into the application, there are three options to generate a JWT Token:

- `JWT`
- `JWT-Empty`
- `JWT-Custom`
- `JWT-Standard`

The options are as follows: `JWT` will generate a token containing all User fields, `JWT-Empty` will generate a token with all non-empty values for the user, and `JWT-Custom` will generate a token containing custom User Token fields (you can choose attributes in the Token fields). `JWT-Standard` will generate a token with some standard OIDC token fields include email, phone, gender and Address (Address value in other format is not standard).

Token format (?) : `JWT-Custom`

Token fields (?) : `Owner` x `CreatedTime` x `DisplayName` x `UpdatedTime` x |

<code>Owner</code>	<code>Name</code>	<input checked="" type="checkbox"/>
<code>CreatedTime</code>	<code>UpdatedTime</code>	<input checked="" type="checkbox"/>
<code>Id</code>	<code>Type</code>	<input checked="" type="checkbox"/>
<code>Password</code>	<code>PasswordSalt</code>	

Token expire (?) :

Refresh token expire (?) :

Failed signin limit (?) :

Failed signin frozen time (?) :

# Webhooks

## Webhooks Overview

Configuring Webhooks in Casdoor

# Webhooks Overview

## Overview

Casdoor provides an event-driven system that allows you to integrate with external applications using webhooks. Webhooks enable real-time communication by sending HTTP `POST` requests with a JSON payload to a configured endpoint whenever a specified event occurs. This allows your application to react to Casdoor events such as user sign-ups, logins, logouts, and profile updates.

## How Webhooks Work

When an event is triggered in Casdoor:

1. Casdoor sends a `POST` request to the specified webhook URL.
2. The request contains a JSON payload with event details.
3. Your application processes the payload and executes relevant actions based on the event type.

## Supported Events

Casdoor webhooks support various user-related events, which are stored in the `action` field of the request payload.

Event	Description
<code>signup</code>	Triggered when a user signs up

Event	Description
<code>login</code>	Triggered when a user logs in
<code>logout</code>	Triggered when a user logs out
<code>update</code>	Triggered when user details are updated

## Setting Up a Webhook

To configure a webhook in Casdoor:

1. Navigate to the Casdoor Webhooks Section:

- Open your Casdoor instance.
- Go to **Settings > Webhooks**.

2. Create a New Webhook:

- Click on Add Webhook.
- Enter the Webhook URL where Casdoor should send event data.
- Select the events you want to listen to (e.g., `signup`, `login`).
- (Optional) Add custom headers for authentication.

3. Save the Webhook Configuration:

- Once saved, Casdoor will start sending event notifications to the specified endpoint.

# Example Webhook Payload

Here's an example of a JSON payload sent to your webhook when a user logs in:

```
{  
  "event": "login",  
  "timestamp": 1709452800,  
  "user": {  
    "id": "12345",  
    "username": "johndoe",  
    "email": "johndoe@example.com"  
  }  
}
```

Your application should parse this payload and perform necessary actions, such as logging the event or notifying another service.

# Testing Your Webhook

Before deploying your webhook integration, you can test it using tools like:

- [Beeceptor](#) – Allows you to create a custom webhook URL and inspect incoming requests.
- [Webhook.site](#) – Provides an instant webhook endpoint for testing.

## Example Test with Beeceptor

1. Visit [Beeceptor](#) and create a new endpoint.
2. Copy the generated webhook URL and configure it in Casdoor.
3. Trigger a test event (e.g., log in to Casdoor).

4. Check Beeceptor's dashboard to inspect the received request.

## Handling Webhooks in Your Application

Your server should be able to process incoming webhook requests. Below is a simple example in Node.js:

```
const express = require('express');
const app = express();

app.use(express.json());

app.post('/webhook', (req, res) => {
  console.log('Received webhook:', req.body);
  res.status(200).send('Webhook received');
});

app.listen(3000, () => console.log('Server running on port 3000'));
```

## Conclusion

Casdoor webhooks provide a powerful way to integrate with external applications by enabling event-driven interactions. Whether you need to sync user data, trigger notifications, or update external systems, webhooks allow seamless automation.

To ensure a smooth integration, always validate incoming requests and test your webhooks with tools like Beeceptor or Webhook.site before deploying them in production.

# LDAP

## Overview

Casdoor cooperates with an LDAP server

## Configuring and Syncing LDAP Users

Configuring LDAP in Casdoor for user synchronization

## LDAP Server

How to connect LDAP client in Casdoor

# Overview

Support for an LDAP server has been introduced into Casdoor. Casdoor is able to synchronize users from LDAP servers to Casdoor in order to use them as user accounts for logging in, and authenticate them using the LDAP servers. Casdoor also supports setting up cron jobs to synchronize users automatically on a regular basis.

## Details about Casdoor-LDAP synchronization mechanism

The way Casdoor cooperates with an LDAP server is described as follows:

1. **Synchronization:** Casdoor can connect to an LDAP server, fetch users' information, and read all users' information (including `uidNumber`, `uid`, `cn`, `gidNumber`, `mail`, `email`, `emailAddress`, `telephoneNumber`, `mobile`, `mobileTelephoneNumber`, `registeredAddress`, `postalAddress`). It then creates Casdoor accounts for each user in the LDAP, and stores these accounts in the database.
2. **Authentication:** As we have seen, Casdoor does not fetch LDAP users' passwords. When an account that is synchronized from the LDAP server tries to log in through Casdoor, instead of checking the password stored in Casdoor's database, Casdoor connects to the LDAP server and verifies whether the user's password is correct.
3. **User identification:** Casdoor uses `uid` to exclusively identify a user. Therefore, please ensure that every LDAP user has a unique `uid`.

Once a user is synchronized into Casdoor, their information is independent from the LDAP user. This means that if you modify the user's information in Casdoor,

the user's information in the LDAP will not be modified, and vice versa (except for the LDAP user's password, as we rely on it to authenticate the user).

# Configuring and Syncing LDAP Users

LDAP configurations are specific to each organization, as LDAP users will be synchronized into them.

To modify the configuration, you need to use a global admin user. Enter the following information for LDAP user synchronization on the "organization" page.

LDAPs <small>(?)</small>		Add	Server name	Server	Base DN	Auto Sync	Last Sync	Action
Example LDAP Server	example.com:389		ou=People,dc=example,dc=com	Disable			<button>Sync</button>	<button>Edit</button>

# Configuring Connection to LDAP Server

Configure the connection settings for your LDAP server.

Edit LDAP		Save	Save & Exit	Sync LDAP
Organization	:	built-in		
ID	:	691edec0-f1ab-4e23-8f9f-a824a383032f		
Server name	:	Example LDAP Server		
Server host	:	example.com		
Server port	:	389		
Enable SSL	:	<input checked="" type="checkbox"/>		
Base DN	:	ou=built-in,dc=example,dc=com		
Search Filter	:	(objectClass=posixAccount)		
Filter fields	:	<input type="checkbox"/> uid <input type="checkbox"/> Email		
Admin	:	cn=admin,dc=example,dc=com		
Admin Password	:	*****		
Auto Sync	:	0	mins	

## Server Name

A friendly name that managers can use to identify different servers.

Example: Example LDAP Server

## Server Host

The host or IP address of the LDAP server.

Example: `example.com`

## Server Port

The port number of the LDAP server. Only numeric values are allowed.

Example: `389`

## Base DN

Casdoor uses Sub search mode by default when searching in LDAP. The Base DN is the basic distinguished name used for the search. Casdoor will return all users under the specified Base DN.

The admin account configured in Casdoor should have at least read-only permissions at the Base DN.

Example: `ou=Example, dc=example, dc=com`

## Search Filter

Casdoor uses a search filter to query LDAP users.

Example: `(objectClass=posixAccount)`

## Filter Fields

Filter fields are the identifiers of the user in the LDAP server. When logging in to Casdoor as an LDAP user, the entered login username is regarded as the `uid` of the LDAP user. You can also configure other fields, such as `mail` or `mobile`.

The screenshot shows the Casdoor web application interface for managing LDAP configurations. The main title is "Edit LDAP". The form fields include:

- Organization: built-in
- ID: 691edec0-f1ab-4e23-8f9f-a824a383032f
- Server name: Example LDAP Server
- Server host: 1
- Server port: 389
- Enable SSL: (checkbox)
- Base DN: ou=built-in,dc=example,dc=com
- Search Filter: (objectClass=inetOrgPerson)
- Filter fields: (empty)
- Admin: cn=admin,dc=example,dc=com
- Admin Password: (redacted)

Buttons at the top right include "Save", "Save & Exit", and "Sync LDAP".

## Admin

An account that can log in to the specified LDAP server.

The login method (DN or ID) depends on the LDAP server settings you want to connect to.

Example: `cn=manager,dc=example,dc=com`

## Admin Password

The password for the LDAP server Admin account.

## Auto Sync

Set to `0` to disable auto sync. Any other value means Sync every few minutes.

# Synchronizing Users

The sync table displays all the users obtained from the LDAP server within the specific `ou`. If the users have already been synced, the checkbox will be disabled. You can select the users by checking the box, and then sync the selected users from the LDAP server.

Example LDAP Server		Sync	Edit LDAP			
<input type="checkbox"/>	CN	UidNumber /Uid	Group Id	Email	Phone	Address
<input type="checkbox"/>	zhan san	1000 / zsan	500			
<input type="checkbox"/>	li si	1001 / lsi	500			
<input type="checkbox"/>	a dmin	1002 / admin	500			
<input type="checkbox"/>	tom brown	1007 / jery	500			
<input type="checkbox"/>	wrie jerry	1003 / wjerry	500			
<input type="checkbox"/>	admin2	1004 / admin2	500			
<input type="checkbox"/>	yyyy	1005 / yyyy	500			

< 1 > 10 / page ▾

## Default group

Group to which users belong after synchronization.

### ⚠ CAUTION

If the `uid` of a user in the LDAP server is the same as the `name` of an existing user in the Casdoor organization, Casdoor will create a new user with a `name` that includes the `uid` and a random string. However, this user may not be able to log in because the name of the newly synced user does not exist in the LDAP server. Therefore, it is recommended to avoid this situation.

# LDAP Server

Many systems, like [Nexus](#), support LDAP authentication. Casdoor also implements a simple LDAP server, which supports bind and search operations.

This document describes how to connect to the LDAP server in Casdoor and implement simple login authentication.

## LDAP Server Port

The LDAP server listens on port [389](#) by default. You can change the default port by modifying the [ldapServerPort](#) value in [conf/app.conf](#).

## How it Works

Similar to the LDAP client in Casdoor, the users in the LDAP server are all subclasses of [posixAccount](#).

When the server receives a set of data transmitted by the LDAP, it will parse the [cn](#) and [ou](#), where [cn](#) represents the username and [ou](#) represents the organization name. The [dc](#) does not matter.

If it is a bind operation, the server will use Casdoor to verify the username and password and grant the user permission in Casdoor.

If it is a search operation, the server will check whether the search operation is legal, according to the permissions granted to the client by the bind operation, and return a response.



INFO

We only support Simple Authentication.

## How to Bind

In Casdoor LDAP server, we only recognize `DN` similar to this format:

`cn=admin,ou=built-in,dc=example,dc=com`.

Please set the `DN` of the admin user to the above format. Then, you can use this `DN` to bind to the LDAP server with the user's password to log in to Casdoor for verification. If the server verification is successful, the user will be granted authority in Casdoor.

## How to Search

Once the bind operation completes successfully, you can perform the search operation. There are some differences between search and bind operations.

- To search for a certain user, such as `Alice` under the `built-in` organization, you should use a `DN` like this: `ou=built-in,dc=example,dc=com`, and add `cn=Alice` in the Filter field.
- To search for all users under a certain organization, such as all users in `built-in`, you should use a `DN` like this: `ou=built-in,dc=example,dc=com`, and add `cn=*` in the Filter field.
- To search for all users in all organizations (assuming the user has sufficient permissions), you should use a `DN` like this: `ou=*,dc=example,dc=com`, and add `cn=*` in the Filter field.
- To search for all users in a specific group, you should use a filter query like this: `(memberOf=organization_name/group_name)` in the Filter field.

# Supported RFC-Style Features

## Partial Root DSE Query Support

The Root DSE (baseDN="") provides directory capabilities.

- Query namingContexts (organization list):

```
ldapsearch -x -H ldap://<casdoor-host>:389 -D "cn=admin,ou=built-in" -w <passwd> -b "" -s base "(objectClass=*)" namingContexts
```

Returns visible organization DNs.

- Query subschemaSubentry: ldapsearch -x -H ldap://<casdoor-host>:389

```
-D "cn=admin,ou=built-in" -w <passwd> -b "" -s base "(objectClass=*)" subschemaSubentry
```

Returns subschemaSubentry: cn=Subschema.

## Schema Query Support

Query objectClasses: ldapsearch -x -H ldap://<casdoor-host>:389 -D "cn=admin,ou=built-in" -w <passwd> -b "cn=Subschema" -s base "(objectClass=\*)" objectClasses

Returns definitions for posixAccount and posixGroup.

## POSIX Filters

- (objectClass=posixAccount) returns user list.
- (objectClass=posixGroup) returns group list under organization (e.g.,  
ldapsearch -x -H ldap://<casdoor-server>:389 -D "cn=admin,ou=built-in" -w <passwd> -b "ou=<org>" "(objectClass=posixGroup)").

Note: (objectClass=posixGroup) Does not support combined searches like (&(objectClass=posixGroup)(cn=<group>)). Please use memberOf for

searching members in a group.

# RADIUS



## Overview

Use Casdoor as RADIUS server

# Overview

You can use Casdoor as a RADIUS server. RADIUS is a client/server protocol, the client can be a NAS or any computer running RADIUS client software.

## Congiure

Before deploying Casdoor, you need to modify the RADIUS-related configurations in the `conf/app.conf` file, including the server port and secret:

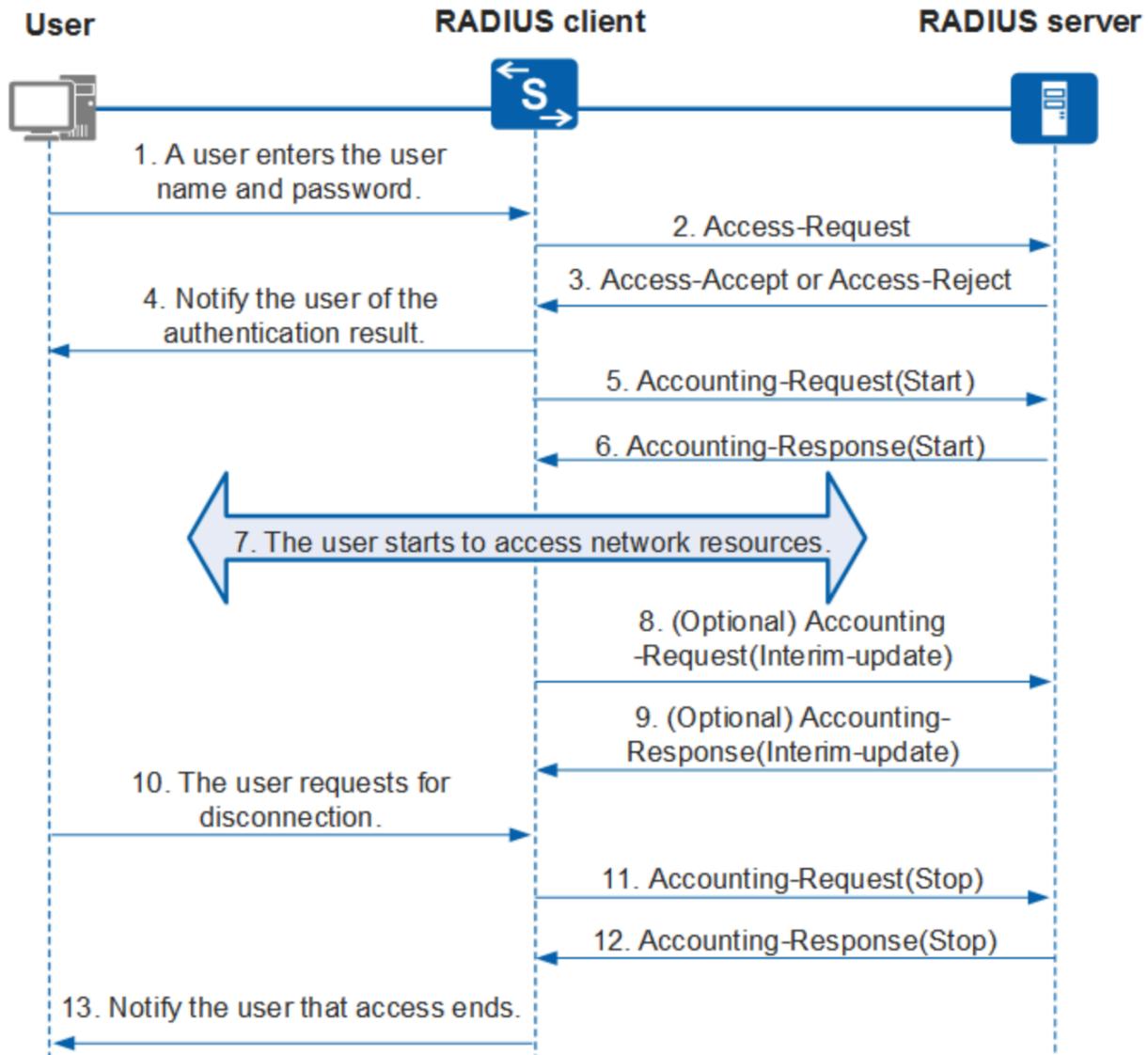
```
radiusServerPort = 1812  
radiusSecret = "secret"
```

Now you can use Casdoor as RADIUS server.

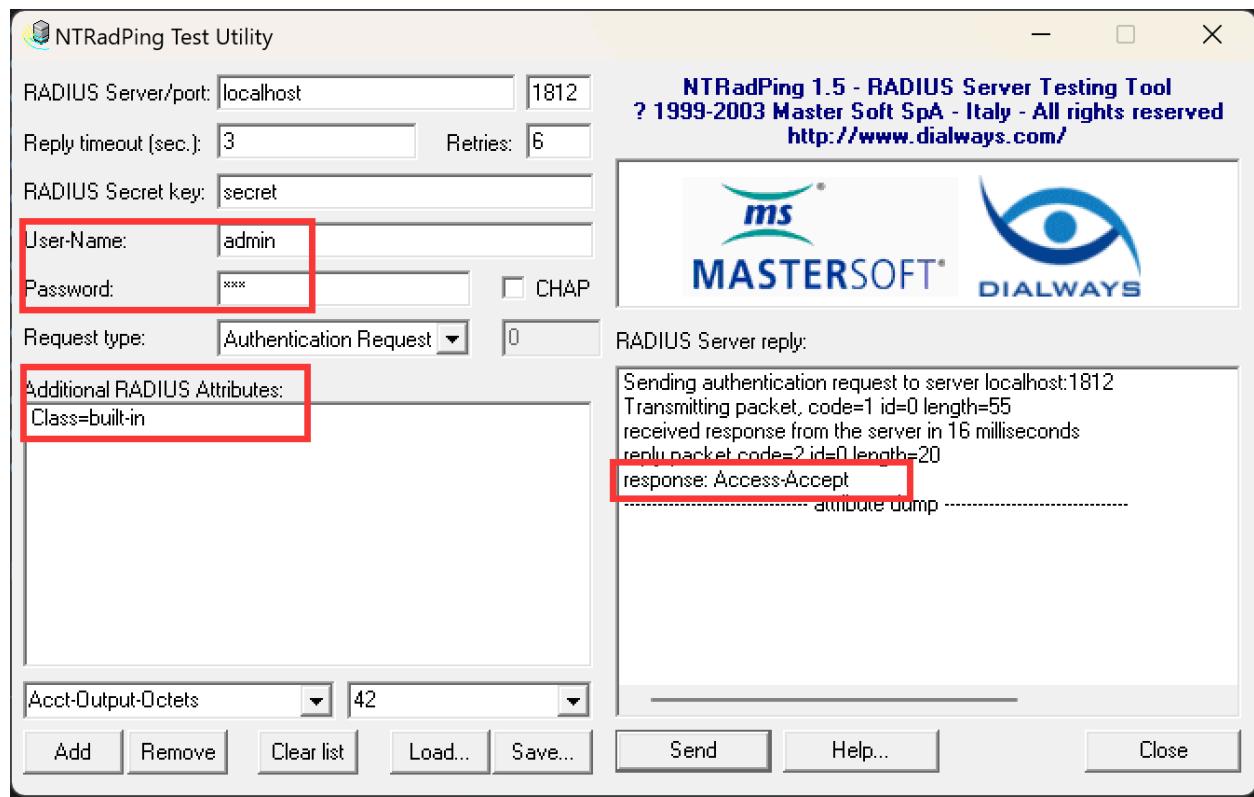
## Use Casdoor as RADIUS server

Casdoor currently can support follow standard RADIUS request:

- `Access-Request` : The authentication request message is sent by the RADIUS client to the Casdoor. Casdoor determines whether to allow access based on the user information carried in the message and reply with `Access-Reject` or `Access-Accept`.
- `Accounting-Request` : When a user starts or stops accessing network resources, the RADIUS client will send accounting request (Start/Interim-update/Stop) message to Casdoor. Casdoor will record relevant accounting request message and reply with `Accounting-Response`.



Since Casdoor uses Organization to manage User, where each User belongs to a specific Organization, the `Class` attribute in the request needs to be set as the User's Organization.



# SCIM



## Overview

Use Casdoor as SCIM service provider

# Overview

The SCIM protocol is a HTTP-based protocol for provisioning and managing identity data specified through SCIM schemas. You can use Casdoor as a SCIM service provider.

## Use Casdoor as SCIM service provider

Currently Casdoor only support `User Resource Schema`, you can manage users through SCIM User operations. You can interact with the Casdoor through the following endpoints:

Endpoint	Method	Description
/scim/ ServiceProviderConfig	GET	Provide details about the features of the SCIM standard that are supported, for example, the resources that are supported.
/scim/Schemas	GET	Provide details about the service provider schemas.
/scim/ResourceTypes	GET	Specifie metadata about each resource.
/scim/Users/:id	GET	Retrieve a user with resource identifier <code>id</code> .
/scim/Users	GET	Query users with query parameters

Endpoint	Method	Description
		(currently only support <code>startIndex</code> and <code>count</code> ).
/scim/Users	POST	Create a user.
/scim/Users/:id	PUT	Update a user with resource identifier <code>id</code> .
/scim/Users/:id	PATCH	Modify a user with resource identifier <code>id</code> by PATCH operation.
/scim/Users/:id	DEL	Delete a user with resource identifier <code>id</code> .

For more details, please refer to [rfc7644](#).

## User Resource

Casdoor implements the mapping between `User Resource Schema` (SCIM) and `User` (Casdoor). The mapping relationship between attributes is as follows:

User Resource Schema (SCIM)	User (Casdoor)
<code>id</code>	<code>Id</code>
<code>meta.created</code>	<code>CreatedTime</code>
<code>meta.lastModified</code>	<code>UpdatedTime</code>

User Resource Schema (SCIM)	User (Casdoor)
meta.version	UpdatedTime
externalId	ExternalId
user_name	Name
password	Password
display_name	DisplayName
profile_url	Homepage
user_type	Type
name.given_name	FirstName
name.family_name	LastName
emails[0].value	Email
phone_numbers[0].value	Phone
photos[0].value	Avatar
addresses[0].locality	Location
addresses[0].region	Region
addresses[0].country	CountryCode

Since Casdoor use Organization to manage User, where each User belongs to a specific Organization, the `organization` attribute should be passed in `Enterprise User Schema Extension` (identified by the schema URI `urn:ietf:params:scim:schemas:extension:enterprise:2.0:User`). Here is a User Resource Schema SCIM representation in JSON format:

```
{  
    "active": true,  
    "addresses": [  
        {  
            "country": "CN",  
            "locality": "Shanghai",  
            "region": "CN"  
        }  
    ],  
    "displayName": "Bob~",  
    "emails": [  
        {  
            "value": "test1@casdoor.com"  
        }  
    ],  
    "externalId": "1234123543234234",  
    "id": "ceacbc6-40d0-48f1-af23-0990232d570a",  
    "meta": {  
        "resourceType": "User",  
        "created": "2023-10-08T23:51:55+08:00",  
        "lastModified": "2023-10-12T20:38:49+08:00",  
        "location": "Users/ceacbc6-40d0-48f1-af23-0990232d570a",  
        "version": "2023-10-12T20:38:49+08:00"  
    },  
    "name": {  
        "familyName": "bob",  
        "formatted": "alice bob",  
        "givenName": "alice"  
    },  
    "nickName": "Bob~",  
    "phoneNumbers": [  
    ]}
```



# Integrations



3 items



1 items



10 items



17 items

 **JavaScript**

2 items

 **Lua**

1 items

 **PHP**

6 items

 **Ruby**

1 items

 **Haskell**

1 items



Python

1 items

# C++



## Nginx

Using Casdoor with Nginx



## NginxCommunityVersion

Using Casdoor with Nginx (Not Nginx-Plus) and Oauth2-Proxy



## Envoy

Using Casdoor in Envoy

# Nginx

Enable OpenID Connect-based single sign-on for applications proxied by NGINX Plus using Casdoor as the identity provider (IdP).

This guide explains how to enable single sign-on (SSO) for applications that are being proxied by NGINX Plus. The solution uses OpenID Connect as the authentication mechanism, with [Casdoor](#) as the identity provider (IdP), and NGINX Plus as the relying party.

See Also: You can find more information about the NGINX Plus OpenID Connect integration in the project's GitHub repository.

## Prerequisites

The instructions assume that you have the following:

- A running Casdoor server. Refer to the Casdoor documentation for [Server Installation](#) and [Try with Docker](#).
- An NGINX Plus subscription and NGINX Plus R15 or later. For installation instructions, see the [NGINX Plus Admin Guide](#).
- The [NGINX JavaScript module](#), which is required for handling the interaction between NGINX Plus and the IdP. After installing NGINX Plus, install the module using the appropriate command for your operating system.

For Debian and Ubuntu:

```
sudo apt install nginx-plus-module-njs
```

For CentOS, RHEL, and Oracle Linux:

```
sudo yum install nginx-plus-module-njs
```

- The following directive should be included in the top-level (“main”) configuration context in `/etc/nginx/nginx.conf` in order to load the NGINX JavaScript module:

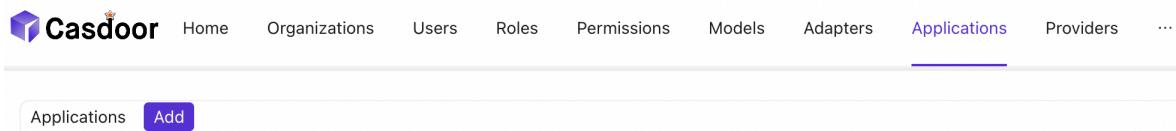
```
load_module modules/ngx_http_js_module.so;
```

## Configuring Casdoor

**Note:** The following procedure reflects the Casdoor GUI at the time of publication, but the GUI is subject to change. Use this guide as a reference and adapt to the current Casdoor GUI as necessary.

To create a Casdoor client for NGINX Plus in the Casdoor GUI, follow these steps:

1. Log in to your Casdoor account at <http://your-casdoor-url.com/login/>.
2. In the top navigation column, click Application. On the Application page that opens, click the Add button in the upper left corner.



3. On the Edit Application page that opens, change the value in the Name and Display name fields to the name of the application for which you’re enabling SSO. Here, we’re using NGINX Plus.

Name  :	NGINX Plus
Display name  :	NGINX Plus

In the Redirect URLs field, type the URL of the NGINX Plus instance including the port number, and ending in `/_codexch` (in this guide it is [https://your-site-url.com:443/\\_codexch](https://your-site-url.com:443/_codexch)).

Redirect URLs  :	<a href="#">Redirect URLs</a> <a href="#" style="background-color: #58357E; color: white; border-radius: 5px; padding: 2px 10px;">Add</a>
<b>Redirect URL</b>	
 <a href="https://my-nginx.example.com:443/_codexch">https://my-nginx.example.com:443/_codexch</a>	

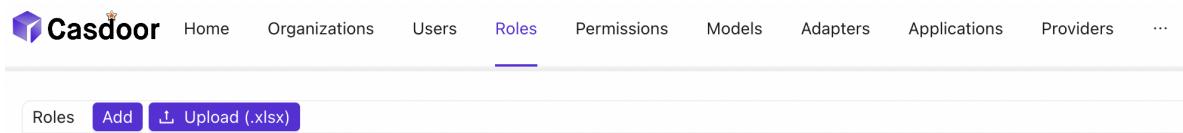
#### Notes:

- For production, we strongly recommend that you use SSL/TLS (port 443).
  - The port number is mandatory even when you’re using the default port for HTTP (80) or HTTPS (443).
4. Record the values in the Client ID and Client Secret fields. You will copy them into the NGINX Plus configuration file in [Step 4 of Configuring NGINX Plus](#).

Client ID [?](#) : 200c96d5ce5f11111111111111111111

Client secret [?](#) : 58f13a80b877e7e7e7e7e7e7e7e7e7e7e

5. Click Roles in the top navigation column, then click the Add button in the upper left corner of the page that opens.



6. On the Add page that opens, type a value in the Name and Display Name fields (here it is nginx-casdoor-role) and click the Save button.

Name [?](#) : nginx-casdoor-role

Display name [?](#) : nginx-casdoor-role

7. In the top navigation column, click Users. On the Users page that opens, either click Edit to edit one of the existing users or click the Add button in the upper left corner to create a new user.
8. On the Add page that opens, modify the Name and Display Name as you like (here it is user1).

Name  : user1

Display name user1

 :

Select NGINX Plus in the Signup application.

Signup application  : NGINX Plus

In the Managed accounts field, select NGINX Plus in Application and fill in the username and password.

Managed accounts  :	Managed accounts 						
	<table border="1"><thead><tr><th>Application</th><th>Username</th><th>Password</th></tr></thead><tbody><tr><td>NGINX Plus </td><td><input type="text"/></td><td><input type="password"/></td></tr></tbody></table>	Application	Username	Password	NGINX Plus 	<input type="text"/>	<input type="password"/>
Application	Username	Password					
NGINX Plus 	<input type="text"/>	<input type="password"/>					

9. Go back to the Roles page and click Edit on the nginx-casdoor-role row. In the opened page, in the Sub users field, select the username you just created (here it is built-in/user1).

Sub users [?](#) : built-in/user1

# Configuring NGINX Plus

To configure NGINX Plus as the OpenID Connect relying party, follow these steps:

1. Start by creating a clone of the [nginx-openid-connect](#) GitHub repository:

```
git clone https://github.com/nginxinc/nginx-openid-connect
```

2. Copy the following files from the clone to the `/etc/nginx/conf.d` directory:

- `frontend.conf`
- `openid_connect.js`
- `openid_connect.server_conf`
- `openid_connect_configuration.conf`

3. Retrieve the URLs for the authorization endpoint, token endpoint, and JSON Web Key (JWK) file from the Casdoor configuration. Open a terminal and execute the following `curl` command, piping the output to the indicated `python` command to generate a readable configuration format. For brevity, we have truncated the output to display only the relevant fields.

```
curl http://<casdoor-server-address>/.well-known/openid-configuration | python -m json.tool
```

4. Open `/etc/nginx/conf.d/openid_connect_configuration.conf` using your preferred text editor. Modify the "default" parameter value for each of the following `map` directives with the specified values:
  - `map $host $oidc_authz_endpoint` – Use the value of the `authorization_endpoint` from [Step 3](#) (in this guide, `https://<casdoor-server-address>/login/oauth/authorize`)
  - `map $host $oidc_token_endpoint` – Use the value of the `token_endpoint` from [Step 3](#) (in this guide, `http://<casdoor-server-address>/api/login/oauth/access_token`)
  - `map $host $oidc_client` – Use the value in the Client ID field from [Step 4 of Configuring Casdoor](#)
  - `map $host $oidc_client_secret` – Use the value in the Client Secret field from [Step 2 of Configuring Casdoor](#)
  - `map $host $oidc_hmac_key` – Use a unique, long, and secure phrase
5. Configure the JWK file based on the version of NGINX Plus being used:
  - In NGINX Plus R17 and later, NGINX Plus can directly read the JWK file from the URL specified as `jwks_uri` in [Step 3](#). Make the following changes to `/etc/nginx/conf.d/frontend.conf`:
    - a. Comment out (or remove) the `auth_jwt_key_file` directive.
    - b. Uncomment the `auth_jwt_key_request` directive. (The parameter `_jwks_uri` refers to the value of the `$oidc_jwt_keyfile` variable, which will be set in the next step.)
    - c. Update the "default" parameter of the `map $host $oidc_jwt_keyfile` directive to the value obtained from the `jwks_uri` field in [Step 3](#) (in this guide, `http://<casdoor-server-address>/.well-known/jwks`).
  - In NGINX Plus R16 and earlier, or if preferred, the JWK file must be located

on the local disk. Follow these steps:

- a. Copy the JSON contents from the JWK file specified in the `jwks_uri` field in [Step 3](#) (in this guide, `http://<casdoor-server-address>/.well-known/jwks`) to a local file (e.g., `/etc/nginx/my_casdoor_jwk.json`).
  - b. In `/etc/nginx/conf.d/openid_connect_configuration.conf`, change the "default" parameter of the `map $host $oidc_jwt_keyfile` directive to the path of the local file.
6. Ensure that the user specified in the `user` directive within the NGINX Plus configuration file (usually `/etc/nginx/nginx.conf`) has read permissions for the JWK file.

## Testing

Open a browser and enter the address of your NGINX Plus instance. Then, attempt to log in using the credentials of a user who has been assigned the NGINX Plus role.



# Casdoor



username, Email or phone



Password



Auto sign in

[Forgot password?](#)

Sign In

No account? [sign up now](#)

## Troubleshooting

Please refer to the [Troubleshooting](#) section in the nginx-openid-connect repository on GitHub.

# NginxCommunityVersion

## Prerequisites

This guide assumes that you have the following conditions:

- Running Casdoor service. If you haven't installed Casdoor service yet, please refer to [Server Installation](#) or [Try with Docker](#).
- Nginx open-source edition with `ngx_http_auth_request_module` module enabled at compile time. If you don't know how to enable the `ngx_http_auth_request_module` module, please refer to the [Nginx Module Document](#).
- The website on which you want to enable authentication is successfully deployed on Nginx, with a **configured domain name** (instead of using an IP address), and can be accessed normally.
- OAuth2-Proxy tool (currently, the following two popular projects with high stars are available on GitHub, and you need to choose one of them):
  1. oauth2-proxy/oauth2-proxy (used in this article) [GitHub](#) OR [Official-Website](#)
  2. vouch/vouch-proxy [GitHub](#)

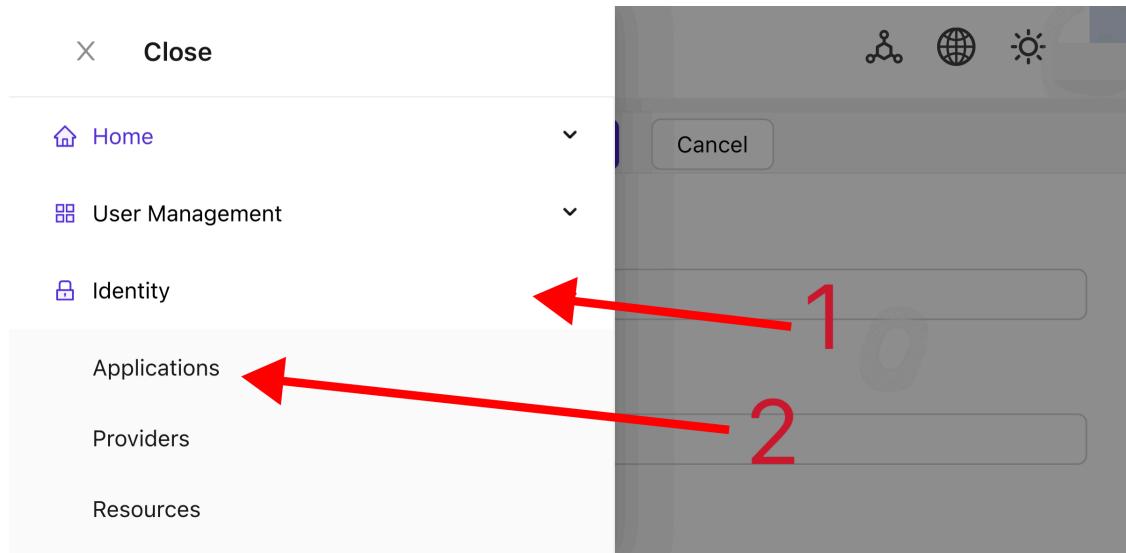
## I. Configure CasDoor

**Note:** The operations in this article are based on the Casdoor GUI at the time of publication, but the Casdoor GUI may change depending on the version. Please follow the references provided in this article to configure your deployed Casdoor version.

**Note:** The keys, passwords, usernames, and other confidential information

mentioned in this article are all examples. For security reasons, you must replace them with your own relevant content when deploying.

1. Log in to your Casdoor admin account.
2. In the top bar, select "Identity Authentication" > "Applications", and then click "Add" on the "Applications" page.



3. Complete the application configuration based on your project information. In this article, we use "Nginx-Community" as the example application name.

☰ Menu

New Application

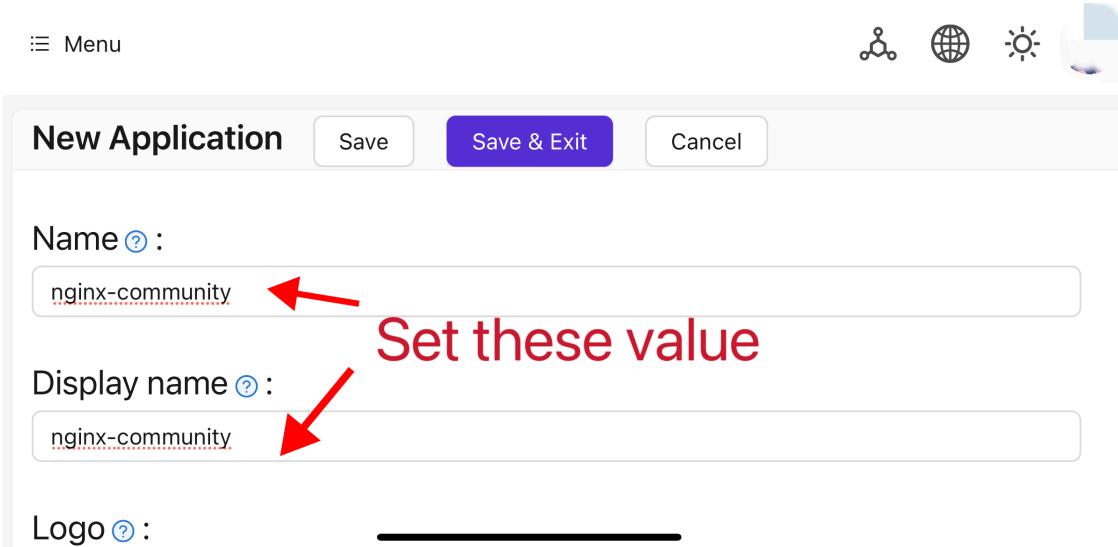
Save Save & Exit Cancel

Name ② : nginx-community

Display name ② : nginx-community

Logo ② :

**Set these value**



4. Take note of the values of the "Client ID" and "Client Secret" fields. They will be used when configuring OAuth2-Proxy later. Then configure the "Redirect URL" as `https://project.yourdomain.com/oauth2/callback/`.

Client ID ② : 811a0b0

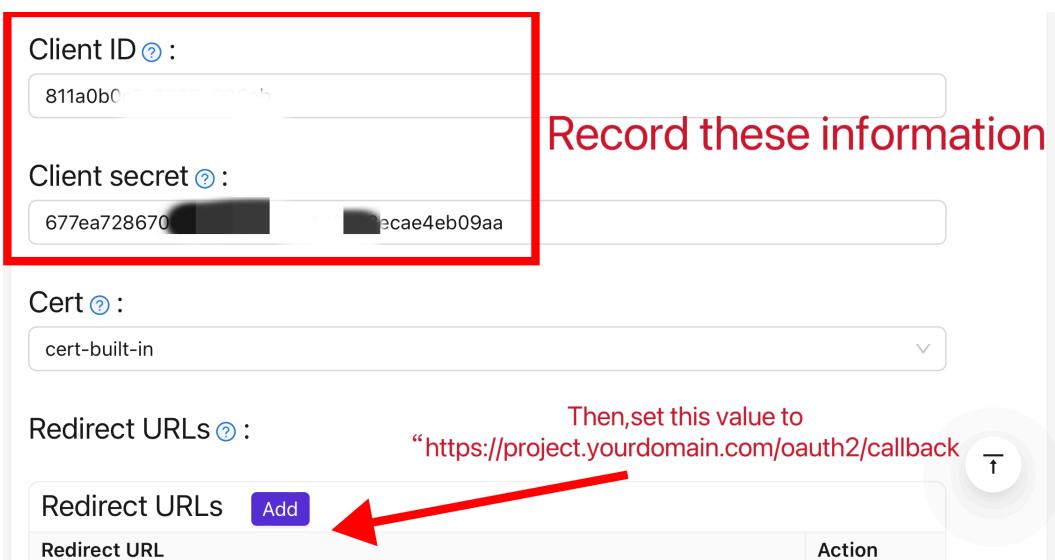
Client secret ② : 677ea728670 [REDACTED] ecae4eb09aa

Cert ② : cert-built-in

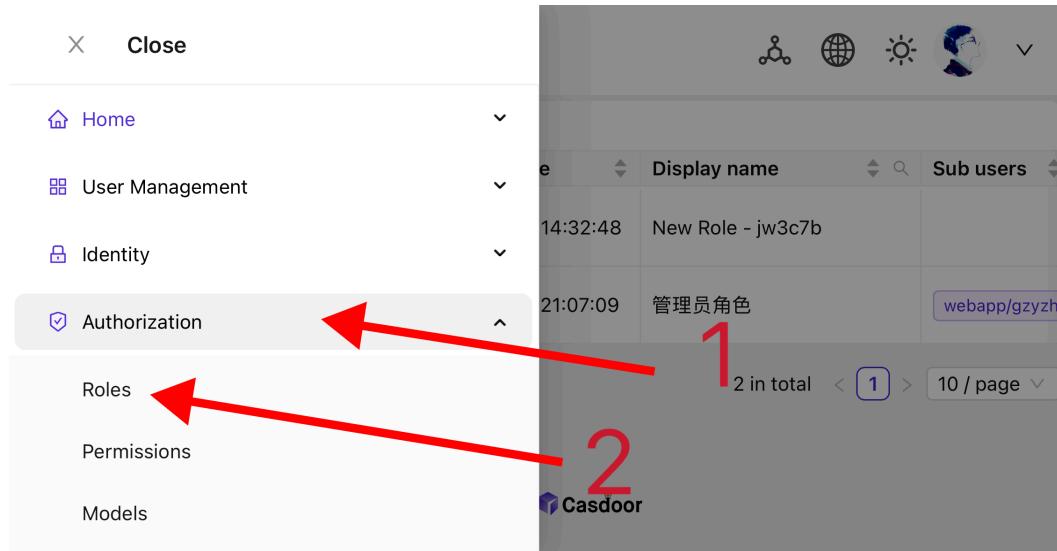
Redirect URLs ② : Then, set this value to  
“`https://project.yourdomain.com/oauth2/callback`”

Redirect URLs Add Redirect URL Action

**Record these information**



5. In the top bar, select "Casbin Permission Management" > "Roles", and then click "Add" on the "Roles" page.



6. Complete the role configuration based on your project information. In this article, we use "nginx\_role" as the example role name.

**New Role** Save Save & Exit Cancel

Organization ? : webapp

Name ? : **nginx\_community**

Display name ? : **nginx\_community**

Set these value  
Then, press “save&exit”

7. (Optional) In the top bar, select "User Management" > "Users", and then add new users based on your needs. If the users you need already exist, you can skip this step. In this article, we create an example user named "user".
8. Go back to the "Roles" page mentioned in step 5, edit the `nginx_role` role, and add the users you need to the "Included Users" option. In this article, we

add the previously created `builtin/user` here.

## II. Configure Oauth2-Proxy

Note: This article uses the Oauth2-Proxy project as an example. If you want to use Vouch instead of Oauth2-Proxy, please refer to their official documentation on [GitHub](#).

Note: This article assumes that your site is configured with a trusted SSL certificate and only allows HTTPS access, or that you have set up automatic redirection from HTTP visitors to HTTPS. This helps maximize the protection of cookies and prevents malicious reading of login tokens. If your site needs to be accessed via the insecure HTTP protocol, please modify the relevant commands accordingly. For more help with deploying via HTTP, please refer to the official documentation of Oauth2-Proxy on [GitHub](#).

Tips: [OAuth2-Proxy](#) provides various deployment methods (such as source code compilation, Docker installation, etc.). For ease of explanation, this article uses the "pre-built binary" for deployment.

1. Go to the [GitHub Releases](#) page and download the binary package corresponding to your operating system and CPU architecture. As of January 1, 2024, the latest release version of OAuth-Proxy is `v7.5.1`. If you want to download the binary package for this version, you can execute the following command for Linux with AMD64:

```
 wget -O oauth2-proxy-linux.tar.gz https://github.com/
 oauth2-proxy/oauth2-proxy/releases/download/v7.5.1/
 oauth2-proxy-v7.5.1.linux-amd64.tar.gz
```

It is strongly recommended that you check the `SHA256SUM` value provided by

the official website on the [GitHub Releases](#) page after downloading the compressed package and compare it with the `SHA256SUM` value of the package you downloaded, character by character.

2. Extract the downloaded package:

```
tar -zxvf oauth2-proxy-*.tar.gz
```

3. Enter the extracted directory:

```
cd oauth2-proxy-v7.5.1.linux-amd64
```

4. Move the obtained binary file to `/usr/local/bin` and configure it with executable permissions. You may need to elevate permissions using `sudo` depending on your situation.

```
cp ./oauth2-proxy /usr/local/bin  
cd /usr/local/bin  
chmod +x ./oauth2-proxy
```

5. Test the binary installation. If the installation is successful, after executing the following command, you should see output similar to `oauth2-proxy v7.5.1 (built with go1.21.1)`.

```
cd ~  
oauth2-proxy --version
```

6. Run `oauth2-proxy` with command-line parameters. Parameters marked with [required] must be configured according to your specific situation, while

parameters marked with [optional] can optimize performance but can also be omitted. To ensure that oauth2-proxy can run in the background, you can use process monitoring tools like `Screen` or `Supervisor` or terminal tools.

```
oauth2-proxy \
--provider=oidc \ #[required] Do not change
--client-id=abc123456def \ #[required] "Client ID" obtained in
step I.4 above
--client-secret=abc123456def \ #[required] "Client Secret"
obtained in step I.4 above
--oidc-issuer-url=https://auth.yourdomain.com \ #[required]
Your Casdoor URL (domain name or public IP)
--redirect-url=https://project.yourdomain.com/oauth2/callback
\ #[required] https://domain-of-the-project-to-protect/oauth2/
callback
--scope=email+profile+groups+openid \ #[required] Obtained
from Casdoor: user email, user profile, groups, and login
authentication
--cookie-domain=project.yourdomain.com \ #[required] Domain
name of the project you want to protect
--whitelist-domain=project.yourdomain.com \ #[required] Domain
name of the project you want to protect
--cookie-secret=abc123456def \ #[required] Please generate a
random string of numbers and letters and fill it in here
--email-domain=* \ #[required] List of acceptable user email
domains (* means accept all domains). If the user's email
suffix is not in this list, a 403 error will be returned even
if the login is successful.
--insecure-oidc-allow-unverified-email=true \ #[required]
Whether to accept users with unverified email addresses
--http-address=http://127.0.0.1:65534 \ #[required] Address
that oauth2-proxy listens on. The port number here can be set
arbitrarily. Please record the value you set, as it will be
needed for configuring Nginx later.
--cookie-expire=24h0m0s \ #[optional] Cookie expiration time.
After this period, users will need to log in again.
```

# III. Configure Nginx

**Note:** Please confirm again that your Nginx has enabled the `ngx_http_auth_request_module` module when compiling and installing from source code (the compilation command includes `--with_http_auth_request_module`). If you don't know how to enable the `ngx_http_auth_request_module` module, please refer to the [Nginx Module Document](#).

**Tips:** Nginx installed using the Baota panel tool does not enable this module by default.

1. Open the configuration file of the website you have already deployed and want to protect, and make the following modifications:

**Note:** You need to adjust this configuration file according to your specific situation. Due to Nginx versions and other factors, this configuration file may not work smoothly on all Nginx instances. Please adjust the relevant content based on your own Nginx information.

```
server {
    listen 443 ssl http2;

    include /path/to/ssl.conf;

    # Add the following content
    location ^~ /oauth2/ {
        proxy_pass      http://127.0.0.1:65534; # Change this
        to the "--http-address" configured in step II.6

        proxy_set_header Host                      $host;
        proxy_set_header X-Real-IP                 $remote_addr;
```

2. Save the file and reload your Nginx.

## Testing

- Next, you can test your implementation.
- In normal circumstances, your users will go through the following process when logging in to your service:
  - Open the URL `project.yourdomain.com` in a browser → Only see a page requiring login, including a button named "Sign in with OpenID Connect" → Click the button and be redirected to your Casdoor address, where they will be asked to log in → Users enter their username and password, and Casdoor verifies their credentials → Automatically redirect back to your URL `project.yourdomain.com` → Successfully access your service → Users will be asked to log in again when the `--cookie-expire` time you set expires.

## Troubleshooting

- If your project is not running as expected, please check your Nginx configuration and Oauth2-Proxy configuration parameters for correctness.
- You can also refer to the official documentation of Oauth2-Proxy on [GitHub](#).
- If you find any errors in this document, please feel free to request edits on GitHub.



# Envoy

## Prerequisites

A running Casdoor server. Please refer to the Casdoor documentation for [Server Installation](#) and [Try with Docker](#).

## Configuring Casdoor

1. Add the Envoy application. In the Redirect URLs field, enter the URL of the Envoy instance including the port number, and ending with /oauth2/callback (e.g., http://%REQ(:authority)%/oauth2/callback). Make a note of the values in the Client ID and Client Secret.
2. Add the `envoy-casdoor-role` role.
3. Add the `user1` user. Select Envoy in the Signup application. In the Managed accounts field, select Envoy in the Application dropdown and fill in the username and password. Go back to the Roles page and click "Edit" on the `envoy-casdoor-role` row. In the opened page, in the Sub users field, select the username you just created (in this case, it is built-in/user1).

## Configure Envoy

1. Modify the `token_endpoint`, `authorization_endpoint`, and `client_id` in the `envoy.yaml` file.
2. Modify the `inline_string` in the `token-secret.yaml` file to the Client Secret of Envoy from Casdoor.
3. Modify the `inline_bytes` in the `hmac-secret.yaml` file with a unique, long, and secure phrase.

4. Add the `envoy.yaml`, `token-secret.yaml`, and `hmac-secret.yaml` files to your Envoy path.

## How to Run

1. Start Envoy using the `envoy.yaml` file.
2. Go to the website where Envoy is listening. You should immediately be redirected to Casdoor for user authentication.

# C#



Unity

Use the Casdoor-dotnet-sdk for Unity development.

# Unity

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed.

You can refer to the Casdoor official documentation for the [Server Installation](#). Please deploy your Casdoor instance in production mode.

After a successful deployment, ensure that:

- Open your favorite browser and visit <http://localhost:8000>, you will see the login page of Casdoor.
- Input `admin` and `123` to test the login functionality.

Alternatively, you can use the [official Casdoor demo station](#) for a quick start.

## Step 2: Import Casdoor.Client

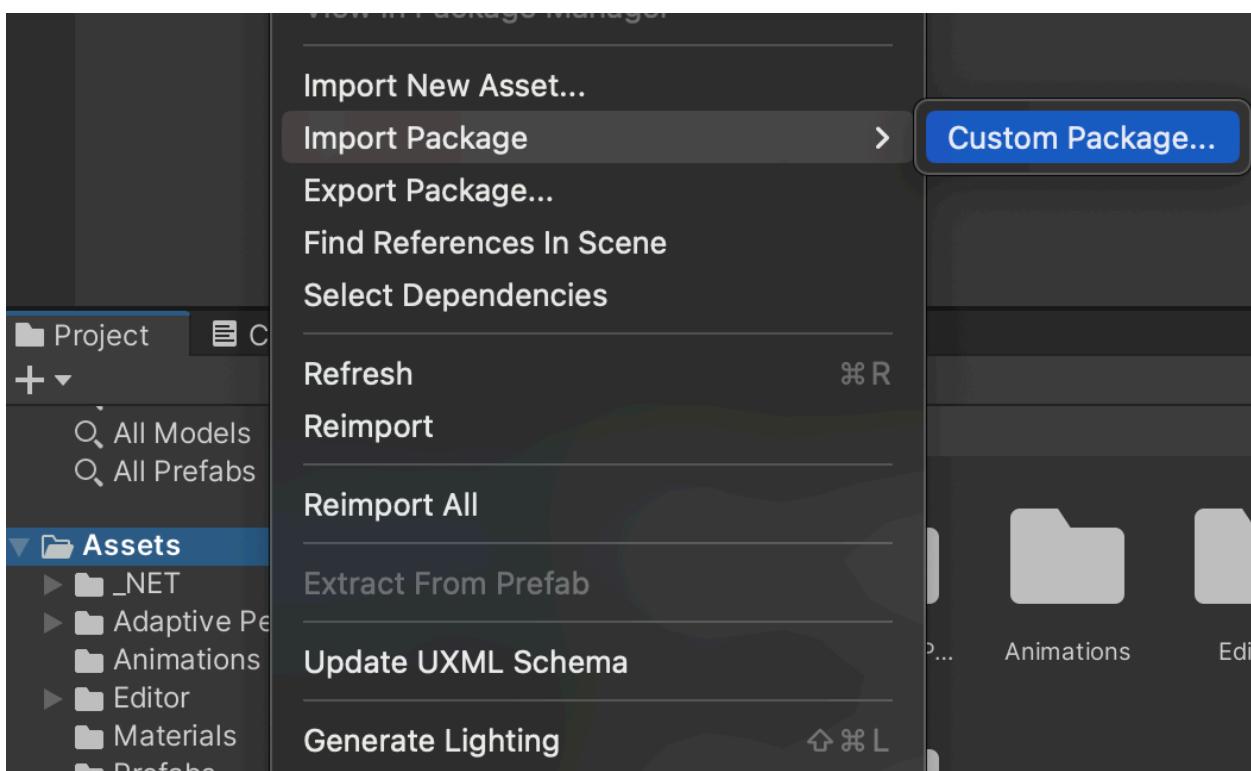
Import `Casdoor.Client` for `.NET` in the [Casdoor-dotnet-sdk](#).

One optional method is as follows:

- `git@github.com:casdoor/casdoor-dotnet-sdk.git`
- Run `ConsoleApp` in the `Sample` folder.
- Get the `/casdoor-dotnet-sdk/src/Casdoor.Client/bin/Debug/net462` folder.

Now, you can import the `net462` folder into your Unity project through the method shown in the figure below. Of course, you can also choose folders of other

versions.



## Step 3: Usage

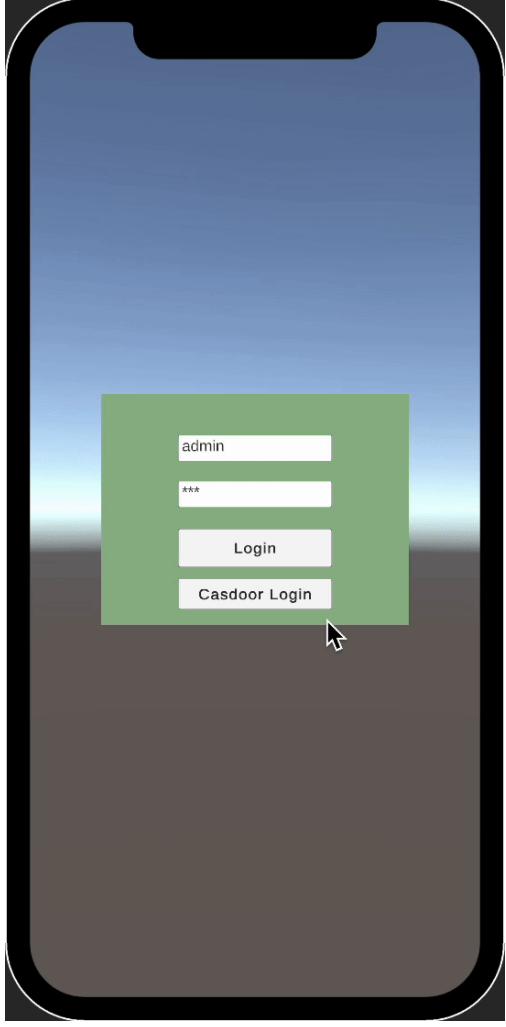
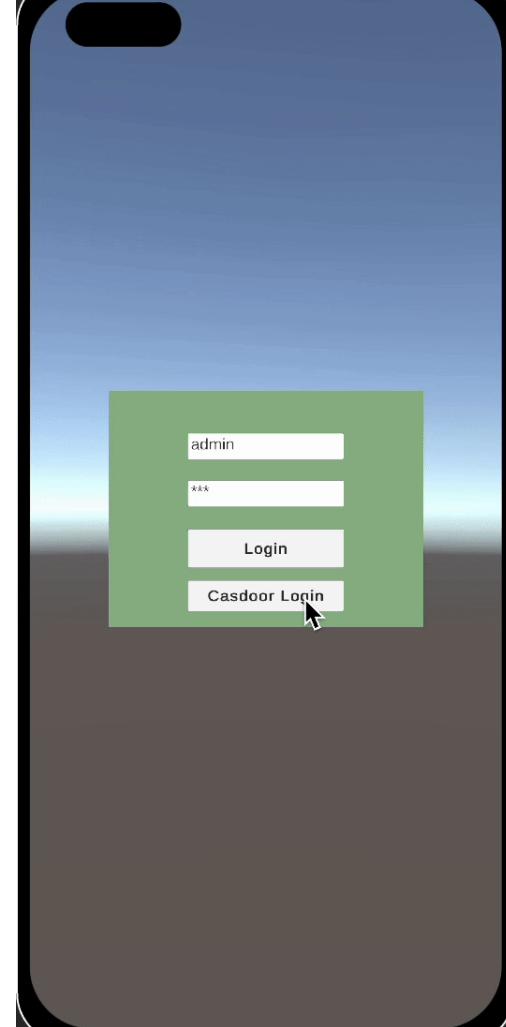
Learn how to use the `Casdoor.Client` SDK for Unity 3D mobile development by looking at [casdoor-unity-example](#).

After running the `casdoor-unity-example`, you will see the following interfaces:

- Login with username and password:



- Login with the Casdoor web page:

iOS	Android
 A screenshot of an iPhone X displaying a login interface. The screen has rounded corners and a notch at the top. A green rectangular overlay covers the bottom portion of the screen. Inside the overlay, there are two input fields: the first contains "admin" and the second contains "***". Below these is a white "Login" button, and at the bottom is a white "Casdoor Login" button. A cursor arrow is positioned directly above the "Casdoor Login" button.	 A screenshot of a Pixel 3 XL displaying a similar login interface. The screen has rounded corners and a notch at the top. A green rectangular overlay covers the bottom portion of the screen. Inside the overlay, there are two input fields: the first contains "admin" and the second contains "***". Below these is a white "Login" button, and at the bottom is a white "Casdoor Login" button. A cursor arrow is positioned directly above the "Casdoor Login" button.

# Go



## Kubernetes

Using Casdoor for Authentication in Kubernetes



## OpenShift

Using Casdoor for authentication in OpenShift



## BookStack

Using Casdoor for authentication in BookStack



## Bytebase

Using OAuth2 to connect various applications, like Bytebase

 **ELK**

Overview of casdoor/elk-auth-casdoor

 **Gitea**

Using Casdoor for authentication in Gitea

 **Grafana**

Using Casdoor for authentication in Grafana

 **MinIO**

Configuring Casdoor as an identity provider to support MinIO

 **Traefik**

Using Casdoor for authentication with Traefik reverse proxy



## Portainer

Using Casdoor for authentication in Portainer

# Kubernetes

According to the [Kubernetes documentation](#), the API Server of Kubernetes can be authenticated using OpenID Connect (OIDC). This article will guide you on how to configure authentication in Kubernetes using Casdoor.

## Environment Requirements

Before starting, please make sure that you have the following environment:

- A Kubernetes cluster.
- A Casdoor application like this [demo website](#).
- `kubectl` command tool (optional).

 NOTE

Kubernetes `oidc-issuer-url` only accepts URLs which use the `https://` prefix. So your Casdoor application should be deployed on an HTTPS website.

## Step 1: Creating a Casdoor App and User Account for Authentication

Go to your Casdoor application and add a new application called **Kubernetes**. Please remember the `Name`, `Organization`, `client ID`, `client Secret`, and add some grant types to this app.

Name [?](#):

Display name [?](#):

Logo [?](#):   
URL [?](#):

Preview: 

Home [?](#):

Description [?](#):

Organization [?](#):

Client ID [?](#):

Client secret [?](#):

Cert [?](#):

Grant types [?](#):

Next, add a new user to the application that you just created. Please note that the **Organization** and **Signup application** used here should correspond to the app registered earlier.

Organization <a href="#">?</a> :	casbin
ID <a href="#">?</a> :	202e02e9-9128-496a-a209-fdb336448f56
Name <a href="#">?</a> :	user_pnvm5i
Display name <a href="#">?</a> :	New User - pnvm5i
Avatar <a href="#">?</a> :	<p>Preview:</p>  <p>Upload a photo...</p>
User type <a href="#">?</a> :	normal-user
Password <a href="#">?</a> :	<a href="#">Modify password...</a>
Email <a href="#">?</a> :	pnvm5i@example.com
Phone <a href="#">?</a> :	+1 <input type="button" value="▼"/> 78005961394
Country/Region <a href="#">?</a> :	Please select country/region
Location <a href="#">?</a> :	
Affiliation <a href="#">?</a> :	Example Inc.
Title <a href="#">?</a> :	
Homepage <a href="#">?</a> :	
Bio <a href="#">?</a> :	
Tag <a href="#">?</a> :	staff
Signup application <a href="#">?</a> :	Kubernetes

# Step 2: Configure Kubernetes API Server with OIDC Authentication

To enable the OIDC plugin, you need to configure the following flags on the API server:

- `--oidc-issuer-url`: URL of the provider that allows the API server to discover public signing keys.
- `--oidc-client-id`: A client id that all tokens must be issued for.

This article uses minikube for demonstration. You can configure the OIDC plugin for the minikube's API server using the following command at startup:

```
minikube start --extra-config=apiserver.oidc-issuer-
url=https://demo.casdoor.com --extra-config=apiserver.oidc-client-
id=294b09fbc17f95daf2fe
```

# Step 3: Test OIDC Authentication

## Obtain Authentication Information

Due to the lack of a frontend in kubectl, authentication can be performed by sending a POST request to the Casdoor server. Here is the code in Python which sends a POST request to the Casdoor server and retrieves the `id_token` and `refresh_token`:

```
import requests
```

After executing this code, you should receive a response similar to the following:

```
{  
  "access_token": "xxx",  
  "id_token": "yyy",  
  "refresh_token": "zzz",  
  "token_type": "Bearer",  
  "expires_in": 72000,  
  "scope": ""  
}
```

Now, you can use the `id_token` that you just obtained to authenticate with the Kubernetes API server.

## HTTP Request-Based Authentication

Add the token to the request header.

```
curl https://www.xxx.com -k -H "Authorization: Bearer $(id_token)"
```

- `https://www.xxx.com` is the Kubernetes API server deployment address.

## Kubectl Client-Based Authentication

### Configuration File Method

Write the following configuration to the `~/.kube/config` file. You should replace each configuration item in the configuration file above with the values you obtained earlier.

```
users:
```

Now, you can directly access your API server using kubectl. Try running a test command.

```
kubectl cluster-info
```

### Command Line Argument Method

Alternatively, you can authenticate by directly adding the `id_token` to the command line parameters of kubectl.

```
kubectl --token=$(id_token) cluster-info
```

# OpenShift

OpenShift supports OIDC, so we can integrate Casdoor with OpenShift. The following steps demonstrate how to integrate Casdoor with OpenShift Local using the [online demo of Casdoor](#).

## Step 1: Create an Casdoor application

Add a new application in Casdoor, noting the following points:

- Remember the `Client ID` and `Client secret` for the next step.
- The format of the Redirect URL is `https://oauth-openshift.apps.<cluster_name>.<cluster_domain>/*`. Fill it in depending on your situation.

Name [?](#) :

Display name [?](#) :

Logo [?](#) :   
Preview: 

Home [?](#) :

Description [?](#) :

Organization [?](#) :

Client ID [?](#) :

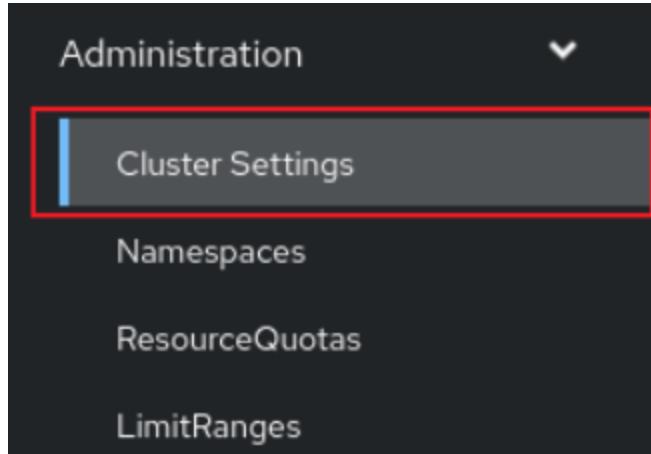
Client secret [?](#) :

Cert [?](#) :

Redirect URLs [?](#) :   
Redirect URLs [Add](#)

## Step 2: OpenShift OAuth Configuration

Now log into the OpenShift Console as Kubeadmin. Once you are logged in, browse to the side menu and locate the Cluster settings.



Under Global Configuration, you will see OAuth.

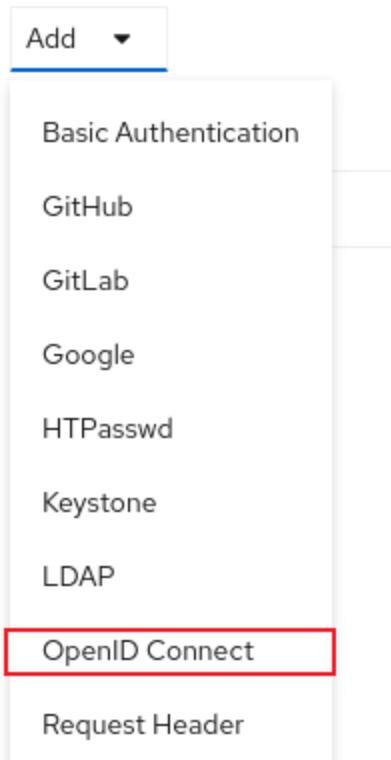
OAuth

OAuth holds cluster-wide information about OAuth. The canonical name is 'cluster'. It is used to configure the integrated OAuth server. This configuration is only honored when the top level Authentication config has type set to IntegratedOAuth. Compatibility level I: Stable within a major release for a minimum of 12 months or 3 minor releases (whichever is longer).

You will see the Identity Provider section. In the ADD section, select OpenID Connect from the options.

## Identity providers

Identity providers determine ho



Configure OIDC, noting the following points:

- Fill in the `Client ID` and `Client Secret` remembered from the previous step.
- The Issuer URL must use https, in the form `https://<casdoor-host>`, again depending on your situation.

## Add Identity Provider: OpenID Connect

Integrate with an OpenID Connect identity provider using an Authorization Code Flow.

Name \*

casdoor

Unique name of the new identity provider. This cannot be changed later.

Client ID \*

2452f2b5abb6ff131199

Client secret \*

\*\*\*\*\*

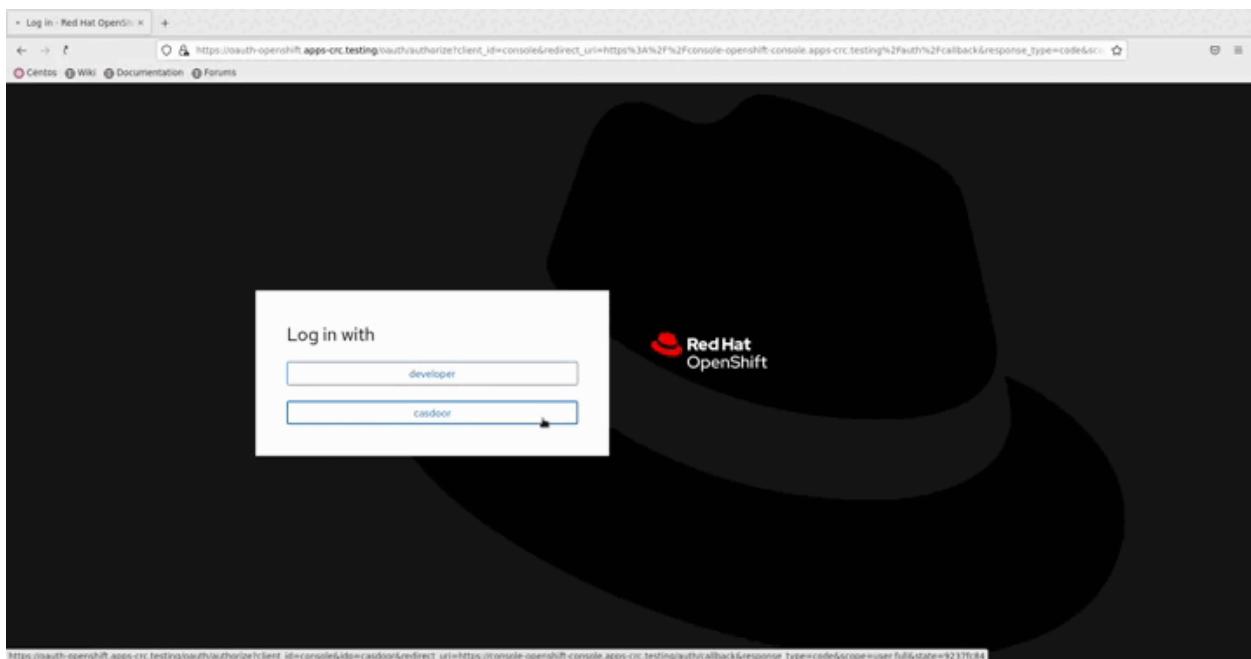
Issuer URL \*

<https://demo.casdoor.com/>

The URL that the OpenID provider asserts as its issuer identifier. It must use the https scheme with no URL query parameters or fragment.

## Step 3: Test OIDC Authentication

Access the OpenShift console in the browser. You will see Casdoor (the name you configured in the previous step). Click on the Casdoor login option. You will be redirected to the Casdoor login page.



# BookStack

## Using Casdoor for authentication in BookStack

[BookStack](#) is an open-source book and document sharing site, as well as an open-source application developed using the Go language to help you better manage document reading.

BookStack-casdoor has been integrated with Casdoor, and you can now quickly get started with a simple configuration.

### Step 1: Create a Casdoor application

Go to your Casdoor and add a new application called BookStack. Here is an example of creating the BookStack application in Casdoor.

Edit Application Save Save & Exit

Name ? : bookstack

Display name ? : bookstack

Logo ? : URL ? : [https://cdn.casdoor.com/logo/casdoor-logo\\_1185x256.png](https://cdn.casdoor.com/logo/casdoor-logo_1185x256.png)

Preview: 

Home ? :

Description ? :

Organization ? : [REDACTED]

Client ID ? : [REDACTED]

Client secret ? : [REDACTED]

Please remember the Name, Organization, client ID, and client Secret. You will need them in the next step.

## Step 2: Configure Casdoor Login

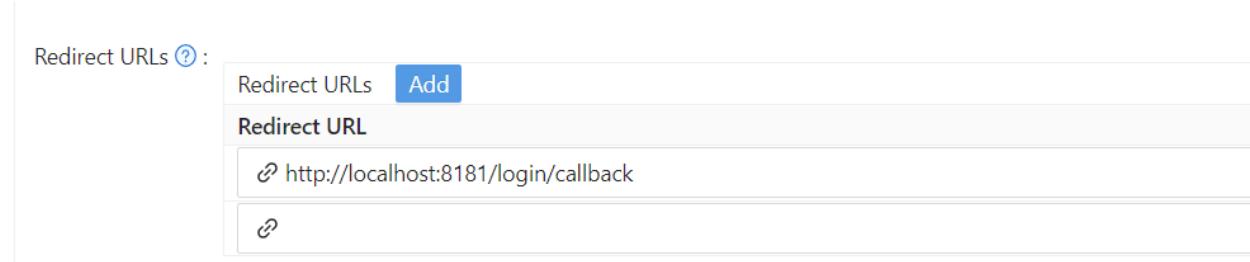
Next, navigate to BookStack and find the file oauth.conf.example.

Rename oauth.conf.example to oauth.conf and modify the configuration. By default, the content is as follows:

```
[oauth]
casdoorOrganization = "<Organization>"
casdoorApplication = "bookstack"
casdoorEndpoint = http://localhost:8000
clientId = <client ID>
clientSecret = <client Secret>
redirectUrl = http://localhost:8181/login/callback
```

## Step 3: Fill in the `redirectUrl` in Casdoor

In the final step, go back to the page where you added the BookStack application and fill in the `Redirect URLs`. Make sure the `Redirect URL` is the same as the `redirectUrl` in the `oauth.conf` file.



Now that you have completed the Casdoor configuration!

You can now go back to your BookStack and experience using Casdoor for login authentication once you have successfully deployed BookStack.

# Bytebase

Casdoor can use OAuth2 to connect various applications. In this example, we will use Bytebase to demonstrate how to use OAuth2 to connect to your applications.

The following are the configuration names:

`CASDOOR_HOSTNAME`: The domain name or IP address where the Casdoor server is deployed.

`Bytebase_HOSTNAME`: The domain name or IP address where Bytebase is deployed.

## Step 1: Deploy Casdoor and Bytebase

Firstly, deploy Casdoor and Bytebase.

After successful deployment, make sure that:

1. Casdoor can be logged in and used normally.
2. You can set `CASDOOR_HOSTNAME` to `http://localhost:8000` when deploying Casdoor in `prod` mode. See [production mode](#).

## Step 2: Configure Casdoor application

1. Create a new or use an existing Casdoor application.
2. Find the redirect URL: `<CASDOOR_HOSTNAME>/oauth/callback`.
3. Add the redirect URL to the Casdoor application:

The screenshot shows the Casdoor application settings page. It includes fields for Client ID (e828fd6922f4292b979e), Client secret (bab9f6c2fad67471e1bd81e074ea192e4f46dd), Cert (cert-built-in), and Redirect URLs (Redirect URLs: <CASDOOR\_HOSTNAME>/oauth/callback). A red box highlights the Client ID and Client secret fields.

On the application settings page, you will find two values: `Client ID` and `Client secret`. We will use these values in the next step.

Open your favorite browser and visit: `http://<CASDOOR_HOSTNAME>/.well-known/openid-configuration`. You will see the OIDC configuration of Casdoor.

## Step 3: Configure Bytebase

- Find SSO and select OAuth 2.0:

The screenshot shows the Bytebase SSO configuration page. On the left sidebar, 'SSO' is highlighted with a black arrow. The main form has 'Type' set to 'OAuth 2.0' (radio button selected) and 'Custom' (radio button selected under 'Use template'). Arrows point to both the selected radio buttons. Below, 'Basic information' shows 'Name \*' set to 'Custom'.

- Configure this app:

The screenshot shows the Casdoor application interface. On the left, there's a sidebar with navigation items like Account, Profile, Workspace, General, Members, Projects, Subscription, Debug Log, Security & Policy, SQL Review, Risk Center, Custom Approval, Data Anonymization, Data Access Control, Audit Log, Integration, GitOps, SSO, IM, and Archive. Under SSO, there's a 'Quickstart' section with links to 'View an issue', 'Visit Projects', and 'Visit Environments'. The main content area is titled 'SSO > casdoor' and contains a 'Basic Information' section with fields for Name (set to 'casdoor'), Identity Provider ID (set to 'idp-casdoor-mels'), Domain (set to 'http://101.43.192.216:8000'), and Client ID (set to 'e828fd992342926979e'). Below this is an 'Identity provider information' section with fields for Client secret (set to 'sensitive - write only'), Auth URL (set to 'http://101.43.192.216:8000/login/oauth/authorize'), and Scopes (set to 'openid profile email'). There's also a 'Tokens URL' field with the value 'http://101.43.192.216:8000/api/login/oauth/access\_token'. The 'User information' section includes fields for name, email, and display name, each mapped to 'Bytebase user identifier'. At the bottom, there are 'Test Connection' and 'Archive this SSO' buttons, along with 'Discard changes' and 'Update' buttons.

### 3. Find the Client ID and Client Secret on the Casdoor application page.

- Token server URL: `http://CASDOOR_HOSTNAME/api/login/oauth/access_token`
- Authorization server URL: `http://CASDOOR_HOSTNAME/login/oauth/authorize`
- User Info server URL: `http://CASDOOR_HOSTNAME/api/get-account`
- Scopes: `address phone openid profile offline_access email`

Log out of Bytebase and test SSO.

The screenshot shows the Bytebase login page. It features a colorful cartoon illustration of a rocket launching from a planet. The main form has fields for 'Email' (containing 'jim@example.com') and 'Password'. Below the form are links for 'Forgot your password?' and 'Sign up'. A 'Sign in' button is prominently displayed. To the right of the form, there's a 'Bytebase' logo and a 'Sign in with casdoor' button. At the bottom, there's a language selection dropdown ('English 简体中文') and a copyright notice ('© 2023 Bytebase. All rights reserved.').

# ELK

## Overview of casdoor/elk-auth-casdoor

One of the biggest drawbacks of ELK (Elasticsearch, Logstash, and Kibana) is that originally these products had no authentication mechanism. As a result, anyone with the URL of Kibana or Elasticsearch could access the Kibana dashboard. Later on, ELK integrated an embedded authentication system called "Xpack." However, its advanced functions (such as OAuth, OIDC, LDAP, SAML) are not free. Only plain authentication, using a set of accounts and passwords, is available free of charge, which is quite inconvenient. This approach does not allow us to provide a unique account for everyone in a corporation.

To address this issue, we have developed an elk authentication solution based on Casdoor. This solution is free, open-source, under ongoing maintenance, and supports a wide range of advanced features. Casdoor is a centralized authentication/Single-Sign-On platform based on OAuth 2.0/OIDC. Casdoor/elk-auth-casdoor serves as a reverse proxy designed to intercept all HTTP data flow towards the ELK/Kibana stack. It guides users who haven't logged in to log in. This reverse proxy operates transparently as long as the user has logged in.

If a user hasn't been correctly authenticated, the request will be temporarily cached, and the user will be redirected to the Casdoor login page. Once the user logs in through Casdoor, the cached request will be restored and sent to Kibana. Therefore, if a POST request (or any other request type besides GET) is intercepted, the user won't need to refill the form and resend the request. The reverse proxy will remember it for you.

The casdoor/elk-auth-casdoor repository is located at <https://github.com/casdoor/elk-auth-casdoor>.

# How to run it?

0. Ensure that you have the Go programming language environment installed.
1. Go to [casdoor/elk-auth-casdoor](#) and fetch the code.
2. Register your proxy as an app with Casdoor.
3. Modify the configuration.

The configuration file is located at "conf/app.conf". Here is an example, which you should customize based on your specific needs.

```
appname = .  
# port on which the reverse proxy shall be run  
httpport = 8080  
runmode = dev  
# EDIT IT IF NECESSARY. The URL of this reverse proxy.  
pluginEndpoint = "http://localhost:8080"  
# EDIT IT IF NECESSARY. The URL of the Kibana.  
targetEndpoint = "http://localhost:5601"  
# EDIT IT. The URL of Casdoor.  
casdoorEndpoint = "http://localhost:8000"  
# EDIT IT. The clientID of your reverse proxy in Casdoor.  
clientID = ceb6eb261ab20174548d  
# EDIT IT. The clientSecret of your reverse proxy in Casdoor.  
clientSecret = af928f0ef1abc1b1195ca58e0e609e9001e134f4  
# EDIT IT. The application name of your reverse proxy in  
Casdoor.  
appName = ELKProxy  
# EDIT IT. The organization to which your reverse proxy  
belongs in Casdoor.  
organization = built-in
```

4. Visit <http://localhost:8080> (in the above example) and log in following the redirection guidance. You should then see Kibana protected and authenticated by Casdoor.
5. If everything works well, don't forget to block external access to the original Kibana port by configuring your firewall (or another method). This ensures that outsiders can only access Kibana via this reverse proxy.

# Gitea

## Using Casdoor for authentication in Gitea

[Gitea](#) is a community managed lightweight code hosting solution written in Go. It is published under the MIT license.

Gitea supports 3rd-party authentication including Oauth, which makes it possible to use Casdoor to authenticate it. Here is the tutorial for achieving this.

### Preparations

To configure Gitea to use Casdoor as identification provider, you need to have Gitea installed as well as access to administrator account.

For more information about how to download, install and run Gitea see  
<https://docs.gitea.io/en-us/install-from-binary/>

You are supposed to create an administrator account during installation. If you didn't, the administrator will be the first registered user. Please use this account proceed the following procedures.

### 1. Create an Casdoor application

Like this

Edit Application

Name ⓘ: application\_9p7eai

Display name ⓘ: New Application - 9p7eai

Logo ⓘ: URL ⓘ https://cdn.casbin.com/logo/logo\_1024x256.png

Preview: 

Home ⓘ:

Description ⓘ:

Organization ⓘ: built-in

Client ID ⓘ: 7ceb9b7fda4a9061ec1c

Client secret ⓘ: 3416238e1edf915eac08b8fe345b2b95cdba7e04

Cert ⓘ: cert-built-in

Redirect URLs

Action
Add
Redirect URL
http://localhost:3000/user/oauth2/Casdoor/callback
Actions: Up, Down, Delete

Please remember the client ID and client Secret for the next step.

Please don't fill in the callback url in this step. The url depends on the configurations on gitea in the next step. Later we will come back to set a correct callback url.

## 2. Configure Gitea to use Casdoor

Log in as administrator. Go to 'Site Administration' page via drop-down menu in the upper right corner. Then Switch to "Authentication Source" Page.

You are supposed to see something like this.

The screenshot shows the GitHub 'Authentication Sources' management interface. At the top, there's a navigation bar with links for Issues, Pull Requests, Milestones, Explore, and a notifications icon. Below the navigation is a secondary header with links for Dashboard, User Accounts, Organizations, Repositories, Webhooks, Authentication Sources (which is underlined to indicate it's the active tab), User Emails, Configuration, System Notices, and Monitoring. The main content area is titled 'Authentication Source Management (Total: 0)' and contains a table with the following columns: ID, Name, Type, Enabled, Updated, Created, and Edit. A prominent blue button labeled 'Add Authentication Source' is located at the top right of the table area.

Press the "Add Authentication Source" Button, and fill in the form like this.

The screenshot shows the 'Add Authentication Source' form on GitHub. The form has the following fields:

- Authentication Type: OAuth2
- Authentication Name: Casdoor
- OAuth2 Provider: OpenID Connect
- Client ID (Key): 7ceb9b7fda4a9061ec1c
- Client Secret: 3416238e1edf915eac08b8fe345b2b95cdba7e04
- Icon URL: (empty)
- OpenID Connect Auto Discovery URL: http://localhost:8000/.well-known/openid-configuration
- Skip local 2FA: Leaving unset means local users with 2FA set will still have to pass 2FA to log on
- Additional Scopes: (empty)

Please choose the authentication type as "oauth2".

Please input a name for this authentication source and remember this name. This name will be used for the callback\_url in the next step.

Please choose the `OpenID Connect` Oauth2 Provider.

Fill in the Client ID and Client Secret remembered in the previous step.

Fill in the openid connect auto discovery url, which is supposed to be `<your endpoint of casdoor>/.well-known/openid-configuration`.

Fill in the other optional configuration items as you wish. And then submit it.

Submit the form.

### 3. Configure the callback url in casdoor

Go back to the application edit page in step 2, and add the following callback url:

`<endpoint of gitea>/user/oauth2/<authentication source name>/callback`

The `<authentication source name>` is the name for authentication source in Gitea in the previous step.

### 4. Have a try on Gitea

Logout the current administrator account.

You are supposed to see this in login page:

Sign In    OpenID

Sign In

Username or Email Address \*

Password \*

Remember this Device

**Sign In**    [Forgot password?](#)

[Need an account? Register now.](#)

Sign In With OpenID

Press the 'sign in with openid' button and you will be redirected to casdoor login page.

After login you will see this:

Explore    Help    [\[←\] Sign In](#)

Register New Account    [Link to Existing Account](#)

Complete New Account

Username \*

Email Address \*

admin@example.com

**Complete Account**

Follow the instructions and bind the casdoor account with a new gitea account or

existing account.

Then everything will be working correctly.

# Grafana

## Using Casdoor for authentication in Grafana

[Grafana](#) supports authentication via OAuth. Therefore, it is extremely easy for users to use Casdoor to log in to Grafana. Only several steps and simple configurations are needed to achieve that.

Here is a tutorial on how to use Casdoor for authentication in Grafana. Before you proceed, please ensure that you have Grafana installed and running.

### Step 1: Create an app for Grafana in Casdoor

Here is an example of creating an app in Casdoor:

Edit Application Save Save & Exit

Name ⓘ: application\_9p7eai

Display name ⓘ: New Application - 9p7eai

Logo ⓘ: URL ⓘ: [https://cdn.casbin.com/logo/logo\\_1024x256.png](https://cdn.casbin.com/logo/logo_1024x256.png)

Preview:



Home ⓘ: [/](#)

Description ⓘ:

Organization ⓘ: built-in

Client ID ⓘ: 7ceb9b7fda4a9061ec1c

Client secret ⓘ: 3416238e1edf915eac08b8fe345b2b95cd8a7e04

Cert ⓘ: cert-built-in

Redirect URLs ⓘ:

Action	Redirect URLs
<a href="#">Add</a>	<a href="#">http://localhost:3000/login/generic_oauth</a>

Please copy the client secret and client ID for the next step.

Please add the callback URL of Grafana. By default, Grafana's OAuth callback is [/login/generic\\_oauth](/login/generic_oauth). So please concatenate this URL correctly.

## Step 2: Modify the configuration of Grafana

By default, the configuration file for OAuth is located at `conf/defaults.ini` in the workdir of Grafana.

Please find the section `[auth.generic_oauth]` and modify the following fields:

```
[auth.generic_oauth]
name = Casdoor
```

## About HTTPS

If you don't want HTTPS enabled for Casdoor or if you deploy Grafana without HTTPS enabled, please also set `tls_skip_verify_insecure = true`.

## About redirectURI after Sign In With Casdoor

If the redirect URI is not correct after signing in with Casdoor in Grafana, you may want to configure [root\\_url](#).

```
[server]
http_port = 3000
# The public-facing domain name used to access Grafana from a
browser
domain = <your IP here>
# The full public-facing URL
root_url = %(protocol)s://%(domain)s:%(http_port)s/
```

Related links:

1. [Grafana documentation](#)
2. [Grafana defaults.ini](#)

## About Role Mapping

You may want to configure `role_attribute_path` to map your user's role to Grafana via [role\\_attribute\\_path](#).

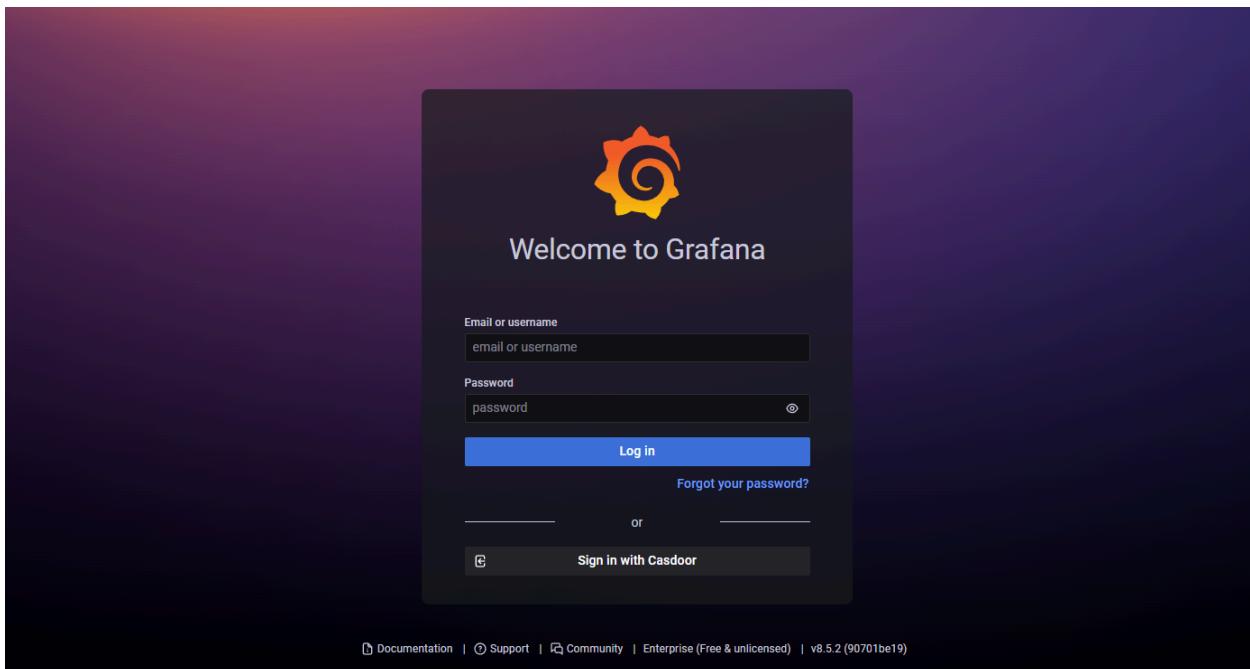
```
[auth.generic_oauth]
role_attribute_path = contains(roles[*].name, 'admin') && 'Admin'
```

The JMESPath expression after `role_attribute_path` is very important here.  
Please refer to the Grafana documentation.

## Step 3: See if it works

Shutdown Grafana and restart it.

Go to the login page. You should see something like this:



# MinIO

MinIO supports external identity management using an OpenID Connect (OIDC)-compatible provider. This document covers the configuration of Casdoor as an identity provider to support MinIO.

## Step 1: Deploy Casdoor & MinIO

First, deploy Casdoor.

You can refer to the Casdoor official documentation for [Server Installation](#).

After a successful deployment, make sure that:

- The Casdoor server is running on <http://localhost:8000>.
- Open your favorite browser and visit <http://localhost:7001> to see the login page of Casdoor.
- Test the login functionality by entering `admin` and `123`.

Next, you can quickly implement a Casdoor-based login page in your own app by following these steps.

You can refer to [here](#) to deploy your MinIO server and [here](#) for the MinIO client called `mc`.

## Step 2: Configure Casdoor Application

1. Create a new Casdoor application or use an existing one.
2. Add your redirect URL.

The screenshot shows the Casdoor application settings page. It includes fields for Client ID (24a25ea0714d92e78595), Client secret (155 followed by a redacted string), and Redirect URLs (http://localhost:8082/ui-one/login/oauth2/code/custom). A note at the bottom says 'Add a redirect URL for spring security'.

Client ID ?: 24a25ea0714d92e78595 **Client ID**

Client secret ?: 155 [redacted] **Client Secret**

Redirect URLs ?: **Add**

Redirect URL **Add a redirect URL for spring security**

http://localhost:8082/ui-one/login/oauth2/code/custom

3. Add the provider you want and provide any necessary settings.

On the application settings page, you will find two values: **Client ID** and **Client secret** (as shown in the picture above). We will use these values in the next step.

Open your favorite browser and visit: `http://CASDOOR_HOSTNAME.well-known/openid-configuration` to see the OIDC configuration of Casdoor.

4. This step is necessary for MinIO. As MinIO needs to use a claim attribute in JWT for its policy, you should configure it in Casdoor as well. Currently, Casdoor uses **tag** as a workaround for configuring MinIO's policy.

Tag ?: **readwrite**

You can find all the supported policies [here](#).

## Step 3: Configure MinIO

You can start a MinIO server using the following commands:

```
export MINIO_ROOT_USER=minio  
export MINIO_ROOT_PASSWORD=minio123  
minio server /mnt/export
```

You can use the `--console-address` parameter to configure the address and port.

Next, add a service alias using the MinIO client `mc`.

```
mc alias set myminio <Your console address> minio minio123
```

Now, configure the OpenID Connect of MinIO. For Casdoor, the command will be:

```
mc admin config set myminio identity_openid  
config_url="http://CASDOOR_HOSTNAME/.well-known/openid-  
configuration" client_id=<client id> client_secret=<client secret>  
claim_name="tag"
```

You can refer to the [official document](#) for more detailed parameters.

Once successfully set, restart the MinIO instance.

```
mc admin service restart myminio
```

## Step 4: Try the demo!

Now, open your MinIO console in the browser and click on `Login with SSO`.

You will be redirected to the Casdoor user login page. Upon successful login, you will be redirected to the MinIO page and logged in automatically. You should now

see the buckets and objects that you have access to.

 CAUTION

If you deploy the frontend and backend of Casdoor on different ports, the login page you are redirected to will be on the backend port and it will display `404 not found`. You can modify the port to the frontend one. Then you can access the Casdoor login page successfully.

# Traefik

## Using Casdoor for authentication with Traefik

[Traefik](#) is a modern HTTP reverse proxy and load balancer that makes deploying microservices easy. This document shows how to use Casdoor as an authentication provider with Traefik using the [traefik-casdoor-auth](#) middleware.

The Traefik Casdoor Auth middleware allows you to protect your services behind Traefik with Casdoor authentication, providing a seamless Single Sign-On (SSO) experience.

## Prerequisites

Before you begin, ensure you have:

- Traefik v2.x or v3.x installed and running
- A Casdoor instance deployed and accessible
- Docker and Docker Compose (if using the containerized approach)

## Step 1: Deploy Casdoor

First, deploy Casdoor if you haven't already.

You can refer to the Casdoor official documentation for [Server Installation](#).

After a successful deployment, make sure that:

- The Casdoor server is running and accessible
- You can log in to the Casdoor admin interface
- Test the login functionality by entering `admin` and `123`

## Step 2: Configure Casdoor Application

1. Create a new Casdoor application or use an existing one.
2. Add your redirect URL. The redirect URL should be in the format:

`http://<your -domain>/callback`

For example: `http://localhost:8080/callback`

3. Note down the following values from your application settings:
  - Client ID
  - Client Secret
  - Organization Name
  - Application Name

Client ID <a href="#">?</a> :	24a25ea0714d92e78595	Client ID
Client secret <a href="#">?</a> :	155██	Client Secret
Redirect URLs <a href="#">?</a> :	Redirect URLs <a href="#">Add</a> Redirect URL <a href="#">Add a redirect URL for spring security</a> <code>http://localhost:8082/ui-one/login/oauth2/code/custom</code>	

1. Configure your application to use the appropriate authentication providers as

needed.

## Step 3: Deploy traefik-casdoor-auth Middleware

There are two ways to deploy the Traefik Casdoor Auth middleware:

### Option 1: Using Docker Compose (Recommended)

Create a `docker-compose.yml` file:

```
version: '3'

services:
  traefik:
    image: traefik:v2.10
    container_name: traefik
    restart: unless-stopped
    command:
      - "--api.insecure=true"
      - "--providers.docker=true"
      - "--providers.docker.exposedbydefault=false"
      - "--entrypoints.web.address=:80"
    ports:
      - "80:80"
      - "8080:8080"
    volumes:
      - /var/run/docker.sock:/var/run/docker.sock:ro
    networks:
      - traefik-network

  casdoor-auth:
    image: casbin/traefik-casdoor-auth:latest
    container_name: casdoor-auth
```

Replace the placeholder values:

- <your-client-id>: Your Casdoor application client ID
- <your-client-secret>: Your Casdoor application client secret
- <your-organization>: Your Casdoor organization name
- <your-application>: Your Casdoor application name

Start the services:

```
docker-compose up -d
```

## Option 2: Using Binary Deployment

1. Download the latest release from the [traefik-casdoor-auth releases page](#).
2. Create a configuration file config.yaml:

```
casdoor:  
  endpoint: "http://localhost:8000"  
  clientId: "<your-client-id>"  
  clientSecret: "<your-client-secret>"  
  organizationName: "<your-organization>"  
  applicationName: "<your-application>"  
  
server:  
  port: 8080  
  callbackUrl: "http://localhost/callback"
```

1. Run the middleware:

```
./traefik-casdoor-auth --config config.yaml
```

1. Configure Traefik to use the middleware. Add to your Traefik dynamic configuration:

```
http:  
  middlewares:  
    casdoor-auth:  
      forwardAuth:  
        address: "http://localhost:8080/verify"  
        authResponseHeaders:  
          - "X-Forwarded-User"  
  
  routers:  
    my-protected-service:  
      rule: "Host(`example.com`)"  
      middlewares:  
        - casdoor-auth  
      service: my-service
```

## Step 4: Test the Integration

1. Access your protected service through Traefik (e.g., `http://localhost` if using the Docker Compose example).
2. You should be redirected to the Casdoor login page.
3. Log in with your Casdoor credentials.
4. After successful authentication, you will be redirected back to your protected service.
5. The middleware will set the `X-Forwarded-User` header with the authenticated user's information, which your backend service can use.

# Configuration Options

The traefik-casdoor-auth middleware supports the following environment variables:

Variable	Description	Required
<code>CASDOOR_ENDPOINT</code>	URL of your Casdoor instance	Yes
<code>CLIENT_ID</code>	Casdoor application client ID	Yes
<code>CLIENT_SECRET</code>	Casdoor application client secret	Yes
<code>CASDOOR_ORGANIZATION</code>	Casdoor organization name	Yes
<code>CASDOOR_APPLICATION</code>	Casdoor application name	Yes
<code>CALLBACK_URL</code>	OAuth callback URL	Yes
<code>JWT_SECRET</code>	Secret for JWT token signing (auto-generated if not set)	No
<code>SESSION_TIMEOUT</code>	Session timeout in seconds (default: 3600)	No
<code>LOG_LEVEL</code>	Logging level: debug, info, warn, error (default: info)	No

# Advanced Configuration

## Using HTTPS

For production deployments, it's recommended to use HTTPS. Update your Traefik configuration to include TLS:

```
services:  
  traefik:  
    command:  
      - "--entrypoints.web.address=:80"  
      - "--entrypoints.websecure.address=:443"  
      - "--certificatesresolvers.myresolver.acme.tlschallenge=true"  
      - "--certificatesresolvers.myresolver.acme.email=your-  
        email@example.com"  
      - "--"  
    certificatesresolvers.myresolver.acme.storage=/letsencrypt/  
      acme.json"  
    ports:  
      - "80:80"  
      - "443:443"  
    volumes:  
      - ./letsencrypt:/letsencrypt
```

And update your service router configuration:

```
labels:  
  - "traefik.http.routers.whoami.entrypoints=websecure"  
  - "traefik.http.routers.whoami.tls.certresolver=myresolver"
```

# Customizing Session Behavior

You can customize session timeout and other behaviors:

```
environment:  
- SESSION_TIMEOUT=7200 # 2 hours  
- LOG_LEVEL=debug
```

# Troubleshooting

## Redirect Loop

If you experience a redirect loop:

1. Verify that the `CALLBACK_URL` matches the redirect URL configured in your Casdoor application.
2. Check that cookies are enabled in your browser.
3. Ensure the middleware can reach the Casdoor endpoint.

## Authentication Fails

If authentication fails:

1. Check that the `CLIENT_ID` and `CLIENT_SECRET` are correct.
2. Verify that the Casdoor organization and application names are correct.
3. Check the middleware logs for detailed error messages: `docker logs casdoor-auth`

## 502 Bad Gateway

If you see a 502 error:

1. Ensure the casdoor-auth service is running: `docker ps`
2. Check that all services are on the same Docker network.
3. Verify the ForwardAuth address is correct in the Traefik configuration.

## Resources

- [Traefik Casdoor Auth GitHub Repository](#)
- [Traefik ForwardAuth Middleware Documentation](#)
- [Casdoor Documentation](#)

# Portainer

## Using Casdoor for authentication in Portainer

Portainer supports authentication via OAuth. Therefore, it is easy for users to use Casdoor to log in to Portainer. Only several steps and simple configurations are needed to achieve that.

Here is a tutorial on how to use Casdoor for authentication in Grafana. Before you proceed, please ensure that you have Portainer installed and running.

The following are the configuration names:

`CASDOOR_HOST`: The domain name or IP address where the Casdoor server is deployed.

`PORTAINER_HOST`: The domain name or IP address where Portainer is deployed.

### Step 1: Create an app for Portainer in Casdoor

Here is an example of creating an app in Casdoor:

Name ⓘ : Portainer\_test

Display name ⓘ : Portainer\_test

Logo ⓘ : URL ⓘ : [https://cdn.casbin.org/img/casdoor-logo\\_1185x256.png](https://cdn.casbin.org/img/casdoor-logo_1185x256.png)

Preview: 

Home ⓘ :

Description ⓘ :

Organization ⓘ : built-in

Tags ⓘ :

Client ID ⓘ : 2da468d1968c5f85d6b4

Client secret ⓘ : b4db599c84f978425102f161b833625fa9b6b7c

Cert ⓘ : cert-built-in

Redirect URLs ⓘ : Redirect URLs Add

Redirect URL : [https://<PORTAINER\\_HOST>](https://<PORTAINER_HOST>)

1. Copy the client secret and client ID for the next step.
2. Add a Redirect URL. It's your Portainer host.

## Step 2: Configure Portainer

Expand the Settings from the left navigation bar, click on the Authentication option from this list.

1. Enable Use SSO and Automatic user provisioning:

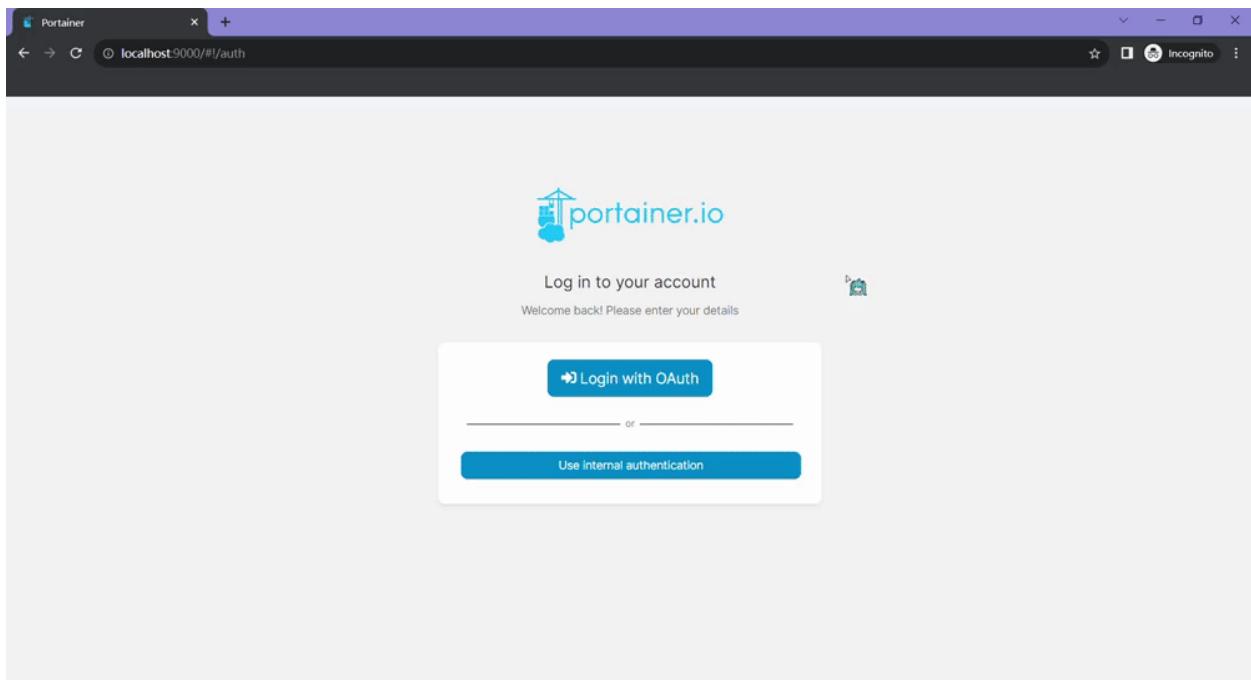
The screenshot shows the Portainer.io interface with the 'Authentication' tab selected in the sidebar. The main page title is 'Authentication settings'. Under 'Authentication method', 'Microsoft Active Directory' is highlighted with an orange border. Other options like 'Internal', 'LDAP', and 'OAuth' are also shown. Below this, there are sections for 'Single Sign-On' (with 'Use SSO' turned on) and 'Automatic user provisioning' (with a red box around the toggle switch).

## 2. Fill in the necessary information as follows:

The screenshot shows the Portainer.io interface with the 'Authentication' tab selected in the sidebar. The main page title is 'OAuth Configuration'. It lists providers: Microsoft (selected), Google, Github, and Custom (highlighted with a blue border). The 'Custom' provider section contains fields for Client ID (89c7db629b5722d4ea2), Client secret (redacted), Authorization URL (https://<CASDOOR\_HOST>/login/oauth/authorize), Access token URL (https://<CASDOOR\_HOST>/api/login/oauth/access\_token), Resource URL (https://<CASDOOR\_HOST>/api/userinfo), Redirect URL (https://<PORTAINER\_HOST>), Logout URL (empty), User identifier (email), and Scopes (openid email profile). A 'Save settings' button is at the bottom.

- Authorization URL: `https://<CASDOOR_HOST>/login/oauth/authorize`
- Access token URL: `https://<CASDOOR_HOST>/api/login/oauth/access_token`
- Resource URL: `https://<CASDOOR_HOST>/api/userinfo`
- Redirect URL: `https://<PORTAINER_HOST>`

Log out of Portainer and test.



# Java

## Spring Boot

Using Casdoor in a Spring Boot project

## Spring Cloud

Using Casdoor in Spring Cloud

## Spring Cloud Gateway

Using Casdoor in Spring Cloud Gateway

## Spring Security

2 items

 Jenkins Plugin

Using the Casdoor plugin for Jenkins security

 Jenkins OIDC

Using the OIDC protocol as an IDP to connect various applications, like Jenkins

 Jira

2 items

 Connecting Applications with OIDC Protocol - Confluence

Learn how to use OIDC protocol as IDP to connect Confluence and other applications.

 RuoYi

Using Casdoor in RuoYi-Cloud



## Pulsar Manager

Using Casdoor in Pulsar Manager



## Using Casdoor in ShenYu

How to use Casdoor with ShenYu



## ShardingSphere

Using Casdoor in ShardingSphere



## Apache IoTDB

Using Casdoor with Apache IoTDB



## Apache DolphinScheduler

Using Casdoor for DolphinScheduler SSO login



## FireZone

Using the OIDC protocol as the IDP to connect various applications, such as FireZone



## Cloud Foundry

Learn how to integrate Casdoor with Cloud Foundry to secure your applications.



## Thingsboard

Learn how to integrate Casdoor with Thingsboard to secure your applications

# Spring Boot

[casdoor-spring-boot-example](#) is an example of how to use [casdoor-spring-boot-starter](#) in a Spring Boot project. We will guide you through the steps below.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed.

You can refer to the Casdoor official documentation for the [Server Installation](#). Please deploy your Casdoor instance in production mode.

After a successful deployment, make sure the following:

- Open your favorite browser and visit <http://localhost:8000>. You will see the login page of Casdoor.
- Test the login functionality by entering `admin` as the username and `123` as the password.

Now, you can quickly implement a Casdoor-based login page in your own app using the following steps.

## Step 2: Import casdoor-spring-boot-starter

You can import the casdoor-spring-boot-starter using Maven or Gradle.

[Maven](#)    [Gradle](#)

---

```

<!-- https://mvnrepository.com/artifact/org.casbin/casdoor-spring-
boot-starter -->
<dependency>
    <groupId>org.casbin</groupId>
    <artifactId>casdoor-spring-boot-starter</artifactId>
    <version>1.x.y</version>
</dependency>

// https://mvnrepository.com/artifact/org.casbin/casdoor-spring-
boot-starter
implementation group: 'org.casbin', name: 'casdoor-spring-boot-
starter', version: '1.x.y'

```

## Step 3: Initialize Config

Initialization requires 6 string-type parameters in the following order:

Name	Required	Description
endpoint	Yes	Casdoor Server URL, such as <code>http://localhost:8000</code>
clientId	Yes	Application client ID
clientSecret	Yes	Application client secret
certificate	Yes	Application certificate
organizationName	Yes	Application organization

Name	Required	Description
applicationName	No	Application name

You can use Java properties or YAML files for initialization.

[Properties](#)    [YML](#)

---

```
casdoor.endpoint = http://localhost:8000
casdoor.clientId = <client-id>
casdoor.clientSecret = <client-secret>
casdoor.certificate = <certificate>
casdoor.organizationName = built-in
casdoor.applicationName = app-built-in
```

```
casdoor:
  endpoint: http://localhost:8000
  client-id: <client-id>
  client-secret: <client-secret>
  certificate: <certificate>
  organization-name: built-in
  application-name: app-built-in
```

**⚠ CAUTION**

Replace the configuration values with your own Casdoor instance,  
especially the `clientId`, `clientSecret`, and `jwtPublicKey`.

## Step 4: Redirect to the Login Page

When you need to authenticate users who access your app, you can send the target URL and redirect to the login page provided by Casdoor.

Make sure you have added the callback URL (e.g. <http://localhost:8080/login>) in the application configuration beforehand.

```
@Resource  
private CasdoorAuthService casdoorAuthService;  
  
@RequestMapping("toLogin")  
public String toLogin() {  
    return "redirect:" +  
casdoorAuthService.getSigninUrl("http://localhost:8080/login");  
}
```

## Step 5: Get Token and Parse

After the Casdoor verification is passed, it will redirect back to your application with the code and state.

You can get the code and call the `getOAuthToken` method, then parse the JWT token.

`CasdoorUser` contains the basic information about the user provided by Casdoor. You can use it to set the session in your application.

```
@RequestMapping("login")  
public String login(String code, String state, HttpServletRequest
```

# Services

Examples of APIs are shown below:

- CasdoorAuthService
  - `String token = casdoorAuthService.getOAuthToken(code, "app-built-in");`
  - `CasdoorUser casdoorUser = casdoorAuthService.parseJwtToken(token);`

- CasdoorUserService
  - `CasdoorUser casdoorUser = casdoorUserService.getUser("admin");`
  - `CasdoorUser casdoorUser = casdoorUserService.getUserByEmail("admin@example.com");`
  - `CasdoorUser[] casdoorUsers = casdoorUserService.getUsers();`
  - `CasdoorUser[] casdoorUsers = casdoorUserService.getSortedUsers("created_time", 5);`
  - `int count = casdoorUserService.getUserCount("0");`
  - `CasdoorResponse response = casdoorUserService.addUser(user);`
  - `CasdoorResponse response = casdoorUserService.updateUser(user);`
  - `CasdoorResponse response = casdoorUserService.deleteUser(user);`

- CasdoorEmailService
  - `CasdoorResponse response = casdoorEmailService.sendEmail(title, content, sender, receiver);`

- CasdoorSmsService
  - `CasdoorResponse response = casdoorSmsService.sendSms(randomCode(), receiver);`

- CasdoorResourceService

- ```
CasdoorResponse response =  
casdoorResourceService.uploadResource(user, tag, parent,  
fullFilePath, file);
```
- ```
CasdoorResponse response =  
casdoorResourceService.deleteResource(file.getName());
```

## More Resources

You can explore the following projects/docs to learn more about integrating Java with Casdoor:

- [casdoor-java-sdk](#)
- [casdoor-spring-boot-starter](#)
- [casdoor-spring-boot-example](#)
- [casdoor-spring-security-example](#)
- [casdoor-spring-security-react-example](#)
- [casdoor-spring-boot-shiro-example](#)

# Spring Cloud

In the Spring Cloud microservice system, general authentication occurs at the gateway. Please refer to [casdoor-springcloud-gateway-example](#) for more information.

If you want to use Casdoor in a single service, you can refer to [casdoor-spring-boot-example](#).

Whether it's in the gateway layer or in a single service, both use the [casdoor-spring-boot-starter](#).

## What's more

You can explore the following projects/docs to learn more about integrating Java with Casdoor:

- [casdoor-java-sdk](#)
- [casdoor-spring-boot-starter](#)
- [casdoor-spring-boot-example](#)
- [casdoor-spring-security-example](#)
- [casdoor-spring-security-react-example](#)
- [casdoor-spring-boot-shiro-example](#)
- [casdoor-springcloud-gateway-example](#)

# Spring Cloud Gateway

The [casdoor-springcloud-gateway-example](#) is an example of how to use the [casdoor-spring-boot-starter](#) as an OAuth2 plugin in Spring Cloud Gateway. The steps to use it are described below.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed. You can refer to the official Casdoor documentation for the [Server Installation](#). Please deploy your Casdoor instance in production mode.

After a successful deployment, you need to ensure the following:

- Open your favorite browser and visit <http://localhost:8000>. You will see the login page of Casdoor.
- Input `admin` and `123` to test if the login functionality is working fine.

After that, you can quickly implement a Casdoor-based login page in your own app using the following steps.

## Step 2: Initialize a Spring Cloud Gateway

You can use the code from this example directly or combine it with your own business code.

You need a gateway service and at least one business service. In this example, `casdoor-gateway` is the gateway service and `casdoor-api` is the business service.

## Step 3: Include the dependency

Add the `casdoor-spring-boot-starter` dependency to your Spring Cloud Gateway project.

For Apache Maven:

```
/casdoor-gateway/pom.xml
```

```
<!-- https://mvnrepository.com/artifact/org.casbin/casdoor-spring-boot-starter -->
<dependency>
    <groupId>org.casbin</groupId>
    <artifactId>casdoor-spring-boot-starter</artifactId>
    <version>1.x.y</version>
</dependency>
```

For Gradle:

```
// https://mvnrepository.com/artifact/org.casbin/casdoor-spring-boot-starter
implementation group: 'org.casbin', name: 'casdoor-spring-boot-starter', version: '1.x.y'
```

## Step 4: Configure your properties

Initialization requires 6 parameters, all of which are of type string.

Name (in order)	Required	Description
endpoint	Yes	Casdoor Server URL, such as <code>http://localhost:8000</code>
clientId	Yes	Application.client_id
clientSecret	Yes	Application.client_secret
certificate	Yes	Application.certificate
organizationName	Yes	Application.organization
applicationName	No	Application.name

You can use Java properties or YAML files to initialize these parameters.

For properties:

```
casdoor.endpoint=http://localhost:8000
casdoor.clientId=<client-id>
casdoor.clientSecret=<client-secret>
casdoor.certificate=<certificate>
casdoor.organizationName=built-in
casdoor.applicationName=app-built-in
```

For YAML:

```
casdoor:
  endpoint: http://localhost:8000
  client-id: <client-id>
```

In addition, you need to configure Gateway Routing. For YAML:

```
spring:
  application:
    name: casdoor-gateway
  cloud:
    gateway:
      routes:
        - id: api-route
          uri: http://localhost:9091
          predicates:
            - Path=/api/**
```

## Step 5: Add the CasdoorAuthFilter

Add an implementation class of the GlobalFilter interface to the gateway for identity verification, such as the CasdoorAuthFilter used in this example.

If the authentication fails, it returns a 401 status code to the frontend to redirect them to the login interface.

```
@Component
public class CasdoorAuthFilter implements GlobalFilter, Ordered {

  private static final Logger LOGGER =
LoggerFactory.getLogger(CasdoorAuthFilter.class);

  @Override public int getOrder() {
    return 0;
  }

  @Override public Mono<Void> filter(ServerWebExchange exchange,
GatewayFilterChain chain) {
```

# Step 6: Get the Service and use it

Now provide 5 services: `CasdoorAuthService`, `CasdoorUserService`, `CasdoorEmailService`, `CasdoorSmsService`, and `CasdoorResourceService`.

You can create them as follows in the Gateway project.

```
@Resource  
private CasdoorAuthService casdoorAuthService;
```

When you require authentication for accessing your app, you can send the target URL and redirect to the login page provided by Casdoor.

Please make sure that you have added the callback URL (e.g., <http://localhost:9090/callback>) in the application configuration in advance.

```
@RequestMapping("login")  
public Mono<String> login() {  
    return Mono.just("redirect:" +  
        casdoorAuthService.getSignInUrl("http://localhost:9090/callback"));  
}
```

After successful verification by Casdoor, it will be redirected back to your application with a code and state. You can get the code and call the `getOAuthToken` method to parse out the JWT token.

`CasdoorUser` contains the basic information about the user provided by Casdoor. You can use it as a keyword to set the session in your application.

```

@RequestMapping("callback")
public Mono<String> callback(String code, String state,
ServerWebExchange exchange) {
    String token = "";
    CasdoorUser user = null;
    try {
        token = casdoorAuthService.getOAuthToken(code, state);
        user = casdoorAuthService.parseJwtToken(token);
    } catch(CasdoorAuthException e) {
        e.printStackTrace();
    }
    CasdoorUser finalUser = user;
    return exchange.getSession().flatMap(session -> {
        session.getAttributes().put("casdoorUser", finalUser);
        return Mono.just("redirect:/");
    });
}

```

Examples of the APIs are shown below.

- CasdoorAuthService

- `String token = casdoorAuthService.getOAuthToken(code, "app-built-in");`
- `CasdoorUser casdoorUser = casdoorAuthService.parseJwtToken(token);`

- CasdoorUserService

- `CasdoorUser casdoorUser = casdoorUserService.getUser("admin");`
- `CasdoorUser casdoorUser = casdoorUserService.getUserByEmail("admin@example.com");`
- `CasdoorUser[] casdoorUsers = casdoorUserService.getUsers();`
- `CasdoorUser[] casdoorUsers = casdoorUserService.getSortedUsers("created_time", 5);`
- `int count = casdoorUserService.getUserCount("0");`

- CasdoorResponse response = casdoorUserService.addUser(user);
  - CasdoorResponse response = casdoorUserService.updateUser(user);
  - CasdoorResponse response = casdoorUserService.deleteUser(user);
- CasdoorEmailService
    - CasdoorResponse response = casdoorEmailService.sendEmail(title, content, sender, receiver);
  - CasdoorSmsService
    - CasdoorResponse response = casdoorSmsService.sendSms(randomCode(), receiver);
  - CasdoorResourceService
    - CasdoorResponse response = casdoorResourceService.uploadResource(user, tag, parent, fullFilePath, file);
    - CasdoorResponse response = casdoorResourceService.deleteResource(file.getName());

## Step 7: Restart the project

After starting the project, open your favorite browser and visit <http://localhost:9090>. Then click any button that requests resources from casdoor-api.



# Casdoor

[Get Resource](#)

[Update Resource](#)

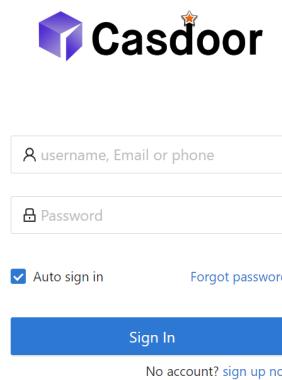
The gateway authentication logic will be triggered. Since you are not logged in, you will be redirected to the login interface. Click the Login button.



# Click to login

[Login](#)

You can see the unified login platform of Casdoor.



After a successful login, you will be redirected to the main interface. Now you can click any button.



# Casdoor

[Get Resource](#)

[Update Resource](#)

"success get resource1"

## What's more

You can explore the following projects/docs to learn more about the integration of Java with Casdoor.

- [casdoor-java-sdk](#)
- [casdoor-spring-boot-starter](#)
- [casdoor-spring-boot-example](#)
- [casdoor-spring-security-example](#)
- [casdoor-spring-security-react-example](#)
- [casdoor-spring-boot-shiro-example](#)
- [casdoor-springcloud-gateway-example](#)

# Spring Security

## Spring Security OAuth

Using Spring Security as an example to demonstrate how to use OIDC to connect to your applications

## Spring Security Filter with OIDC integration for Casdoor

This article explains how to use Spring Security Filter to connect your application with Casdoor using OIDC.

# Spring Security OAuth

Casdoor can use the OIDC protocol as an IDP to connect various applications. In this guide, we will use Spring Security as an example to show you how to use OIDC to connect to your applications.

## Step 1: Deploy Casdoor

First, you need to deploy Casdoor.

You can refer to the Casdoor official documentation for the [Server Installation](#).

After successfully deploying Casdoor, make sure:

- The Casdoor server is running on <http://localhost:8000>.
- Open your favorite browser and visit <http://localhost:7001>, where you will see the login page of Casdoor.
- Verify that the login functionality is working fine by entering `admin` and `123`.

Now, you can quickly implement a Casdoor-based login page in your own app by following the steps below.

## Step 2. Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Add your redirect URL (You can find more details on how to obtain the redirect URL in the next section).

The screenshot shows the 'Client ID' field containing '24a25ea0714d92e78595' and the 'Client Secret' field containing '155...'. Below these, the 'Redirect URLs' section shows a table with one row: 'http://localhost:8082/ui-one/login/oauth2/code/custom'.

Client ID	24a25ea0714d92e78595	Client ID						
Client secret	155...	Client Secret						
Redirect URLs	<table border="1"><tr><td>Redirect URLs</td><td>Add</td></tr><tr><td>Redirect URL</td><td>Add a redirect URL for spring security</td></tr><tr><td colspan="2">🔗 http://localhost:8082/ui-one/login/oauth2/code/custom</td></tr></table>		Redirect URLs	Add	Redirect URL	Add a redirect URL for spring security	🔗 http://localhost:8082/ui-one/login/oauth2/code/custom	
Redirect URLs	Add							
Redirect URL	Add a redirect URL for spring security							
🔗 http://localhost:8082/ui-one/login/oauth2/code/custom								

3. Add the desired provider and fill in any additional settings.

On the application settings page, you will find two values: `Client ID` and `Client secret`, as shown in the image above. We will use these values in the next step.

Open your preferred browser and visit: `http://CASDOOR_HOSTNAME/.well-known/openid-configuration`. Here, you will find the OIDC configuration of Casdoor.

## Step 3. Configure Spring Security

Spring Security natively supports OIDC.

You can customize the settings of Spring Security OAuth2 Client:

**⚠ CAUTION**

You should replace the configuration with your own Casdoor instance, especially the `<Client ID>` and others.

`application.yml`    `application.properties`

```
spring:  
  security:  
    oauth2:  
      client:  
        registration:
```

```
spring.security.oauth2.client.registration.casdoor.client-id=<Client ID>
spring.security.oauth2.client.registration.casdoor.client-secret=<Client
Secret>
spring.security.oauth2.client.registration.casdoor.scope=<Scope>
spring.security.oauth2.client.registration.casdoor.authorization-grant-
type=authorization_code
spring.security.oauth2.client.registration.casdoor.redirect-uri=<Redirect
URL>

spring.security.oauth2.client.provider.casdoor.authorization-
uri=http://CASDOOR_HOSTNAME:7001/login/oauth/authorize
spring.security.oauth2.client.provider.casdoor.token-
uri=http://CASDOOR_HOSTNAME:8000/api/login/oauth/access_token
spring.security.oauth2.client.provider.casdoor.user-info-
uri=http://CASDOOR_HOSTNAME:8000/api/get-account
spring.security.oauth2.client.provider.casdoor.user-name-attribute=name
```

#### CAUTION

For the default situation of Spring Security, the <Redirect URL> should be like

`http://<Your Spring Boot Application Endpoint>/<Servlet Prefix if it is
configured>/login/oauth2/code/custom`. For example, in the following demo, the
redirect URL should be `http://localhost:8080/login/oauth2/code/custom`.

You should also configure this in the `casdoor` application.

You can also customize the settings using `ClientRegistration` in your code. You can find the mapping [here](#)

## Step 4: Get Started with a Demo

1. We can create a Spring Boot application.
2. We can add a configuration that protects all endpoints except `/` and `/login**` for users to log in.

```

@EnableWebSecurity
public class UiSecurityConfig extends WebSecurityConfigurerAdapter {

    @Override
    protected void configure(HttpSecurity http) throws Exception {
        http.authorizeRequests()
            .antMatchers("/", "/login**")
            .permitAll()
            .anyRequest()
            .authenticated()
            .and()
            .oauth2Login();

    }
}

```

3. We can add a naive page for the user to log in.

```

<!DOCTYPE html>
<html lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Spring OAuth Client Thymeleaf - 1</title>
<link rel="stylesheet"
      href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/
bootstrap.min.css" />
</head>
<body>
    <nav
        class="navbar navbar-expand-lg navbar-light bg-light shadow-sm
p-3 mb-5">
        <a class="navbar-brand" th:href="@{/foos/}">Spring OAuth Client
            Thymeleaf - 1</a>
    </nav>
    <div class="container">
        <label>Welcome!</label> <br /> <a th:href="@{/foos/}"
            class="btn btn-primary">Login</a>
    </div>
</body>
</html>

```

When the user clicks the `login` button, they will be redirected to `casdoor`.

4. Next, we can define our protected resources. We can expose an endpoint called `/foos` and a web page for display.

### Data Model

```
public class FooModel {  
    private Long id;  
    private String name;  
  
    public FooModel(Long id, String name) {  
        super();  
        this.id = id;  
        this.name = name;  
    }  
    public Long getId() {  
        return id;  
    }  
    public void setId(Long id) {  
        this.id = id;  
    }  
    public String getName() {  
        return name;  
    }  
    public void setName(String name) {  
        this.name = name;  
    }  
}
```

### Controller

```
@Controller  
public class FooClientController {  
    @GetMapping("/foos")  
    public String getFoos(Model model) {  
        List<FooModel> foos = new ArrayList<>();  
        foos.add(new FooModel(1L, "a"));  
        foos.add(new FooModel(2L, "b"));  
        foos.add(new FooModel(3L, "c"));  
    }  
}
```

## Web page

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Spring OAuth Client Thymeleaf - 1</title>
<link rel="stylesheet"
      href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/
bootstrap.min.css" />
</head>
<body>
  <nav
    class="navbar navbar-expand-lg navbar-light bg-light shadow-sm
p-3 mb-5">
    <a class="navbar-brand" th:href="@{/foos/}">Spring OAuth Client
      Thymeleaf - 1</a>
    <ul class="navbar-nav ml-auto">
      <li class="navbar-text">Hi, <span
sec:authentication="name">preferred_username</span>&ampnbsp&ampnbsp&ampnbsp</li>
    </ul>
  </nav>
  <div class="container">
    <h1>All Foos:</h1>
    <table class="table table-bordered table-striped">
      <thead>
        <tr>
          <td>ID</td>
          <td>Name</td>
        </tr>
      </thead>
      <tbody>
        <tr th:if="${foos.empty}">
          <td colspan="4">No foos</td>
        </tr>
        <tr th:each="foo : ${foos}">
          <td>
            <span th:text="${foo.id}">ID</span>
          </td>
          <td>
            <span th:text="${foo.name}">Name</span>
          </td>
        </tr>
      </tbody>
    </table>
  </div>
</body>
```

**⚠ CAUTION**

All the web page templates should be placed under `resources/templates`.

## Step 5: Try the demo!

Firstly, you can try opening your favorite browser and directly visiting `/foos`. It will automatically redirect you to Casdoor's login page. You can log in there or from the root page.

If you visit your root page, you will see the Casdoor Application Setting.

Spring OAuth Client Thymeleaf - 1

Welcome !  
[Login](#)

Click the `Login` button and the page will redirect you to Casdoor's login page.



username, Email or phone

Password

Auto sign in      [Forgot password?](#)

[Sign In](#)

[Sign in with code](#)    No account? [sign up now](#)

After logging in, the page will redirect you to </foos>.

Spring OAuth Client Thymeleaf -1

Hi,

Your Username

### All Foos:

ID	Name
1	a
2	b
3	c

# Spring Security Filter with OIDC integration for Casdoor

Casdoor is an open-source IDP that supports OIDC and various other protocols. In this article, we will see how to integrate Casdoor with your application using Spring Security Filter and OIDC.

## Step 1: Deploy Casdoor

First, you need to deploy the Casdoor server. Refer to the [official documentation](#) for server installation instructions. After successful deployment, ensure that:

- The Casdoor server is running at <http://localhost:8000>.
- You can see the Casdoor login page at <http://localhost:7001>.
- You can test the login functionality by logging in with the credentials `admin` and `123`.

After verifying these steps, follow the steps below to integrate Casdoor with your application.

## Step 2: Configure Casdoor Application

- Create a new Casdoor application or use an existing one.
- Add your redirect URL. You can find more information about obtaining the redirect URL in the next section.

Name [?](#) : application\_a6ftas → your application name

Display name [?](#) : New Application - a6ftas

Logo [?](#) : URL [?](#) : [https://cdn.casbin.org/img/casdoor-logo\\_1185x256.png](https://cdn.casbin.org/img/casdoor-logo_1185x256.png)

Preview: 

Home [?](#) :

Description [?](#) :

Organization [?](#) : organization\_carg1b → your organization name

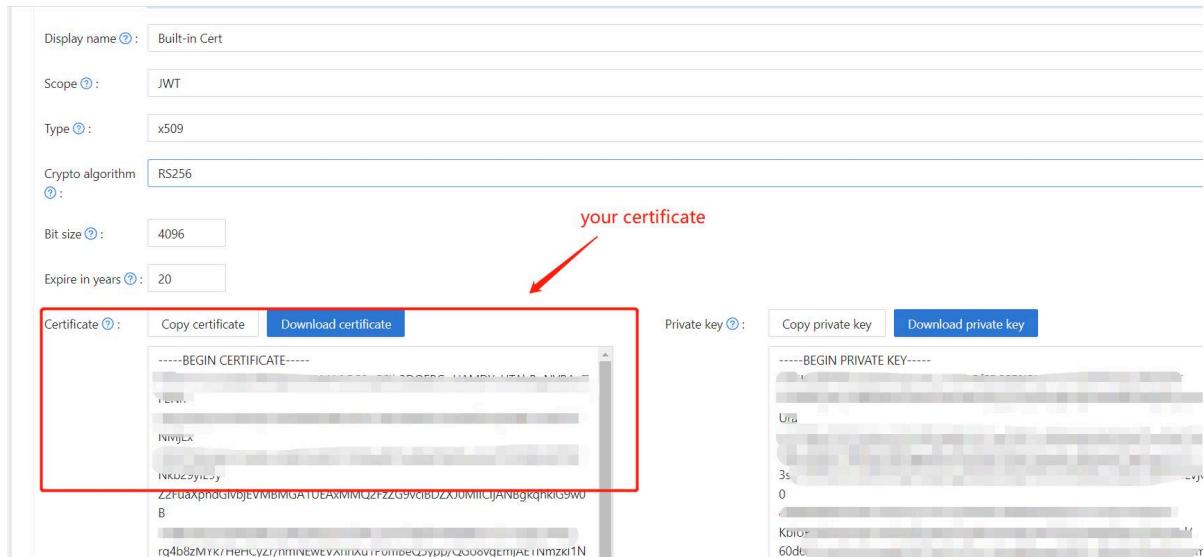
Client ID [?](#) : 3ed7314825ecf955cb19 → your client id

Client secret [?](#) : ee9314ea228 → your client secret

Cert [?](#) : cert-built-in

Redirect URLs [?](#) : Redirect URLs [Add](#)  
Redirect URL [?](#) : http://localhost:3000/callback → your redirect url

- Obtain your Certificate on the certificate editing page.



- Add the provider and other settings as needed.

You can obtain the values for `Application Name`, `Organization Name`, `Redirect URL`, `Client ID`, `Client Secret`, and `Certificate` on the application settings page. We will use them in the next step.

## Step 3: Configure Spring Security

You can customize the settings of the Spring Security filters to process tokens:

### **⚠ CAUTION**

Make sure you replace the configuration values with your own Casdoor instance, especially `<Client ID>` and the others.

```
server:
  port: 8080
casdoor:
  endpoint: http://CASDOOR_HOSTNAME:8000
  client-id: <Client ID>
  client-secret: <Client Secret>
  certificate: <Certificate>
```

### CAUTION

For frontend applications, the default value of <FRONTEND\_HOSTNAME> is localhost:3000. In this demo, the redirect URL is http://localhost:3000/callback. Make sure to configure this in your casdoor application.

## Step 4: Configure Frontend

You need to install casdoor-js-sdk and configure the SDK as follows:

1. Install casdoor-js-sdk.

```
npm i casdoor-js-sdk
# or
yarn add casdoor-js-sdk
```

2. Set up SDK.

```
import Sdk from "casdoor-js-sdk";

// Serverurl is the URL where spring security is deployed
export const ServerUrl = "http://BACKEND_HOSTNAME:8080";

const sdkConfig = {
  serverUrl: "http://CASDOOR_HOSTNAME:8000",
  clientId: "<your client id>",
  appName: "<your application name>",
  organizationName: "<your organization name>",
  redirectPath: "/callback",
};

export const CasdoorSDK = new Sdk(sdkConfig);
```

# Step 5: Set Up a Demo

1. Create a Spring Boot application.
2. Add some configurations to handle JWT.

```
@EnableWebSecurity
public class SecurityConfig {

    private final JwtTokenFilter jwtTokenFilter;

    public SecurityConfig(JwtTokenFilter jwtTokenFilter) {
        this.jwtTokenFilter = jwtTokenFilter;
    }

    @Bean
    public SecurityFilterChain securityFilterChain(HttpSecurity http) throws Exception {
        // enable CORS and disable CSRF
        http = http.cors(corsConfig -> corsConfig
            .configurationSource(configurationSource())
            .csrf().disable());

        // set session management to stateless
        http = http
            .sessionManagement()
            .sessionCreationPolicy(SessionCreationPolicy.STATELESS)
            .and();

        // set permissions on endpoints
        http.authorizeHttpRequests(authorize -> authorize
            .mvcMatchers("/api/redirect-url", "/api/signin").permitAll()
            .mvcMatchers("/api/**").authenticated()
        );

        // set unauthorized requests exception handler
    }
}
```

3. Add a simple JWT filter to intercept requests that require token verification.

```
@Component
public class JwtTokenFilter extends OncePerRequestFilter {

    private final CasdoorAuthService casdoorAuthService;

    public JwtTokenFilter(CasdoorAuthService casdoorAuthService) {
        this.casdoorAuthService = casdoorAuthService;
    }

    @Override
    protected void doFilterInternal(HttpServletRequest request,
                                    HttpServletResponse response,
                                    FilterChain chain)
        throws ServletException, IOException {
        // get authorization header and validate
        final String header =
request.getHeader(HttpHeaders.AUTHORIZATION);
        if (!StringUtils.hasText(header) ||
!header.startsWith("Bearer ")) {
            chain.doFilter(request, response);
            return;
        }

        // get jwt token and validate
        final String token = header.split(" ")[1].trim();

        // get user identity and set it on the spring security
        context
        UserDetails userDetails = null;
        try {
            CasdoorUser casdoorUser =
casdoorAuthService.parseJwtToken(token);
            userDetails = new CustomUserDetails(casdoorUser);
        } catch (CasdoorAuthException exception) {
            logger.error("casdoor auth exception", exception);
            chain.doFilter(request, response);
            return;
        }
    }
}
```

When the user accesses the interface requiring authentication, `JwtTokenFilter` will obtain the token from the request header `Authorization` and verify it.

4. Define a `Controller` to handle when the user logs in to Casdoor. After the user logs in, they will be redirected to the server and carry the `code` and `state`. The server then needs to verify the user's identity from Casdoor and obtain the `token` through these two parameters.

```
@RestController
public class UserController {

    private static final Logger logger =
LoggerFactory.getLogger(UserController.class);

    private final CasdoorAuthService casdoorAuthService;

    // ...

    @PostMapping("/api/signin")
    public Result signin(@RequestParam("code") String code,
@RequestParam("state") String state) {
        try {
            String token = casdoorAuthService.getOAuthToken(code,
state);
            return Result.success(token);
        } catch (CasdoorAuthException exception) {
            logger.error("casdoor auth exception", exception);
            return Result.failure(exception.getMessage());
        }
    }

    // ...
}
```

## Step 6: Try the Demo

You can access the frontend application through your browser. If you are not logged in,

you will see a login button. Click on it, and you will be redirected to the Casdoor login page.

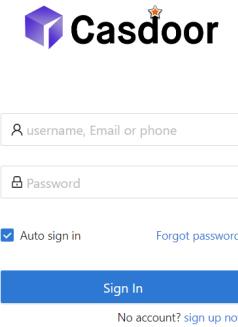
If you visit your root page,

---

[Casdoor Login](#)

Click the [Casdoor Login](#) button, and the page will redirect to Casdoor's login page.

---



---

Made with ❤ by [Casdoor](#)

After logging in, you will be redirected to [/](#).



New User - rtsbx4

[Logout](#)

# Jenkins Plugin

Casdoor provides a plugin that allows users to log in to Jenkins. Here, we will show you how to use the Casdoor plugin for Jenkins security.

The following are some of the configuration settings:

`CASDOOR_HOSTNAME`: The domain name or IP where the Casdoor server is deployed.

`JENKINS_HOSTNAME`: The domain name or IP where Jenkins is deployed.

## Step 1: Deploy Casdoor and Jenkins

Firstly, deploy [Casdoor](#) and [Jenkins](#).

After a successful deployment, ensure the following:

1. Set the Jenkins URL (Manage Jenkins → Configure System → Jenkins Location) to `JENKINS_HOSTNAME`.

The screenshot shows the Jenkins 'Configuration' screen under 'Manage Jenkins'. The 'Jenkins Location' section is highlighted. In the 'Jenkins URL' field, the value 'http://10.144.125.123:6780' is entered, with the placeholder 'JENKINS\_HOSTNAME' visible below it. The 'System Admin e-mail address' field contains the placeholder 'address not configured yet <nobody@nowhere>'. Below this, the 'Serve resource files from another domain' section is shown, with a note about the 'Resource Root URL' field being empty. At the bottom, there are 'Global properties' options for 'Environment variables' and buttons for 'Save' and 'Apply'.

2. Verify that Casdoor can be logged in and used normally.
3. Set the `origin` value of Casdoor (conf/app.conf) to `CASDOOR_HOSTNAME`.

```
conf > ⚙ app.conf
  8  dbName = casdoor
  9  redisEndpoint =
10  defaultStorageProvider =
11  isCloudIntranet = false
12  authState = "casdoor"
13  httpProxy = "127.0.0.1:10808"
14  verificationCodeTimeout = 10
15  initScore = 2000
16  logPostOnly = true
17  origin = "http://10.144.1.2:8000" | CASDOOR_HOSTNAME
```

## Step 2: Configure the Casdoor Application

1. Create a new Casdoor application or use an existing one.
2. Add a redirect URL: `http://JENKINS_HOSTNAME/securityRealm/finishLogin`

The screenshot shows the Casdoor application configuration interface. It includes fields for Description (set to 'Casdoor for Jenkins'), Organization (set to 'built-in'), Client ID (set to 'bbd0bd66696e504dec59'), Client secret (set to 'd2de01b01...110b47465c'), and Redirect URLs. The 'Redirect URLs' section has an 'Add' button and a table with one entry: 'Redirect URL' set to '`http://10.144.125.123:6780/securityRealm/finishLogin`' and 'Add a redirect url for Jenkins' set to '`JENKINS_HOSTNAME`'.

3. Add the desired provider and provide any additional settings.

On the application settings page, you will find two values: `Client ID` and `Client secret`, as shown in the picture above. We will use these values in the next step.

Open your favorite browser and visit `http://CASDOOR_HOSTNAME/.well-known/openid-configuration` to view the OIDC configuration of Casdoor.

## Step 3: Configure Jenkins

Now, you can install the Casdoor plugin from the marketplace or by uploading its `.jar` file.

After the installation is complete, go to Manage Jenkins → Configure Global Security.

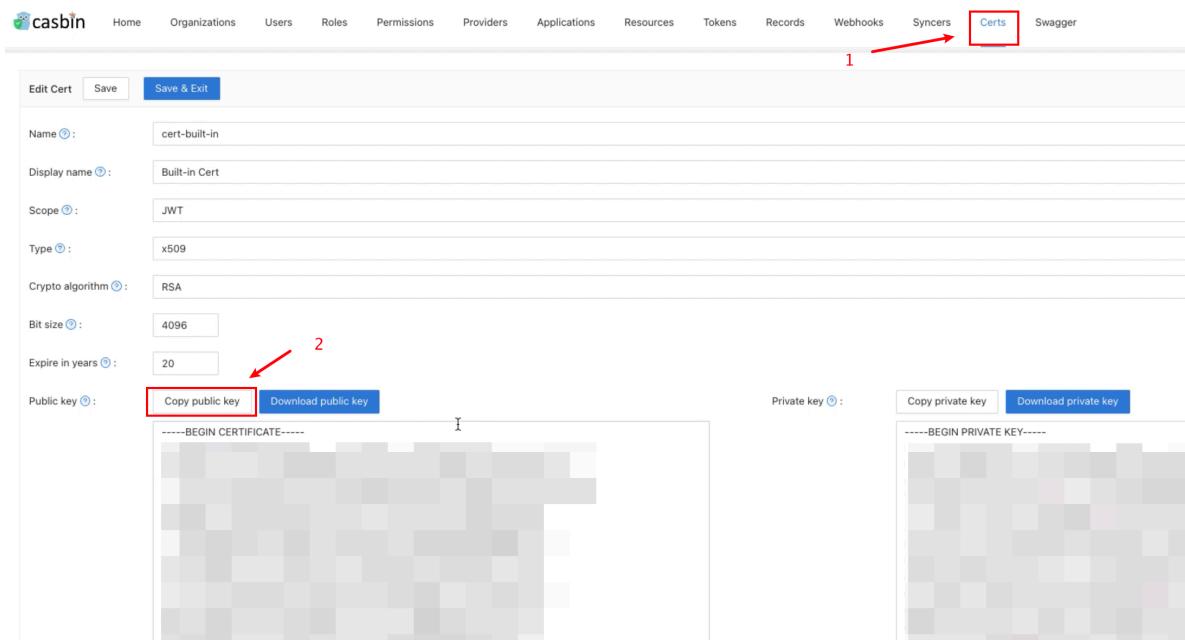
**Suggestion:** Back up the Jenkins `config.xml` file and use it for recovery in case of setup errors.

The screenshot shows the Jenkins 'Configure Global Security' page with the 'Casdoor Authentication Plugin' selected. The form fields are as follows:

- Authentication**:
  - Disable remember me
- Security Realm**:
  - Casdoor Authentication Plugin
  - Casdoor Endpoint:  
[Input field] (highlighted with a blue border)
  - ⚠ Casdoor Endpoint is required.
- Client ID**:  
[Input field]  
⚠ Client Id is required.
- Client Secret**:  
[Input field]  
⚠ Client Secret is required.
- JWT Public Key**:  
[Input field]  
⚠ Jwt Public Key is required.
- Organization Name**:  
[Input field]
- Application Name**:  
[Input field]
- Advanced...** (button)
- Delegate to servlet container** (radio button)
- Jenkins' own user database** (radio button)

At the bottom are **Save** and **Apply** buttons.

1. In the Security Realm section, select "Casdoor Authentication Plugin".
2. In the Casdoor Endpoint field, enter the `CASDOOR_HOSTNAME` mentioned earlier.
3. In the Client ID field, enter the `Client ID` mentioned earlier.
4. In the Client secret field, enter the `Client secret` mentioned earlier.
5. In the JWT Public Key field, provide the public key used to validate the JWT token. You can find the public key in Casdoor by clicking on `Cert` at the top. After clicking `edit` on your application, you can copy the public key from the following page.



6. Organization Name and Application Name are optional. You can specify your organization and application to verify users in other organizations and applications. If these fields are left empty, the plugin will use the default organization and application.
7. In the Authorization section, check "Logged-in users can do anything". Disable "Allow anonymous read access".
8. Click `Save`.

Jenkins will now automatically redirect you to Casdoor for authentication.

# Jenkins OIDC

Casdoor can use the OIDC protocol as an IDP to connect various applications. In this example, we will use Jenkins to demonstrate how to use OIDC to connect to your applications.

The following are some of the names used in the configuration:

- `CASDOOR_HOSTNAME`: The domain name or IP where the Casdoor server is deployed.
- `JENKINS_HOSTNAME`: The domain name or IP where Jenkins is deployed.

## Step 1: Deploy Casdoor and Jenkins

Firstly, deploy [Casdoor](#) and [Jenkins](#).

After a successful deployment, ensure the following:

1. Set the Jenkins URL (Manage Jenkins → Configure System → Jenkins Location) to `JENKINS_HOSTNAME`.

The screenshot shows the Jenkins configuration page under 'Dashboard > configuration'. It includes sections for 'Jenkins Location' (with Jenkins URL set to 'http://10.144.125.123:6780') and 'Global properties' (with checkboxes for 'Environment variables' and 'Advanced'). Buttons for 'Save' and 'Apply' are at the bottom.

2. Ensure that Casdoor can be logged in and used normally.
3. Set Casdoor's `origin` value (conf/app.conf) to `CASDOOR_HOSTNAME`.

```
conf > ⚙ app.conf
 8  dbName = casdoor
 9  redisEndpoint =
10 defaultStorageProvider =
11 isCloudIntranet = false
12 authState = "casdoor"
13 httpProxy = "127.0.0.1:10808"
14 verificationCodeTimeout = 10
15 initScore = 2000
16 logPostOnly = true
17 | origin = "http://10.144.1.2:8000"
      CASDOOR_HOSTNAME
```

## Step 2: Configure the Casdoor application

1. Create a new Casdoor application or use an existing one.

2. Add a redirect URL: `http://JENKINS_HOSTNAME/securityRealm/finishLogin`

The screenshot shows the Casdoor application settings page. A specific redirect URL configuration is highlighted with a red box. The URL is `http://10.144.125.123:6780/securityRealm/finishLogin`, which is labeled as "Add a redirect url for Jenkins". Above this, the "Client ID" and "Client secret" fields are also highlighted with red boxes. The "Client ID" is `bbd0bd66696e504dec59` and the "Client secret" is `d2de01b01...110b47465c`. The "Description" field contains "Casdoor for Jenkins". The "Organization" field is set to "built-in". The "Redirect URLs" section shows the URL `JENKINS_HOSTNAME`.

3. Add the provider you want and provide any additional settings.

You will obtain two values from the application settings page: `Client ID` and `Client secret`. We will use these values in the next step.

Open your favorite browser and visit: `http://CASDOOR_HOSTNAME/.well-known/openid-configuration` to view the OIDC configuration of Casdoor.

## Step 3: Configure Jenkins

First, we need to install [OpenId Connect Authentication](#) as Jenkins does not natively support OIDC.

After the installation is complete, go to [Manage Jenkins → Configure Global Security](#).

The screenshot shows the Jenkins Manage Jenkins interface. On the left, there's a sidebar with links like '用户列表' (User List), '构建历史' (Build History), 'Manage Jenkins' (which is selected and highlighted with a red border), and 'My Views'. Below that are sections for '构建队列' (Build Queue) and '构建执行状态' (Build Execution Status). The main area is titled 'System Configuration' and contains several management options: 'Configure System' (global settings), 'Global Tool Configuration' (configure tools and installers), 'Manage Nodes and Clouds' (control nodes and clouds), 'Manage Plugins' (manage Jenkins plugins), 'Configure Global Security' (highlighted with a red box), 'Manage Credentials' (configure credentials), and 'Configure Credential Providers'.

### TIP

Make sure to back up the Jenkins `config.xml` file to recover in case of any setup errors.

1. In Access Control, select `Login with Openid Connect` as the Security Realm.
2. Specify the `Client ID` noted above in the Client ID field.
3. Specify the `Client secret` noted above in the Client secret field.
4. In the Configuration mode, select `Automatic configuration` and enter `http://CASDOOR_HOSTNAME.well-known/openid-configuration` as the Well-known configuration endpoint.

**Security Realm**

- Delegate to servlet container ?
- Jenkins' own user database ?
- Login with Openid Connect Select this  ?

Client id ?

Input your Client ID

Client secret ?

 Concealed Input your Client secret Change Password

**Configuration mode**

- Automatic configuration ?
- Well-known configuration endpoint ?
- Manual configuration ?

http://10.144.1.2:8000/.well-known/openid-configuration

**CASDOOR\_HOSTNAME**

If your Casdoor is deployed locally, you may need to select **Manual configuration** and provide the following information:

- Token server URL: **http://CASDOOR\_HOSTNAME/api/login/oauth/access\_token**
- Authorization server URL: **http://CASDOOR\_HOSTNAME/login/oauth/authorize**
- UserInfo server URL: **http://CASDOOR\_HOSTNAME/api/get-account**
- Scopes: **address phone openid profile offline\_access email**

Configuration mode

- Automatic configuration ?
- Manual configuration ?
- Token server url ?

http://10.144.1.2:8000/api/login/oauth/access\_token

**CASDOOR\_HOSTNAME**

Authorization server url ?

http://10.144.1.2:8000/login/oauth/authorize

Userinfo server url ?

http://10.144.1.2:8000/api/get-account

Scopes ?

address phone openid profile offline\_access email

5. Click on **Advanced settings** and fill in the following:

- In the User name field, specify **name**.

- In the Full name field, specify `displayName`.
- In the Email field, specify `email`.

User name field name	<input type="text" value="name"/>
Full name field name	<input type="text" value="displayName"/>
Email field name	<input type="text" value="email"/>
Groups field name ?	<input type="text"/>
Token Field Key To Check ?	<input type="text"/>

6. In the Authorization section, enable “Logged-in users can do anything” and disable “Allow anonymous read access”. You can configure more complex authorization later, but for now, check if OpenID works correctly.

Log out of Jenkins, and it should redirect you to Casdoor for authentication.



Auto sign in      [Forgot password?](#)

[Sign In](#)

[Sign in with code](#)      [No account? sign up now](#)

Q
G

# Jira

## Via Built-in SSO

Using the OIDC protocol as an IDP to connect various applications, such as Jira

## Using the miniOrange Plugin

Connect casdoor and Jira using the OIDC protocol as the IDP

# Via Built-in SSO

This is a free method to connect Casdoor, but your website must use HTTPS.

Casdoor can use the OIDC protocol as an IDP to connect various applications. Here is a [Jira](#) tutorial.

The following are some of the names in the configuration:

- `CASDOOR_HOSTNAME`: Domain name or IP where the Casdoor server is deployed.
- `Jira_HOSTNAME`: Domain name or IP where Jira is deployed.

## Step 1: Deploy Casdoor and Jira

Firstly, deploy [Casdoor](#) and [Jira](#).

After a successful deployment, ensure the following:

1. Casdoor can be logged in and used normally.
2. You can set `CASDOOR_HOSTNAME` to `http://localhost:8000` when deploying Casdoor in `prod` mode. See [production mode](#).

## Step 2: Configure Casdoor application

1. Create or use an existing Casdoor application.
2. Find Authentication methods:

Jira Software

Administration

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General configuration Find more admin tools Jira mobile app

SYSTEM SUPPORT System info Instrumentation Monitoring Database monitoring Integrity checker Logging and profiling Scheduler details Troubleshooting and support tools Clean up Audit log Clustering

SECURITY Project roles Global permissions Password Policy User sessions **Authentication methods**

Administering personal access <https://test.v2tl.com/plugins/servlet/applications/licenses>

**Authentication methods**

Manage how users authenticate. Save authentication configurations using SAML, OpenID Connect, or Crowd as the identity provider. [Learn more about using multiple identity providers.](#)

**Make authentication safer**

Authenticating with username and password is less secure than through single sign-on. Now that you've configured the latter, consider disabling product login form and basic authentication.

Communicate this change to your users.

[How to disable](#) · [Dismiss](#)

**Login options**

Name	Type	Last updated	Show on login page	Actions
Username and password	Product login form	Never	<input checked="" type="checkbox"/>	...
casdoor	OpenID Connect	25 April 2023 4:33 PM	<input checked="" type="checkbox"/>	...

**Authentication on API calls**

Allow basic authentication on API calls. You can use personal access tokens as a safer alternative method of authentication. See [Using personal access tokens](#).

3

- Add a Configuration and choose OpenID Connection single sign-on in the Authentication method

### Add new configuration

Name \*

Use a unique name for this configuration.

Authentication method

OpenID Connect single sign-on



Users log in using OpenID Connect

- Find the redirect URL:

Give these URLs to your identity provider

Redirect URL

<https://test.v2tl.com/plugins/servlet/oidc/callback>



Location where the client is sent to after successful account authentication.

## 5. Add a redirect URL:

The screenshot shows the Casdoor application settings page. It includes fields for Client ID (642ec5d6779a2f0e879d), Client secret (26cb47985c47ae3844580536ce2f59872969e109), Cert (cert-built-in), and a Redirect URLs section. The Redirect URLs section contains an 'Add' button and a table with one entry: Redirect URL (https://test.v2tl.com/plugins/servlet/oidc/callback). There is also an 'Action' column with icons for edit, delete, and copy.

Not surprisingly, you can obtain two values on the application settings page:

`Client ID` and `Client secret`, like the picture above. We will use them in the next step.

Open your favorite browser and visit: `http://CASDOOR_HOSTNAME/.well-known/openid-configuration`. You will see the OIDC configuration of Casdoor.

## Step 3: Configure Jira

1. We need to continue configuring our Configuration in Jira

## Edit existing configuration

Name \*

casdoor

Use a unique name for this configuration.

Authentication method

OpenID Connect single sign-on

Users log in using OpenID Connect

### OpenID Connect settings

Issuer URL \*

https://demo.casdoor.com

your casdoor url

The complete URL of the OpenID Provider. Needs to be unique.

Client ID \*

642ec5d6779a2f0e879d

application client ID

The client identifier, as registered with the OpenID Provider.

Client secret \*

.....

application client secret [Change](#)

Client secret is used in conjunction with the Client ID to authenticate the client application against the OpenID Provider.

Username mapping \*

\${preferred\_username}

Used to map IdP claims to the username, e.g. \${sub}

Additional scopes

phone ✕ email ✕ address ✕ profile ✕

✖ ▾

The default scope is 'openid'. Add more scopes if needed to obtain the username claim.

Redirect URL  
 Copy it to casdoor

Location where the client is sent to after successful account authentication.

Initiate login URL  
 Copy

URL used for OpenID Provider-initiated login.

**Additional settings**  
The authorization, token, and user info endpoints will be filled automatically if your Identity provider offers this option. If not, you will be asked to provide this information.

Fill the data automatically from my chosen identity provider.

**JIT provisioning**  
Just-in-time user provisioning allows users to be created and updated automatically when they log in through SSO to Atlassian Data Center applications. [Learn more](#).

Create users on login to the application

**OpenID Connect behaviour**

Remember user logins  
If checked, successful login history will be saved and users will be logged in automatically without the need for reauthentication.

**Login page settings**  
Decide if the IdP should be visible on login page and customize what the user will see on the button.

Show IdP on the login page

Login button text \*

The text is shown to the user on the login page. Remaining characters: 33.

Save configuration Cancel

2. You can configure more complex authorization later. For now, check if OpenID actually works.

⚠ You have temporary access to administrative functions. [Drop access](#) if you no longer require it. For more information, refer to the [documentation](#).



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## Administration

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Integrity checker

Logging and profiling

Scheduler details

Troubleshooting and support tools

Clean up

Audit log

Clustering

SECURITY

Project roles

Global permissions

### Authentication methods

Add configuration

Manage how users authenticate. Save authentication configurations using SAML, OpenID Connect, or Crowd as the identity provider. [Learn more about using multiple identity providers.](#)

#### ⚠ Make authentication safer

Authenticating with username and password is less secure than through single sign-on. Now that you've configured the latter, consider disabling product login form and basic authentication.

Communicate this change to your users.

[How to disable](#) - Dismiss

#### Login options

Name	Type	Last updated	Show on login page	Actions
Username and password	Product login form	Never	<input checked="" type="checkbox"/>	<span style="font-size: small;">...</span>
casdoor	OpenID Connect	26 April 2023 7:20 PM	<input checked="" type="checkbox"/>	<span style="font-size: small;">...</span>

#### Authentication on API calls



Allow basic authentication on API calls.

You can use personal access tokens as a safer alternative method of authentication. See [Using personal access tokens](#).

# Using the miniOrange Plugin

This tutorial explains how to use [miniOrange](#) to connect casdoor and Jira.

[Casdoor](#) can use the OIDC protocol as the IDP to connect various applications. You can refer to this [Jira](#) tutorial for more information.

The following are some important names in the configuration:

`CASDOOR_HOSTNAME`: The domain name or IP where the Casdoor server is deployed.

`Jira_HOSTNAME`: The domain name or IP where Jira is deployed.

## Step 1: Deploy Casdoor and Jira

Firstly, deploy [Casdoor](#) and [Jira](#).

After successful deployment, make sure:

1. Set Jira URL (Plans → Administration → System → General Configuration) to

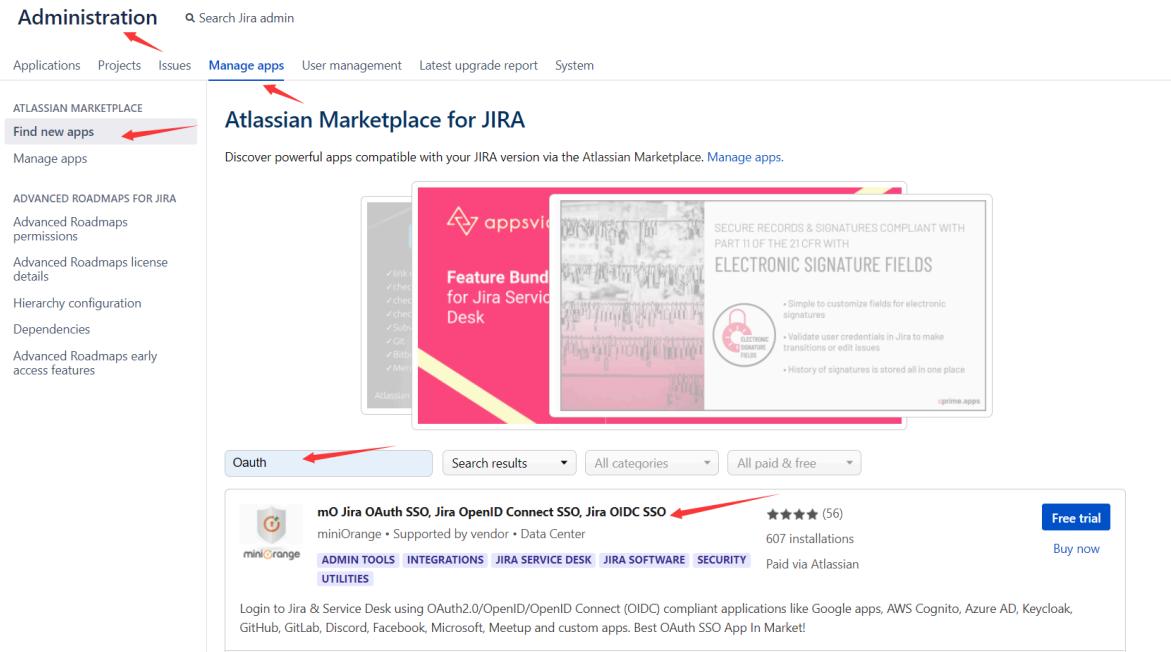
`Jira_HOSTNAME`.

The screenshot shows the Casdoor General Configuration page under the System tab. On the left sidebar, there are links for Applications, Projects, Issues, Manage apps, User management, and Latest upgrade report. The System tab is selected. In the main content area, there is a 'General configuration' sidebar with links for Find more admin tools, Jira mobile app, SYSTEM SUPPORT, System info, Instrumentation, Monitoring, Database monitoring, Integrity checker, Logging and profiling, Scheduler details, and Troubleshooting and support tools. The main panel shows the 'Settings' section with 'General Settings'. The 'Base URL' field is highlighted with a red border and contains the value `http://localhost:8080`. A red arrow points from the text 'Jira\_HOSTNAME' in the previous step description to this highlighted URL field.

2. Casdoor can be logged in and used normally.
3. You can set `CASDOOR_HOSTNAME` to `http://localhost:8000` when deploying Casdoor in `prod` mode. See [production mode](#).

## Step 2: Configure Casdoor Application and Jira

1. Create a new Casdoor application or use an existing one.
2. Install the [miniOrange](#) app to support OAuth. You can find this app in Plans->Administration->Find new apps->search



The screenshot shows the Atlassian Marketplace for JIRA interface. A red arrow points to the 'Manage apps' tab in the top navigation bar. Another red arrow points to the 'Find new apps' button in the left sidebar under the 'ATLASSIAN MARKETPLACE' section. A third red arrow points to the 'Oauth' filter button at the top of the search results. The search results page displays the 'mO Jira OAuth SSO, Jira OpenID Connect SSO, Jira OIDC SSO' app by miniOrange. This app has a 5-star rating (56 reviews), 607 installations, and is categorized under ADMIN TOOLS, INTEGRATIONS, JIRA SERVICE DESK, JIRA SOFTWARE, SECURITY, and UTILITIES. A red arrow points to the app's title. The app description states: 'Login to Jira & Service Desk using OAuth2.0/OpenID Connect (OIDC) compliant applications like Google apps, AWS Cognito, Azure AD, Keycloak, GitHub, GitLab, Discord, Facebook, Microsoft, Meetup and custom apps. Best OAuth SSO App In Market!'.

3. Set `Selected Application` to Custom OpenId.
4. Find the redirect URL:

miniOrange OAuth Configuration

Manage apps Ask Us On Forum Frequently Asked Questions

OAuth/OIDC Configurations

Callback URL: http://localhost:8080/plugins/servlet/oauth/callback

## 5. Add the redirect URL:

Client ID: 514e09591ee5554b16fe

Client secret: e7f05b14a68fb23e526f08515aefb73bbab7814a

Cert: cert-built-in

Redirect URLs: [Add](#)

Redirect URL	Action
http://localhost:8080/plugins/servlet/oauth/callback	

## 6. Configure the app as follows:

Selected Application: Custom OpenId Import Details

Provider ID: 5c881c25-2e02-42c9-af06-0a71e0beb516

Custom App Name: casdoor

Client Id: 514e09591ee5554b16fe

Client Secret: e7f05b14a68fb23e526f08515aefb73bbab7814a

Scope: openid email profile address phone offline\_access

Authorize Endpoint: http://localhost:8000/login/oauth/authorize

Access Token Endpoint: http://localhost:8000/api/login/oauth/access\_token

Logout Endpoint: Enter the Logout Endpoint URL

Enter the Logout endpoint of your OAuth/OpenID Provider. Leave blank if Logout endpoint not supported by provider.  
e.g. If Keycloak Logout endpoint is configured with {hostname}/auth/realms/{realm-name}/protocol/openid-connect/logout too.

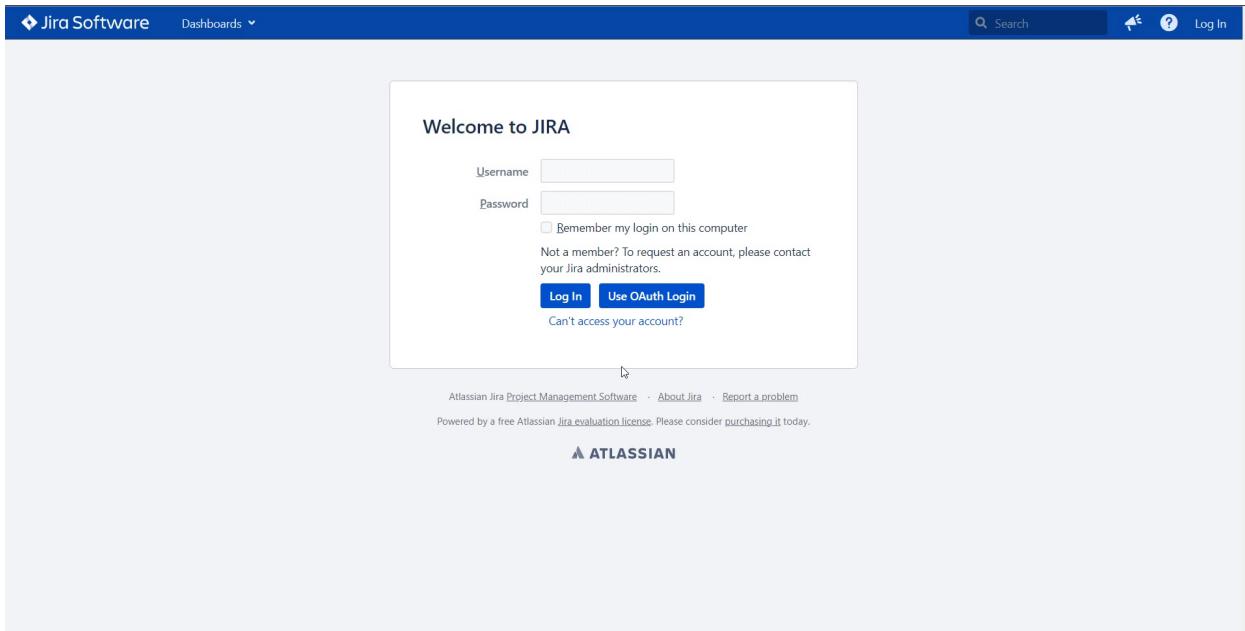
Save Test Configuration

- Token server URL: http://**CASDOOR\_HOSTNAME**/api/login/oauth/**access\_token**
- Authorization server URL: http://**CASDOOR\_HOSTNAME**/login/oauth/**authorize**

- UserInfo server URL : http://**CASDOOR\_HOSTNAME**/api/get-account
- Scopes: address phone openid profile offline\_access email

Open your favorite browser and visit: http://**CASDOOR\_HOSTNAME**/.well-known/openid-configuration. You will see the OIDC configuration of Casdoor.

Log out of Jira and test SSO.



# Connecting Applications with OIDC Protocol - Confluence

Casdoor can use OIDC protocol as an IDP to connect various applications. In this guide, we will use Confluence as an example to demonstrate how to use OIDC to connect your applications.

To start, make sure you have deployed Casdoor and Confluence successfully. Here are a few configuration names you need to remember:

- `CASDOOR_HOSTNAME`: Domain name or IP where Casdoor server is deployed.
- `Confluence_HOSTNAME`: Domain name or IP where Confluence is deployed.

## Step 1: Deploy Casdoor and Confluence

First, deploy Casdoor and Confluence.

After successful deployment, ensure the following:

1. Set Confluence URL to `Confluence_HOSTNAME`.

The screenshot shows the 'General Configuration' section of the Confluence administration interface. On the left, a sidebar lists various configuration options. The 'General Configuration' option is highlighted with a blue arrow pointing to it. The main content area is titled 'General Configuration' and contains a 'Site Configuration' section. Under 'Site Configuration', there is a 'Server Base URL' field set to 'http://localhost:8090'. A blue arrow points to this field.

2. Casdoor can be logged in and used normally.
3. You can set `CASDOOR_HOSTNAME` to `http://localhost:8000` if you deploy Casdoor in `prod` mode. Refer to the [production mode](#) for more details.

## Step 2: Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Find a redirect URL:

The screenshot shows the 'OAuth/OIDC Configurations' page. At the top, there is a 'Back to common setting' button. Below it, the title 'OAuth/OIDC Configurations' is displayed. A 'Callback URL' field contains the value 'http://localhost:8090/plugins/servlet/oauth/callback'. A blue arrow points to this field.

3. Add the redirect URL to the application:

The screenshot shows the 'OAuth/OIDC Configurations' page with several input fields. 
 - 'Client ID': Value is '01ae4bd048734ca2dea'. A blue arrow points to this field.
 - 'Client secret': Value is 'f26a4115725867b7bb7b668c81e1f8f7fae1544d'. A blue arrow points to this field.
 - 'Cert': Value is 'cert-built-in'.
 - 'Redirect URLs': A table with a header 'Redirect URLs' and a 'Add' button. A row shows a 'Redirect URL' field containing 'http://localhost:8090/plugins/servlet/oauth/callback'. A blue arrow points to this field.

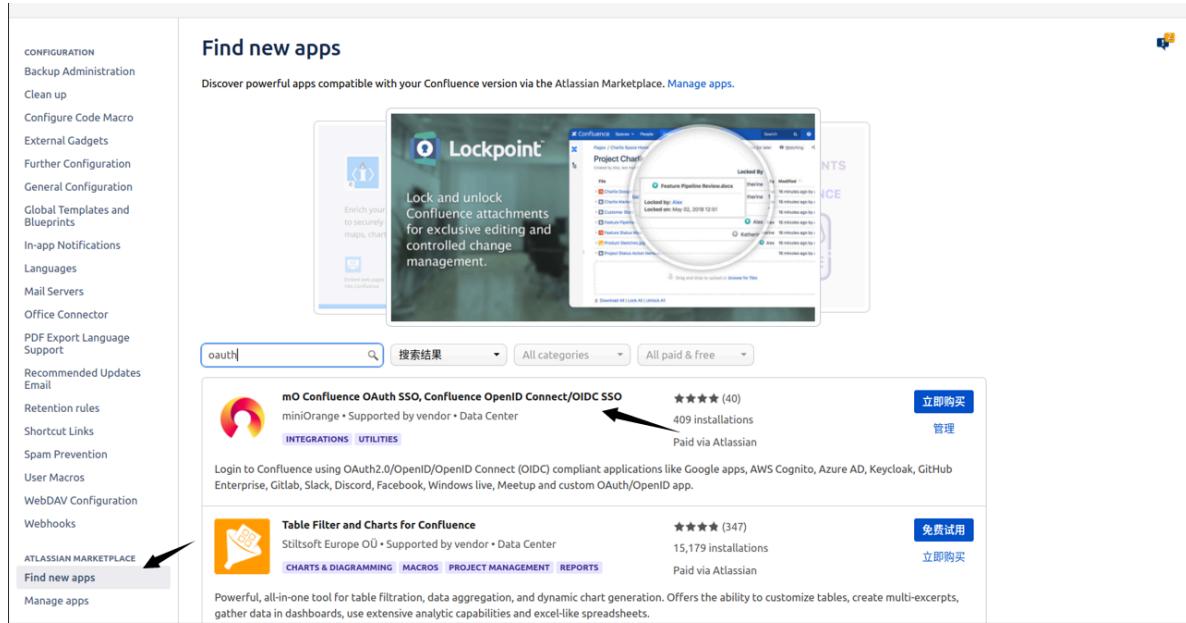
4. Add the desired provider and configure other settings accordingly.

On the application settings page, you will find two values: `Client ID` and `Client Secret`. We will need these in the next step.

Open your favorite browser and visit: `http://CASDOOR_HOSTNAME/.well-known/openid-configuration` to see the OIDC configuration of Casdoor.

## Step 3: Configure Confluence

1. Install the [miniOrange](#) app to support OAuth. You can find this app in:



The screenshot shows the Atlassian Marketplace interface. On the left, there's a sidebar with various configuration options like 'Backup Administration', 'External Gadgets', and 'ATLASSIAN MARKETPLACE'. The 'ATLASSIAN MARKETPLACE' option is highlighted with a red arrow. In the main area, there's a search bar with 'oauth' typed in. Below it, there are filters for '搜索结果', 'All categories', and 'All paid & free'. A preview of the 'Lockpoint' app is shown, followed by a list of results. The first result is the 'mO Confluence OAuth SSO, Confluence OpenID Connect/OIDC SSO' app by miniOrange. It has a 4-star rating (40 reviews), 409 installations, and is listed under 'INTEGRATIONS UTILITIES'. A black arrow points to this app entry. The second result is 'Table Filter and Charts for Confluence' by Stiltsoft Europe OÜ, with a 3-star rating (347 reviews), 15,179 installations, and is listed under 'CHARTS & DIAGRAMMING MACROS PROJECT MANAGEMENT REPORTS'. There are also '立即购买' (Buy Now) and '免费试用' (Free Trial) buttons for each app.

2. Configure the app:

Selected Application:	<b>Custom OpenId</b>	<b>Import Details</b>	<b>Setup Guide</b>
Provider ID: <b>4f6b30c1-eba8-4b89-ac02-4a4b7a137b97</b>			
Custom App Name: <input type="text" value="Casdoor SSO"/>			
Client Id: <input type="text" value="014ae4bd048734ca2dea"/>			
Client Secret: <input type="text" value="f26a4115725867b7bb7b668c81e1f8f7fae1544d"/>			
Scope: <input type="text" value="openid profile email"/>			
Authorize Endpoint: <input type="text" value="https://door.casdoor.com/login/oauth/authorize"/>			
Access Token Endpoint: <input type="text" value="https://door.casdoor.com/api/login/oauth/access_token"/>			
Logout Endpoint: <input type="text" value="Enter the Logout Endpoint URL"/> <p style="font-size: small; margin-top: 5px;">           Enter the Logout endpoint of your OAuth/OpenID Provider. Leave blank if Logout endpoint not supported by provider.            e.g. If Keycloak Logout endpoint is configured with {hostname}/auth/realm/{realm-name}/{protocol}/openid-connect/logout URL then on!         </p>			

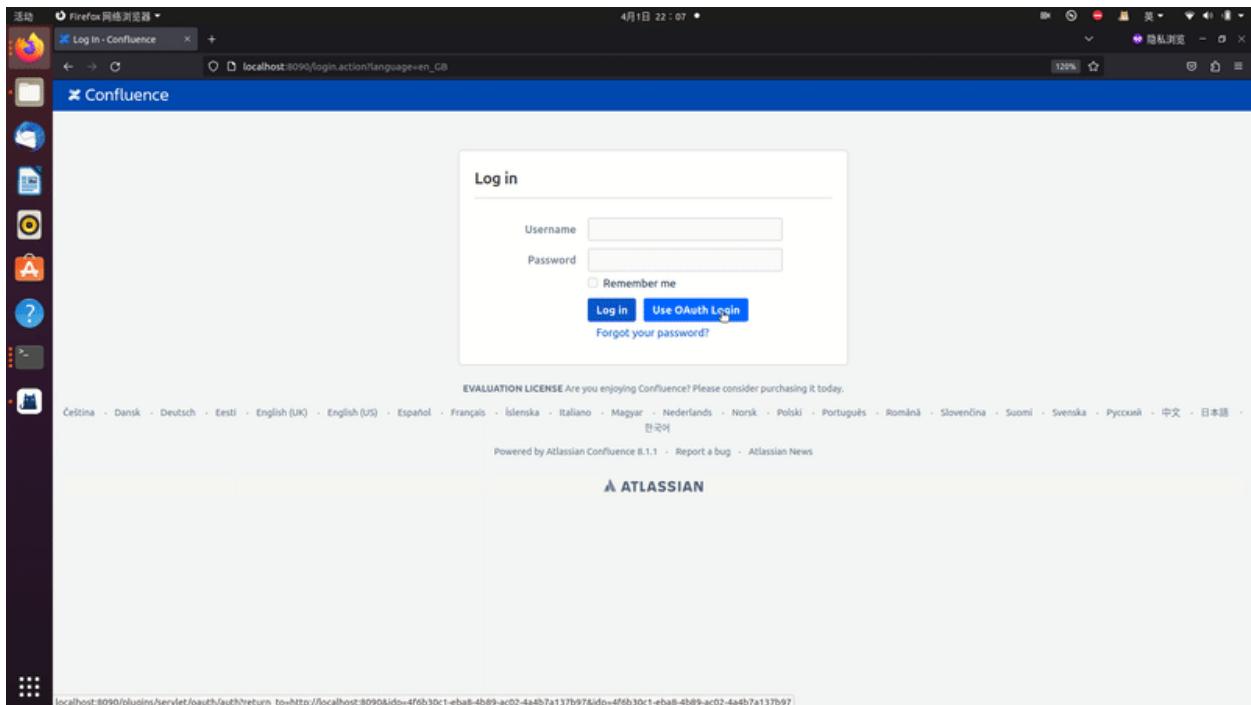
3. Set **Selected Application** to Custom OpenID.
4. Retrieve the Client ID and Client Secret from the Casdoor application page.

Configure the following settings for Confluence:

- **Token server URL**: `http://CASDOOR_HOSTNAME/api/login/oauth/access_token`
- **Authorization server URL**: `http://CASDOOR_HOSTNAME/login/oauth/authorize`
- **User Info server URL**: `http://CASDOOR_HOSTNAME/api/get-account`
- **Scopes**: `address phone openid profile offline_access email`

You can configure more advanced authorization settings later. For now, check if OpenID actually works.

Log out of Confluence and test SSO:



# RuoYi

Casdoor can be easily integrated with RuoYi-cloud.

## Step 1: Deploy Casdoor

First, deploy Casdoor.

You can refer to the Casdoor official documentation for the [Server Installation](#).

After successful deployment, ensure the following:

- The Casdoor server is running at <http://localhost:8000>.
- Open your favorite browser and visit <http://localhost:7001> to access the Casdoor login page.
- Test the login functionality by entering `admin` and `123`.

Next, you can quickly implement a Casdoor-based login page in your own app following these steps.

## Step 2: Configure Casdoor

To configure Casdoor, please follow these steps:

1. Open Casdoor in a browser by clicking [here](#). It is recommended to use a different browser than your development browser.
2. Configure an organization, an application, and the Synchronizer in Casdoor. You can find detailed instructions on how to do this [here](#).

Here are some additional points to keep in mind:

1. When editing the syncer, make sure to check the table columns:

Table columns 	Add	Column name	Column type	Casdoor column	Is hashed	Action
		user_id	integer	Id	<input checked="" type="checkbox"/>	  
		dept_id	integer	Affiliation	<input checked="" type="checkbox"/>	  
		user_name	string	Name	<input checked="" type="checkbox"/>	  
		nick_name	string	DisplayName	<input checked="" type="checkbox"/>	  
		user_type	string	Type	<input checked="" type="checkbox"/>	  
		email	string	Email	<input checked="" type="checkbox"/>	  
		phonenumber	string	Phone	<input checked="" type="checkbox"/>	  
		sex	string	Gender	<input checked="" type="checkbox"/>	  
		avatar	string	Avatar	<input checked="" type="checkbox"/>	  
		password	string	Password	<input checked="" type="checkbox"/>	  
		del_flag	string	IsDeleted	<input checked="" type="checkbox"/>	  
		login_ip	string	CreatedIp	<input checked="" type="checkbox"/>	  
		create_time	string	CreatedTime	<input checked="" type="checkbox"/>	  
		password	string	Password	<input checked="" type="checkbox"/>	  

2. When editing the organization, make sure to select the correct password type:

Password type  :

3. Lastly, ensure that you have enabled soft deletion.

Please make sure to follow these instructions carefully to properly configure Casdoor.

## Step 3. Reform your front-end

### 3.1 Jump to Casdoor's login page

We can use a front-end SDK, taking vue-sdk as an example here. After you initialize vue-sdk, you can obtain the Casdoor login page URL by using the `getSignInUrl()` function.

You can link it in the way you prefer, and feel free to delete any original code from

Ruoyi-Cloud that is no longer necessary, such as the original account and password el-input.

## 3.2 Accept the code and state returned by Casdoor

After successfully logging in through Casdoor, Casdoor sends the code and state to the page we set up. We can retrieve the code and state using the create() function.

```
created() {
    let url = window.document.location.href; // get URL
    let u = new URL(url);
    this.loginForm.code = u.searchParams.get('code'); // get code
    and state
    this.loginForm.state = u.searchParams.get('state');
    if (this.loginForm.code != null && this.loginForm.state != null) { // if code and state are not null, execute handleLogin
        this.handleLogin();
    }
}
```

For RuoYi-Cloud, we simply modify its original method of sending the account and password to send the code and state instead. Therefore, the change is only in what is sent to the backend, in relation to the original login.

## Step 4: Refactor your back-end

### 4.1 Accept the code and state returned by the front-end

```
@PostMapping("login")
```

In this method, we are using the casdoor-SpringBoot-sdk method and making slight modifications to the RuoYi-Cloud method.

For example, the RuoYi-Cloud original method registers an account with a password. I have changed it to register an account using the `casdoorRegister` method.

I have also added a method `getUserByCasdoorName` to check if the account exists, and changed the method `executeUserInfo` to `executeWithAccount` to reflect this change.

This is an easy modification, as we only need to remove the part that checks the password.

## Step 5: Summary

### 5.1 Front-end

- The existing login and register pages need to be removed.
- Additionally, the front-end needs to accept code and state parameters and send them to the back-end.

### 5.2 Back-end

The RuoYi back-end already has a well-implemented login and registration function. We just need to make some minor modifications, which makes the process highly convenient.

# Step 6: Detailed Steps

1. Deploy and configure Casdoor. Be sure to select the bcrypt password type for the organization, as RuoYi-Cloud also uses bcrypt for passwords.
2. Use Casdoor syncers to copy database users to your Casdoor organization. This will import the original accounts into Casdoor.
3. After deploying Casdoor, make changes to the front-end. Disable the RuoYi check code.

```
// checkcode switch  
captchaEnabled: false,  
// register switch  
register: true,
```

Note that the RuoYi-Cloud captcha needs to be disabled in Nacos again. Also, the RuoYi-Cloud registration function needs to be enabled by setting `sys.account.registerUser` to `true`.

4. Add a button for users to log in with Casdoor, and modify the data's `loginForm`.

```
// el-button  
<a href="http://localhost:7001/login/oauth/authorize?client_id=d509b6b3edc8a3d4cce9&response_type=code&redirect_uri=http%3A%2F%2Flocalhost:7001/casdoor">casdoor</a>  
  
loginForm: {  
  code: "",  
  state: ""  
},
```

Here, I have written the URL, but you can obtain it using the Casdoor-Vue-SDK or Casdoor-SpringBoot-SDK.

5. Since we are no longer using the original login method, delete the cookie and checkcode methods.

The new `created` function should look like this:

```
created() {
  let url = window.document.location.href; // Get the URL
  let u = new URL(url);
  this.loginForm.code = u.searchParams.get('code'); // Get
the code and state
  this.loginForm.state = u.searchParams.get('state');
  if (this.loginForm.code != null && this.loginForm.state != null) { // If code and state are not null, execute handleLogin
    this.handleLogin();
  }
}
```

6. In fact, we only need to change the parameter we send to the back-end and delete the unnecessary functions. No other changes are necessary.

```
handleLogin() {
  console.log("进入handleLogin")
  this.$store.dispatch("Login", this.loginForm).then(() => {
    this.$router.push({ path: this.redirect || "/" }).catch(()=> {});
  }).catch(() => {
    this.loading = false;
    if (this.captchaEnabled) {
      this.getCode();
      console.log(this.getCode)
    }
  });
}
```

```
  Login({ commit }, userInfo) {
    const code = userInfo.code
    const state = userInfo.state
    return new Promise((resolve, reject) => {
      login(code, state).then(res => {
        console.log("LOGIN")
        let data = res.data
        setToken(data.access_token)
        commit('SET_TOKEN', data.access_token)
        setExpiresIn(data.expires_in)
        commit('SET_EXPIRES_IN', data.expires_in)
        resolve()
      }).catch(error => {
        reject(error)
      })
    })
  },

```

```
export function login(code, state) {
  return request({
    url: '/auth/login',
    headers: {
      isToken: false
    },
    method: 'post',
    data: {code, state}
  })
}
```

7. Import the required dependency in the back-end.

pom.xml

```
<dependency>
  <groupId>org.casbin</groupId>
  <artifactId>casdoor-spring-boot-starter</artifactId>
  <version>1.2.0</version>
</dependency>
```

You also need to configure Casdoor in the resource file.

8. Define the callback function as the redirect function. Make changes to some methods in `sysLoginService`. Delete the password check step because it is no longer needed.

```
@PostMapping("login")
public R<?> callback(@RequestBody CodeBody code) {
    // Define a CodeBody entity with code and state
    String token =
        casdoorAuthService.getOAuthToken(code.getCode(),
            code.getState());
    CasdoorUser casdoorUser =
        casdoorAuthService.parseJwtToken(token);
    if (casdoorUser.getName() != null) {
        String casdoorUserName = casdoorUser.getName();
        if
            (sysLoginService.getUserByCasdoorName(casdoorUserName) ==
            null) {
                // If the user is not in the Ruoyi-Cloud database
                // but exists in Casdoor, create the user in the database
                sysLoginService.casdoorRegister(casdoorUserName);
            }
        }
    LoginUser userInfo =
        sysLoginService.casdoorLogin(casdoorUser.getName());
    // Get the user's information from the database
    return R.ok(tokenService.createToken(userInfo));
}
```

9. Add new methods to `SysLoginService`.

```
public LoginUser casdoorLogin(String username) {
    R<LoginUser> userResult =
```

```
public String getUserByCasdoorName(String casdoorUsername) {
    R<LoginUser> userResult =
remoteUserService.getUserInfo(casdoorUsername,
SecurityConstants.INNER);
    if (StringUtils.isNull(userResult) ||
StringUtils.isNull(userResult.getData())) {
        // If the user is not in the Ruoyi-Cloud database but
exists in Casdoor, create the user in the database
        return null;
    }
    String username =
userResult.getData().getSysUser().getUserName();
    return username;
}
```

```
public void casdoorRegister(String username) {
    if (StringUtils.isAnyBlank(username)) {
        throw new ServiceException("User must provide a
username");
    }
    SysUser sysUser = new SysUser();
    sysUser.setUserName(username);
    sysUser.setNickName(username);
    R<?> registerResult =
remoteUserService.registerUserInfo(sysUser,
SecurityConstants.INNER);
    System.out.println(registerResult);
    if (R.FAIL == registerResult.getCode()) {
        throw new ServiceException(registerResult.getMsg());
    }
    recordLogService.recordLoginInfo(username,
Constants.REGISTER, "Registration successful");
}
```



# Pulsar Manager

Casdoor can easily connect to Pulsar Manager.

The code for connecting Casdoor has already been added to Pulsar Manager, so we just need to configure the `application.yml` file in the back-end and enable the front-end switch.

## Step 1: Deploy Casdoor

First, deploy Casdoor.

You can refer to the official Casdoor documentation for the [Server Installation](#).

After a successful deployment, ensure the following:

- The Casdoor server is running successfully at <http://localhost:8000>.
- Open your favorite browser and visit <http://localhost:7001>. You should see the login page of Casdoor.
- Test the login functionality by entering `admin` and `123`.

Now, you can quickly implement a Casdoor-based login page in your own app using the following steps.

## Step 2: Configure Casdoor

To configure Casdoor, refer to [Casdoor](#) (it is recommended to use a different browser than your development browser).

You should also configure an organization and an application. You can refer to

[Casdoor](#) for detailed instructions.

## Step 2.1: Create an organization

Edit Organization Save Save & Exit

Name ⓘ :	pulsar
Display name ⓘ :	pulsar
Favicon ⓘ :	<a href="https://cdn.casbin.org/img/favicon.png">https://cdn.casbin.org/img/favicon.png</a>
Preview:	
Website URL ⓘ :	<a href="http://localhost:9527/#/login?redirect=%2F">http://localhost:9527/#/login?redirect=%2F</a>
Password type ⓘ :	plain
Password salt ⓘ :	
Phone prefix ⓘ :	+ 86

## Step 2.2: Create an application

Name ⓘ : app-pulsar  
Display name ⓘ : app-pulsar  
Logo ⓘ : [https://cdn.casbin.org/img/casdoor-logo\\_1185x256.png](https://cdn.casbin.org/img/casdoor-logo_1185x256.png)

Preview:

Home ⓘ :	<a href="#">/</a>						
Description ⓘ :							
Organization ⓘ :	pulsar						
Client ID ⓘ :	6ba06c1e1a30929fdda7						
Client secret ⓘ :	d92bbf913225ebbae9af7ba8d41fe19507eb079						
Cert ⓘ :	cert-built-in						
Redirect URLs ⓘ :	<table border="1"><thead><tr><th>Action</th><th>Redirect URLs</th><th>Add</th></tr></thead><tbody><tr><td><a href="#">^</a> <a href="#">X</a> <a href="#">D</a></td><td><a href="http://localhost:9527/callback">http://localhost:9527/callback</a></td><td><a href="#">Add</a></td></tr></tbody></table>	Action	Redirect URLs	Add	<a href="#">^</a> <a href="#">X</a> <a href="#">D</a>	<a href="http://localhost:9527/callback">http://localhost:9527/callback</a>	<a href="#">Add</a>
Action	Redirect URLs	Add					
<a href="#">^</a> <a href="#">X</a> <a href="#">D</a>	<a href="http://localhost:9527/callback">http://localhost:9527/callback</a>	<a href="#">Add</a>					

## Step 3: Enable the Pulsar Manager front-end switch

Enable this switch to send code and state to the back-end.

You can find the switch on line 80 of `pulsar-manager/front-end/src/router/index.js`.

```
- // mode: 'history', // require service support
+ mode: 'history', // require service support
```

## Step 4: Configure the back-end code

Configure Casdoor's settings in the `application.properties` file, which can be found on line 154 of `pulsar-manager/src/main/resources/application.properties`.

```
casdoor.endpoint = http://localhost:8000
casdoor.clientId = <client id from previous step>
casdoor.clientSecret = <client secret from previous step>
casdoor.certificate = <client certificate from previous step>
casdoor.organizationName = pulsar
casdoor.applicationName = app-pulsar
```

# Using Casdoor in ShenYu

ShenYu has a Casdoor plugin to enable the use of Casdoor.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed. You can refer to the official Casdoor documentation for [Server Installation](#).

After a successful deployment, please ensure that:

- The Casdoor server is running on <http://localhost:8000>.
- Open your preferred browser and visit <http://localhost:7001> to see the Casdoor login page.
- Login functionality is working fine by inputting `admin` and `123`.

After following the above steps, you can quickly implement a Casdoor-based login page in your app with the following steps.

## Step 2: Configure the Casdoor application

1. Create a new Casdoor application or use an existing one
2. Add your redirect URL

The screenshot shows the Casdoor application configuration interface. Key fields include:

- Name:** app-test (highlighted with a red arrow)
- Display name:** app-test
- Logo:** https://cdn.casbin.org/img/casdoor-logo\_118x256.png
- Preview:** Shows the Casdoor logo and the word "Casdoor".
- Home:** (empty)
- Description:** (empty)
- Organization:** built-in (highlighted with a red arrow)
- Client ID:** 663a84154e73d1fb156a (highlighted with a red arrow)
- Client secret:** 84209d412a338a42b789c05a3446e623cb7262d (highlighted with a red arrow)
- Cert:** cert-built-in
- Redirect URLs:**
  - Add button
  - Redirect URL 1: http://localhost:9195/http/hi (highlighted with a red arrow)
  - Redirect URL 2: http://localhost:9195/http/hello

### 3. On the certificate editing page, you can view your **Certificate**

**Certificate:**

Copy certificate
Download certificate

```
-----BEGIN CERTIFICATE-----
MIIE+TCCAUgBgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTABBgNVBAoTFENh
c2Rvb3IgT3JnYW5pemF0aW9uMRUwEwYDVQQDEwxDYXNkb29yIENlcnQwHhcNMjEx
MDE1MDgxMTUyWhcNNDEXMDE1MDgxMTUyWjA2M0R0wGwYDVQQKExRDYXNkb29yIe9y
Z2FuaxphdGlvbjEVMBMGA1UEAxMMQ2FzZG9vcibDZXJ0MIIiCjANBgkqhkiG9w0B
AQEFAOCAG8AMiCCgKCAGEAisInpb5E1/ymf01RfSDSSE8I7y+lw+RJi74e5ej
rq4b8zMYk7HeHCyZr/hmNewEVXnhXu1P0mBeQ5ypp/QGo8vgEmjAETNmzkl1NjOQ
CjCYwUrasO/f/Mnl1C0j13vx6mV1kHZjSrKsMhYY1vaxTEP3+VB8Hjg3MHFWrb07
uvFMCJe5W8+0rKErZCKTR8+9VB3janeBz/zQePFVh79bfZate/hLirPK0Go9P1g
OvwloC1A3sarHTP4Qm/LQRt0rHqZFybdySpyWAQvhNaDFE7mTstRS8b/wUjNCUBD
PTSLVjc04WIIIf6Nkfx0Z7KvmbPstSj+btvqsvRAGtvsB9h62Kptjs1Yn7GAuo
I3qt/4zoKbiURYxkQJXlvwCQsEftUuk5ew5zuPSIDRLoLByQTLbx0jLAFNfW3g/
pzSDjgd/60d6HTmvbZni4SmjdyFhXCDb1Kn7N+xTojnfaNkwep2REV+RMc0fx4Gu
hRsnlsmkmUDeylZ9aBL9oj11YEQfM2JZEq+RvtUx+wB4y8K/tD1bcY+lfnG5rBpw
IDpS262boq4RSvzb3Z7bB0w4ZxvOfj/1VLoRjtPbLifobhfr/AeZMHPiKOXvfz4
yE+hqzi68wdF0VR9xYc/RbSAf7323OsjYnjjEglnUtRohnRgCpjlk/Mt2Kt84Kb0
wn8CAwEAAaMQMA4wDAYDVR0TAQH/BAlwADANBgkqhkiG9w0BAQsFAOCAGEAn2lf
DKkLX+F1vKRO/5gJ+Plr85NKuQkmwH97b8CS2gS1phDyNgic4/LSdzuf4Awe6ve
C06lVdWSlis8UPUPdjmt2uMPSNjwLxG3QsrimMURNlwFLTfRem/heJe0Zgur9J1M
8haawdSdjH2RgmFoDeE2r8NVRfhbR8KnCO1ddTJKuS1N0/irHz21W4jt4rxzCvl
2nR42Fybap3O/g2jXMhNNRowZmNjgpsF7XVENCSuFO1jTywLaqjuXCg54lL7XVLG
omKNNNcc8h1FCelj/nbbGMhodnFWKDTsJcbNmcOPNHo6ixzqMy/Hqc+mWv7maAG
Jtevs3qgMZ8F9Qzr3HpUc6R3ZYWDY/xxPisuKftOPZgtH979XC4mdf0WPnOBLql
2DJ1zaBmjIGolvb7XNVKcUfdXYw85ZTQ5b9cli4e+6bmwyQlItwt+Ati/uFEV
XzCj70B4IALX6xau1kLepV9O1GERizYrz5P9NJNA7Ko5AVMp9w0DQTkt+LbXnZE
HHnWk8xHQKF9sR7YBPGls/Ac6tvivUa150gj/8dLRZ/veyFfGo2yZsl+hKVU5
nCCJHBcAyFnm1hdvdwEdH3jDbjNB6ciotJzrf/3VYaIWSalADosHAgMWFxFuWP+h
8XKXmzlxuHbTMQytZPDgsps5aK+S4Q9wb8RRAYo=
-----END CERTIFICATE-----
```

## Step 3: Use the Casdoor plugin in

# ShenYu

## 1. Configure the Casdoor plugin in ShenYu

## Plugin

X

\* Plugin: casdoor

### casdoor Configuration

\* application-name: app-test

\* certificate: -----BEGIN CERTIFICATE-----\nMIIE+TCCAuGgAwI

\* client\_id: 6e3a84154e73d1fb156a

\* client\_secrect: a4209d412a33a842b7a9c05a3446e623cbb7262d

\* casdoor endpoint: http://localhost:8000

\* organization-name: test

\* Role: Authentication

\* Sort: 40

Status:

Cancel

Sure

Note: As ShenYu only has a single line input box, `\n` must be added in every line

of certificate.

## Certificate ? :

[Copy certificate](#)

[Download certificate](#)

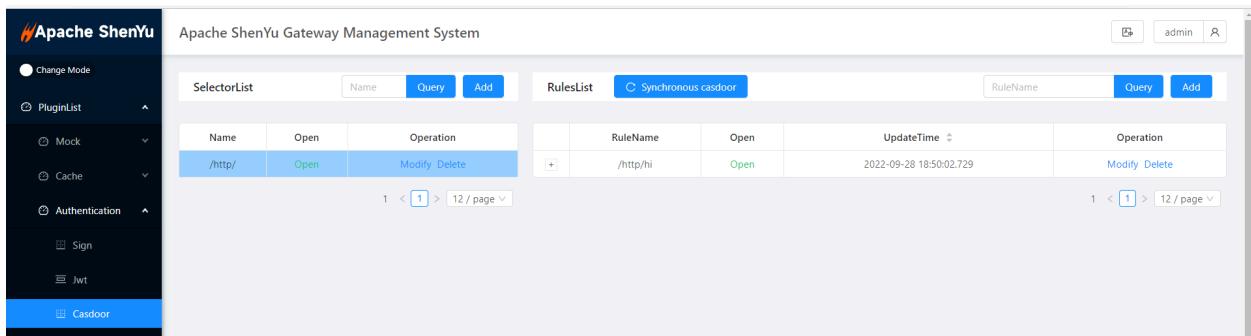
-----BEGIN CERTIFICATE-----\nMIIE+TCCAUgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgNVBAoTFENH\nn\nc2Rvb3lgT3JnYW5pemF0aW9uMRUwEwYDVQQDEwxDYXNkb29yIENlcnQwHhcNMjEx\nn\nMDE1MDgxMTUyWhcNNDExMDE1MDgxMTUyWja2MR0wGwYDVQQKErDYXNkb29yIe9y\nn\nZ2FuaXphdGlvbjEVMBMGA1UEAxMMQ2FzZG9vcBDZXJ0MIIICjANBgkqhkiG9w0B\nn\nAQEFAAOCAg8AMIICgKCAgEAstnpb5E1/yM0f1RfSDSSE8IR7y+lw+RJi74e5ej\nn\nrq4b8zMjYk7HeHCyZr/hmNEwEVXnhXu1P0mBeQ5yp/QGo8vgEmjAETNmzkl1NjOQ\nn\nCjCYwUrasO/f/Mnl1C0j13vx6mV1kHZjsRsKmhYY1vaxTEP3+VB8Hjg3MHFWrb07\nn\nuvFMCJe5W8+0rKErZCKTR8+9VB3janeBz//zQePFVh79bfZate/hLirPK0Go9P1g\nn\nOvwloC1A3sarHTP4Qm/LQRt0rHqZFybdySpyWAQvhNaDFE7mTstRSBb/wUjNCUBD\nn\nPTSLVjc04WIISf6Nkf0Z7KvmbPstSj+btcqvRAgtvdsB9h62Kptjs1Yn7GAuo\nn\nl3qt/4zoKbiURYxkQJXlvwCQsEftUuk5ew5zuPSIDRLoLbyQLtbx0JqlAFNfW3g\nn\npzSDjgd/60d6HTmvbZni4SmjdyFhXCDb1Kn7N+xTojnfaNkwep2REV+RMc0fx4Gu\nn\nhRsnLsmkmUDeylZ9aBL9oj11YEQfm2JZEq+RvtUx+wB4y8K/tD1bcY+lfnG5rBpw\nn\nIDpS262boq4SRsvb3Z7bB0w4ZxvOfJ/1VLoRftjPbLlf0bhfr/AeZMHpIKOXvfz4\nn\nyE+hqzi68wdF0VR9xYc/RbSAf7323OsjYnjjEgInUtRohnRgCpjlk/Mt2Kt84Kb0\nn\nwn8CAwEAAsMQMA4wDAYDVR0TAQH/BAlwADANBgkqhkiG9w0BAQsFAAOCAgEAn2If\nn\nDKkLX+F1vKRO/5gJ+Plr8P5NKuQkmwH97b8CS2gS1phDyNgIc4/LSdzuf4Awe6ve\nn\nC06IVdWSlis8UPUPdmT2uMPNSJwLxG3QsrimMURNwFILTfRem/heJe0ZgurJ1M\nn\n8haawdSdjH2RgmFoDeE2r8NVRfhbR8KnCO1ddTJKuS1N0/irHz21W4jt4rxzCv\nn\n2nR42Fybap3O/g2JXMHNNROwZmNjgpsF7XVENCSuFO1jTywLaajuXCg54IL7XVLG\nn\nomKNNNcc8h1FcEkj/nnbGMhodnFWKDTsJcbNmOPNHo6ixzqMy/Hqc+mWYv7maAG\nn\nJtevs3qgMZ8F9Qzr3HpUc6R3ZYYWDY/xxPisufktpZGtH979XC4mdf0WPnOBQlQ\nn\n2DJ1zaBmjijGolvb7XNVKcUfDXYw85ZTZQ5b9cl4e+6bmyWqQltlw+Ati/uFEV\nn\nXzCj70B4IALX6xau1kLepV9O1GERizYRz5P9NJNA7Ko05AVMp9w0DQTkt+LbXnZE\nn\nHHnWKy8xHQKZF9sR7YBPGls/Ac6tviv5ua15Ogj/8dLRZ/veyFfGo2yZsl+hKVU5\nn\nnCCJHBcAyFnmlhdvdwEdH33jDBjNB6ciotJzf/3VYalWSalADosHAgMWfXuWP+h\nn\n8XXKXmzlxuHbTMQYtZPDgspS5aK+S4Q9wb8RRAYo=\n

here not need add \n

You can copy it and paste it into the certificate of the ShenYu Casdoor config.

You don't need to save it in the Casdoor certificate editing page, as it is only for copying.

## 2. Configure the ShenYu Casdoor plugin

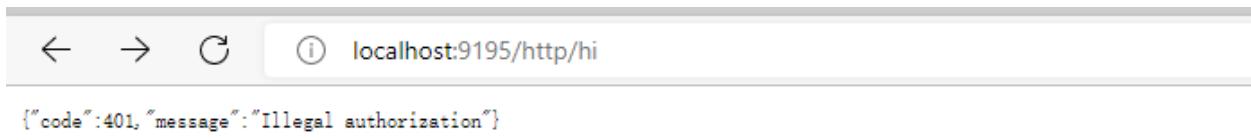


The screenshot shows the Apache ShenYu Gateway Management System interface. On the left, there's a sidebar with 'Change Mode' (radio button), 'PluginList' (selected), and a list of plugins: Mock, Cache, Authentication (Sign, Jwt), and Casdoor (highlighted in blue). The main area is titled 'Apache ShenYu Gateway Management System' and shows the 'RulesList' for the 'Synchronous casdoor' plugin. It has two tabs: 'SelectorList' and 'RulesList'. The 'RulesList' tab is active, showing a table with columns: Name, Open, Operation, RuleName, Open, UpdateTime, and Operation. There is one row: '/http/' (Open, Modify Delete), '/http/hi' (Open), 2022-09-28 10:50:02.729, and Modify Delete. Below the table are pagination controls: '1 < 1 > 12 / page'.

You can configure what you need for the Casdoor config.

## 3. Getting the service and using it

### 3.1 Directly visit the Web



The screenshot shows a browser window with the address bar containing 'localhost:9195/http/hi'. The page content displays a JSON response: {"code":401, "message":"Illegal authorization"}

### 3.2 Use Casdoor Login

localhost:7001/login/oauth/authorize?client\_id=6e3a84154e73d1fb156a&response\_type=code&redirect\_uri=http://localhost:9195/http/hi&scope=read&state=app-test A a



Continue with :



Or sign in with another account :

Auto sign in [Forgot password?](#)

Sign In

No account? [sign up now](#)



localhost:9195/http/hi?code=822607b015cca2515b2b&state=app-test

hi! null! I'm Shenyu-Gateway System. Welcome!

### 3.3 Carry the token in Headers

The screenshot shows the Postman interface with a request to `http://localhost:9195/http/hi`. The **Headers (8)** tab is selected, displaying the following configuration:

Key	Description
Postman-Token	<calculated when request is sent>
Host	<calculated when request is sent>
User-Agent	PostmanRuntime/7.29.2
Accept	*
Accept-Encoding	gzip, deflate, br
Connection	keep-alive
Authorization	eyJhbGciOiJSUzI1NiIsImtpZCI6ImNlcnQtYn... <span style="color:red">Your token</span>

The response body contains the message: `1 hi! null! I'm Shenyu-Gateway System. Welcome!`

### 3.4 Save name, ID and organization in Headers

This makes it easier to use them in the future.

# ShardingSphere

[shardingsphere-elasticjob-ui](#) has integrated Casdoor. You can use it after configuring it.

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed.

You can refer to the Casdoor official documentation for the [Server Installation](#).

After a successful deployment, make sure:

- The Casdoor server is successfully running on <http://localhost:8000>.
- Open your favorite browser and visit <http://localhost:7001>. You will see the login page of Casdoor.
- Input `admin` and `123` to test if the login functionality is working fine.

Then, you can quickly implement a Casdoor-based login page in your own app with the following steps.

## Step 2: Configure Casdoor application and configure application in ShardingSphere

1. Create or use an existing Casdoor application

Name ⓘ: ShardingSphere 

Display name ⓘ: ShardingSphere

Logo ⓘ:  https://cdn.casbin.org/img/casdoor-logo\_1185x256.png

Preview:

Home ⓘ: 

Description ⓘ:

Organization ⓘ: ShardingSphere 

Client ID ⓘ: 3ed79fa530645fb0d3653 

Client secret ⓘ: 54633c82b7796a4332c6976864c6c16bc3b05556 

Cert ⓘ: cert-built-in 

Redirect URLs ⓘ:  Redirect URLs 

Redirect URL:  http://localhost:8080 

The RedirectURLs depend on the URL you need to redirect to. The selected data will be used in the next step.

2. On the certificate editing page, you can see your **Certificate**

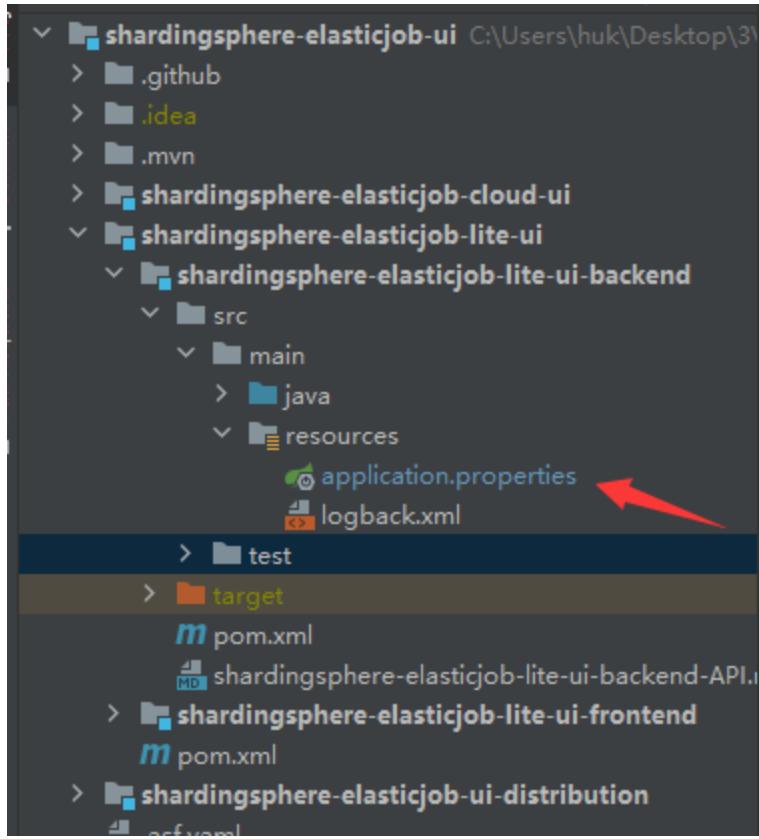
Certificate [?](#) : Private

[Copy certificate](#) [Download certificate](#)

-----BEGIN CERTIFICATE-----  
MIIE+TCCAUgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgNVBAoTFENhc2Rvb3IgT3JnYW5pemF0aW9uMRUwEwYDVQQDEwxDYXNkb29yIE NIcnQwHhcNMjExMDE1MDgxMTUyWhcNNDExMDE1MDgxMTUyWjA2MR0wGwYDVQQKExRDYXNkb29yIE9yZ2FuaxphdGlvbjEVMBMGA1UEAxMMQ2FzZG9vcibDZXJ0MIIcIjANBqkqhkiG9w0BAAQFAAOCAg8AMIIICgkCAGEA sInpb5E1/ym0f1RfSDSSE8IR7y+l w+Rjji74e5ejrq4b8zMYk7HeHCyZr/hmNEwEVXnhXu1P0mBeQ5ypp/QGo8vgEmjAE TNmzk1NjOQCjCYwUraso/f/Mn1C0j13vx6mV1kHZjSrKsMhYY1vaxTEP3+VB8Hjg3MHFWrb07uvFMCJe5W8+0rKErZCKTR8+9VB3janeBz/zQePFVh79bFZate/hLirPK0Go9P1gOvwloC1A3sarHTP4Qm/LQRt0rHqZFybdySpyWAQvhNaDFE7mTstRSBb/wUjNCUBDPTSLVjC04WIIS6Nkfx0Z7KvmbPstSj+btcqsvRAGtvdsB9h62Kptjs1Yn7GAuoI3qt+4zoKbiURYxkQJXlvwCQsEftUuk5ew5zuPSIDRLoLByQTLbx0jqLAFNfW3g/pzSDjgd/60d6HTmvbZni4SmjdyFhXCDb1Kn7N+xTojnfaNkwep2REV+RMc0fx4GuhRsnLsmkmUDeylZ9aBL9oj11YEQfM2JZEq+RVtUx+wB4y8K/tD1bcY+IfnG5rBpwIDpS262boq4SRsvb3Z7bB0w4ZxvOfj/1VLoRftjPbLif0bhfr/AeZMHpIKOXvfz4yE+hqzi68wdF0VR9xYc/RbSAf7323OsjYnjEglnUtRohnRgCpjlk/Mt2Kt84Kb0wn8CAwEAAaMQMA4wDAYDVR0TAQH/BAIwADANBqkqhkiG9wOBAQsFAAOCAgEAn2IfDKkLX+F1vKRO+5gJ+Plr8P5NKuQkmwH97b8CS2gS1phDyNgIc4/Lsdzuf4Awe6veC06IVdWSlis8UPUPdjmt2uMPSNjwLxG3QsrimMURNwFILTfRem/heJe0Zgur9J1M8haawdSdJjH2RgmFoDeE2r8NVRfhbR8KnCO1ddTJKuS1N0/irHz21W4jt4rxzCv12nR42Fyba p3O/g2JXMHNNR0wZmNjgpsF7XVENCSuFO1jTywLaqjuXCg54IL7XVLGomKNNNcc8h1FCeKj/nnbGMhodnFWKDTsJcbNm cOPNHo6ixzqMy/Hqc+mWYv7maAGJtevs3qgMZ8F9Qzr3HpUc6R3ZYWDY/xxPisuKftOPZgtH979XC4mdf0WPnOBLql2DJ1zaBmjigJolvb7XNVKcUfdXYw85ZTZQ5b9cl4e+6bmyWqQltwt+Ati/uFEVXzCj70B4IALX6xau1kLEpV9O1GERizYRz5P9NJNA7KoO5AVMp9w0DQTkt+LbXnZEHHnWKy8xHQKZF9sR7YBPGLs/Ac6tviv5Ua15OgJ/8dLRZ/veyFfGo2yZsl+hKVU5nCCJHBcAyFn m1hdvdwEdH33jDBjNB6ciotJZrf/3VYalWSalADosHAgMWfXuWP+h8XXXmzlkuHbTMQYtZPDgspS5aK+S4Q9wb8RRAYo=-----END CERTIFICATE-----

### 3. Configure the application in ShardingSphere

First, we need to find the application.properties that we need to configure.



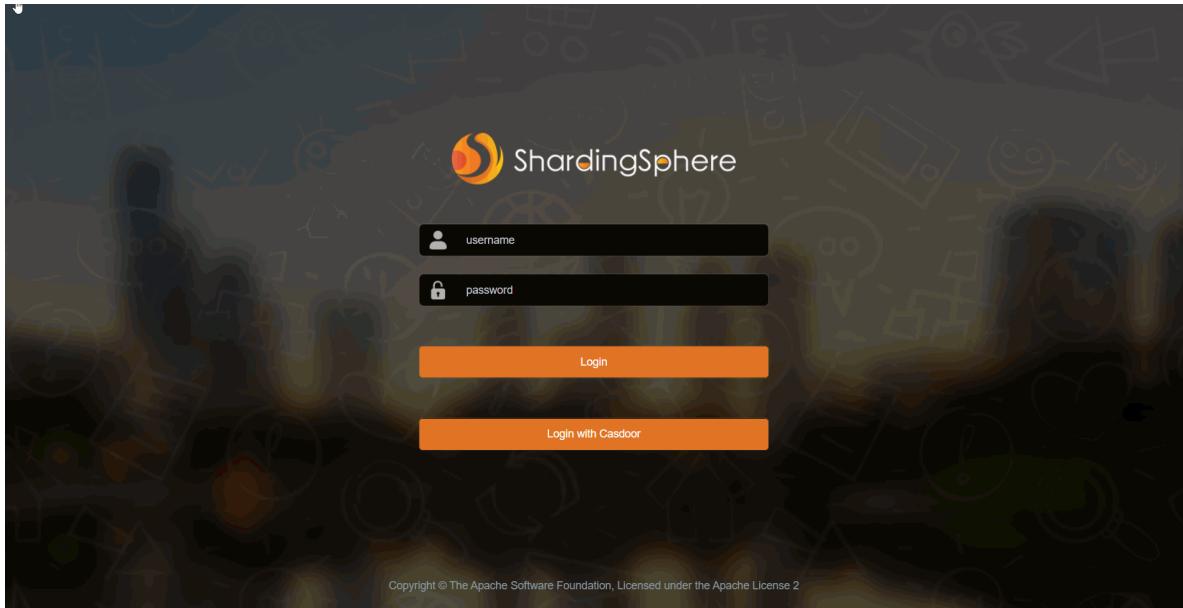
Next, we need to copy the data from the Casdoor application and paste it into the application.

```

casdoor.endpoint=http://localhost:7001
casdoor.client-id=3ed79fa530645fdb3653
casdoor.client-secret=54633c82b7796a4332c6976864c6c16bc3b05556
casdoor.certificate=\n
-----BEGIN CERTIFICATE-----\n\
MIIE+TCCAUgAwIBAgIDAeJAMA0GCSqGSIb3DQEBCwUAMDYxHTAbBgNVBAoTFENh\n\
c2Rvb3IgT3JnYW5pemF0aW9uMRUwEwYDVQQDEwxDYXNkb29yIENlcnQwHhcNMjEx\n\
MDE1MDgxMTUyWhcNNDExMDE1MDgxMTUyWja2MR0wGwYDVQQKExRDYXNkb29yIE9y\n\
Z2FuaXphdGlvbjEVMBMGa1UEAxMMQ2FzZG9vcIBDZXJ0MIICIjANBqkqhkiG9w0B\n\
AQEFAOCAg8AMIIICgKCAGeAsInpb5E1/ym0f1RfSDSSE8IR7y+lw+RJjI74e5ej\n\
rq4b8zMYk7HeHCyZr/hmNEwEVXnhXu1P0mBeQ5ypp/QGo8vgEmjAE TNmzkI1Nj0Q\n\
CjCYwUras0/f/MnI1C0j13vx6mV1kHZjSrKsMhYY1vaxTEP3+VB8Hjg3MHFWrb07\n\
uvFMCJe5W8+0rKErZCKTR8+9VB3janeBz//zQePFVh79bFZate/hLirPK0Go9P1g\n\
OvwIoC1A3sarHTP4Qm/LQRt0rHqZFybdySpyWAQvhNaDFE7mtStRSBb/wUjNCUBD\n\
PTSLvjC04W1lsf6Nufx0Z7KvmbPstSj+btvccsvRAGtvdsB9h62Kptjs1Yn7GAuo\n\
I3qt/4zoKbiURYxkQJXIvwCQsEftUuk5ew5zuPS1DRLoLByQTLbx0JqLAFNfW3g/\n\
pzSDjgd/60d6HTmvbZni4SmidyFhXCDb1Kn7N+xTojnfaNkwep2REV+RMc0fx4Gu\n\
hRsnLsmkmUDeyIZ9aBL9oj1YEQfM2JZEq+RVtUx+wB4y8K/tD1bcY+IfnG5rBpw\n\
IDpS262boq4SRSpb3Z7bB0w4Zxv0fJ/1VL0RftjPbLIf0bhfr/AeZMHpIK0Xvfz4\n\
yE+hqzi68wdF0VR9xYc/RbSAf73230sjYnjjEgInUtRohnRgCpjIk/Mt2Kt84Kb0\n\
wn8CAwEAaMQMA4wDAYDVR0TAQH/BAIwADANBqkqhkiG9w0BAQsFAAOCAgEAn2lf\n\
DKkLX+F1vKRO/5gJ+Plr8P5NKuQkmwH97b8CS2gS1phDyNgIc4/LSdzuf4Awe6ve\n\
C061VdWSIis8UPUPdjmt2uMPSNjwLxG3QsrimMURNwFLLTfRem/heJe0Zqur9J1M\n\
8aaawdSdJjh2RgmFoDeE2r8NVRfhbR8KnC01ddTJKuS1N0/irHz21W4jt4rxzCvl\n\
2nR42Fybap30/g2JXMhNNR0wZmNjgpsF7XVENCSuF01jTywLaqjuXcg54IL7XVLG\n\
omKNNNcc8h1FCeKj/nnbGMhodnFWKDTsJcbNmcoPNHo6ixzqMy/Hqc+mWYv7maAG\n\
Jtevs3qgMZ8F9Qzr3HpUc6R3ZYWDY/xxPisuKftOPZgtH979XC4mdf0WPn0BLql\n\
2DJ1zaBmjiGJolyb7XNVKcUfDXYw85TZQ5b9clI4e+6bmyWqQItlw+Ati/uFEV\n\
XzCj70B4lALX6xau1kEpV901GERizYRz5P9NJNA7Ko05AVMp9w0DQTkt+LbXnZE\n\
HHnWKy8xHQKZF9sR7YBPGls/Ac6tviv5Ua150gJ/8dLRZ/veyFFGo2yZsI+hKVU5\n\
nCCJHBcAyFnmlhdvdwEdH33jDBjNB6ciotJZrf/3VYaIWSalADosHAgMWfXuWP+h\n\
8XKXmzlxuHbTMQYtZPDgspS5aK+S4Q9wb8RRAYo=\n
-----END CERTIFICATE-----\n
casdoor.organization-name=ShardingSphere
casdoor.application-name=ShardingSphere

```

#### 4. Test it



# Apache IoTDB

Casdoor can easily connect to [Apache IoTDB](#).

The code for connecting Casdoor has already been added in [Apache IoTDB Web Workbench](#), so all we need to do is configure the application.yml file in the back-end and activate the front-end switch.

## Step 1: Deploy Casdoor

First, deploy Casdoor.

You can refer to the official Casdoor documentation for the [Server Installation](#).

After deploying successfully, ensure that:

- The Casdoor server is running successfully at <http://localhost:8000>.
- Open your preferred browser and visit <http://localhost:7001>, where you will see the Casdoor login page.
- Test the login functionality by entering `admin` and `123`.

With these steps completed, you can now quickly implement a Casdoor-based login page in your own application.

## Step 2: Configure Casdoor

To configure Casdoor, refer to [casdoor](#) (It is recommended not to use the same browser you are developing in to configure Casdoor's browser).

You should also create an organization and an application. Refer to [casdoor](#) for

instructions.

## 2.1 Create an organization

Name ⓘ: IoTDB

Display name ⓘ: IoTDB

Favicon ⓘ: URL ⓘ: <https://cdn.casbin.org/img/favicon.png>

Preview: 

Website URL ⓘ: <https://door.casdoor.com>

Password type ⓘ: plain

Password salt ⓘ:

## 2.2 Create an application

Name ⓘ: app\_IoTDB

Display name ⓘ: app\_IoTDB

Logo ⓘ: URL ⓘ: [https://cdn.casbin.org/img/casdoor-logo\\_1185x256.png](https://cdn.casbin.org/img/casdoor-logo_1185x256.png)

Preview: 

Home ⓘ:

Description ⓘ:

Organization ⓘ: built-in

Client ID ⓘ: 6f561b83d119be3e1e3c

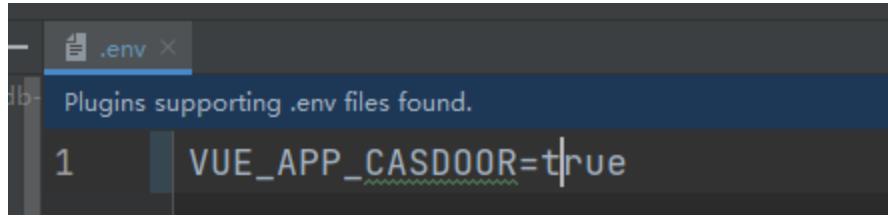
Client secret ⓘ: 242082e823b31a9b0d3a0a4a5a80cd5e415c75f7

Cert ⓘ: cert-built-in

# Step 3: Activate Apache IoTDB Web Workbench front-end switch

Open this switch to send the code and state to the back-end.

This switch can be found in `iotdb-web-workbench/fronted/.env` file.



```
.env
Plugins supporting .env files found.
1 | VUE_APP_CASDOOR=true
```

## Step 4: Configure the back-end code

You need to configure Casdoor's settings in the iotdb-web-workbench/backend/src/main/resources/application.properties file.

```
casdoor.endpoint = http://localhost:8000
casdoor.clientId = <client id from previous step>
casdoor.clientSecret = <client secret from previous step>
casdoor.certificate=<client certificate from previous step>
casdoor.organizationName=IoTDB
casdoor.applicationName=app-IoTDB
```

# Result

The image is a composite of two screenshots. On the left, there is a photograph of a factory conveyor belt system, showing several large, dark cylindrical components and a bright yellow rectangular object being processed. On the right, there is a screenshot of the IoTDB WorkBench login page. The page has a header with the IoTDB WorkBench logo and a 'Logout' button. Below the header, it says 'Welcome To IoTDB WorkBench'. There are two input fields: 'Account' with placeholder text 'Please Input Account' and 'Password' with placeholder text '\*\*\*\*\*'. To the right of the password field is a 'Forgot Password?' link. At the bottom are two buttons: a teal 'Sign In' button and a green 'Sign In With Casdoor' button with a small circular icon.

# Apache DolphinScheduler

Casdoor is one of the supported login methods for [Apache DolphinScheduler](#).

## Step 1: Deploy Casdoor

Firstly, Casdoor should be deployed. You can refer to the Casdoor official documentation for [Server Installation](#).

After a successful deployment, please ensure that:

- The Casdoor server is running successfully at <http://localhost:8000>.
- Open your favorite browser and visit <http://localhost:7001>. You will see the login page of Casdoor.
- Test the login functionality by inputting "admin" and "123".

Once the deployment is completed, you can quickly implement a Casdoor-based login page in your own app by following the steps below.

## Step 2: Configure Casdoor Application

1. Create a new Casdoor application or use an existing one.
2. Add your redirect URL (You can find more details about how to obtain the redirect URL in the next section).

Name [?](#) : application\_a6ftas → your application name

Display name [?](#) : New Application - a6ftas

Logo [?](#) : URL [?](#) : [https://cdn.casbin.org/img/casdoor-logo\\_1185x256.png](https://cdn.casbin.org/img/casdoor-logo_1185x256.png)

Preview: 

Home [?](#) :

Description [?](#) :

Organization [?](#) : organization\_carg1b → your organization name

Client ID [?](#) : 3ed7314825ecf955cb19 → your client id

Client secret [?](#) : ee9314ea228... → your client secret

Cert [?](#) : cert-built-in

Redirect URLs [?](#) : Redirect URLs Add  
Redirect URL [?](#) http://localhost:3000/callback → your redirect url

3. Add the desired provider and fill in other necessary settings.

On the application settings page, you will find two important values: `Client ID` and `Client secret`, as shown in the picture above. We will use these values in the next step.

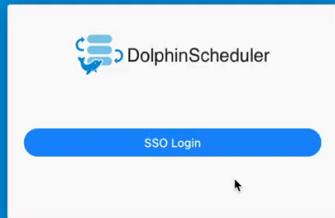
Open your favorite browser and visit `http://CASDOOR_HOSTNAME/.well-known/openid-configuration` to view the OIDC configuration of Casdoor.

# Step 3: Configure DolphinScheduler

| dolphinscheduler-api/src/main/resources/application.yaml

```
security:
  authentication:
    # Authentication types (supported types: PASSWORD, LDAP,
    CASDOOR_SSO)
    type: CASDOOR_SSO
  casdoor:
    # The URL of your Casdoor server
    endpoint:
    client-id:
    client-secret:
    # The certificate may be multi-line; you can use `|-` for ease
    certificate:
    # The organization name you added in Casdoor
    organization-name:
    # The application name you added in Casdoor
    application-name:
    # The DolphinScheduler login URL
    redirect-url: http://localhost:5173/login
```

Now, DolphinScheduler will automatically redirect you to Casdoor for authentication.



# FireZone

Casdoor can use the OIDC protocol as the IDP to connect various applications. Here, we will use [FireZone](#) as an example to show you how to use OIDC to connect to your applications.

## Step 1: Deploy Casdoor and FireZone

Firstly, Casdoor and FireZone should be deployed.

After a successful deployment, ensure the following:

1. Set the FireZone URL (Sigin → Security → Add OpenID Connect Provider) to FIREZONE\_HOSTNAME.

The screenshot shows the FireZone configuration interface. On the left is a dark sidebar with navigation links: Configuration (Users, Devices, Rules), Settings (Defaults, Account, Customization, Security), and Diagnostics (WAN Connectivity). The main area is titled "Site Settings" and contains the following sections:

- Site Defaults**:
  - Allowed IPs**: 172.21.0.0/16, 172.16.0.0/16
  - DNS Servers**: 172.16.250.155
  - Endpoint**: FIREZONE\_HOSTNAME (highlighted with a red arrow)
  - Persistent Keepalive**: 0
  - MTU**: 1280

2. Casdoor can be logged in and used normally.
3. `CASDOOR_HOSTNAME`: <http://localhost:8000>, if you deploy Casdoor using the default `app.conf`.

## Step 2: Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Add a redirect URL:

For example, if the Configid in the FireZone Provider is TEST, the redirect URL should be `http://[FIREZONE_HOST]/auth/oidc/[PROVIDER_CONFIG_ID]/callback/`.

The screenshot shows the configuration page for a Casdoor application. The fields are as follows:

- Home :** `http://localhost:8080` (highlighted with a red box)
- Description :** (empty)
- Organization :** `built-in`
- Client ID :** `0159c45127541d48e433` (highlighted with a red box)
- Client secret :** `add1be9982640e048fcf46770d75674b918484af` (highlighted with a red box)
- Cert :** `cert-built-in`
- Redirect URLs :**
  - `Add` (button)
  - `Redirect URI` (button)
  - `http://localhost:8080/auth/oidc/TEST/callback/` (highlighted with a red box)

Open your favorite browser and visit: `http://[CASDOOR_HOSTNAME]/.well-known/openid-configuration`, and you will see the OIDC configuration of Casdoor.

3. Configure FireZone: Security → Add OpenID Connect Provider

OIDC Config

Config ID  
TEST

Label  
TEST

Scope  
openid email profile

Response type  
code

Client ID  
0159c45127541d48e433

Client secret  
add1be9982640e048fcf46770d75674b918484af

Discovery Document URI  
http://localhost:8000/.well-known/openid-configuration

Auto create users

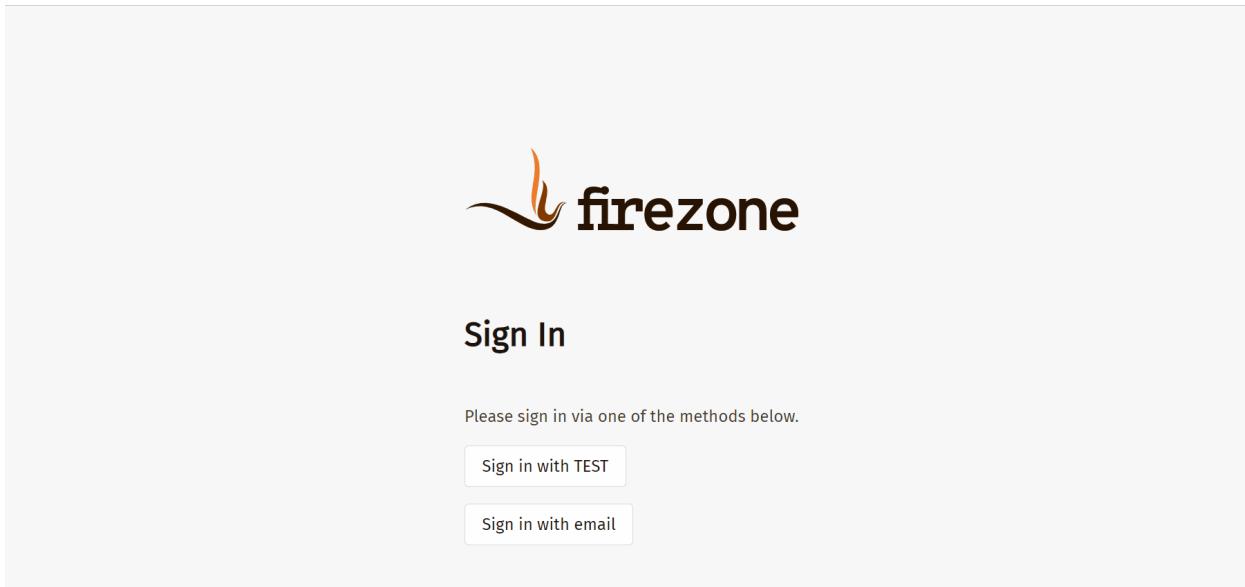
Save

- Discovery Document URI: The FireZone Provider Discovery Document URI should be https://[CASDOOR\_HOST]/.well-known/openid-configuration.
- Scopes: openid email profile
- ConfigID: The ConfigID should be the PROVIDER\_CONFIG\_ID of the

redirect URL and should correspond to the Casdoor redirect URL.

- `Auto-create users`: Successful login will automatically create a user.

## Log out of FireZone and test SSO



# Cloud Foundry

Before the integration, we need to deploy Casdoor locally.

Then, we can quickly implement a Casdoor-based login page in our own app with the following steps.

## Step 1: Configure Casdoor application

1. Create or use an existing Casdoor application.
2. Add a redirect URL: `http://CASDOOR_HOSTNAME/login`



3. Copy the client ID; we will need it in the following steps.

## Step 2: Add a user in Casdoor

Now that you have the application, but not a user, you need to create a user and assign the role.

Go to the "Users" page and click on "Add user" in the top-right corner. This opens a new page where you can add the new user.

Save the user after adding a username and the organization "Cloud Foundry" (other details are optional).

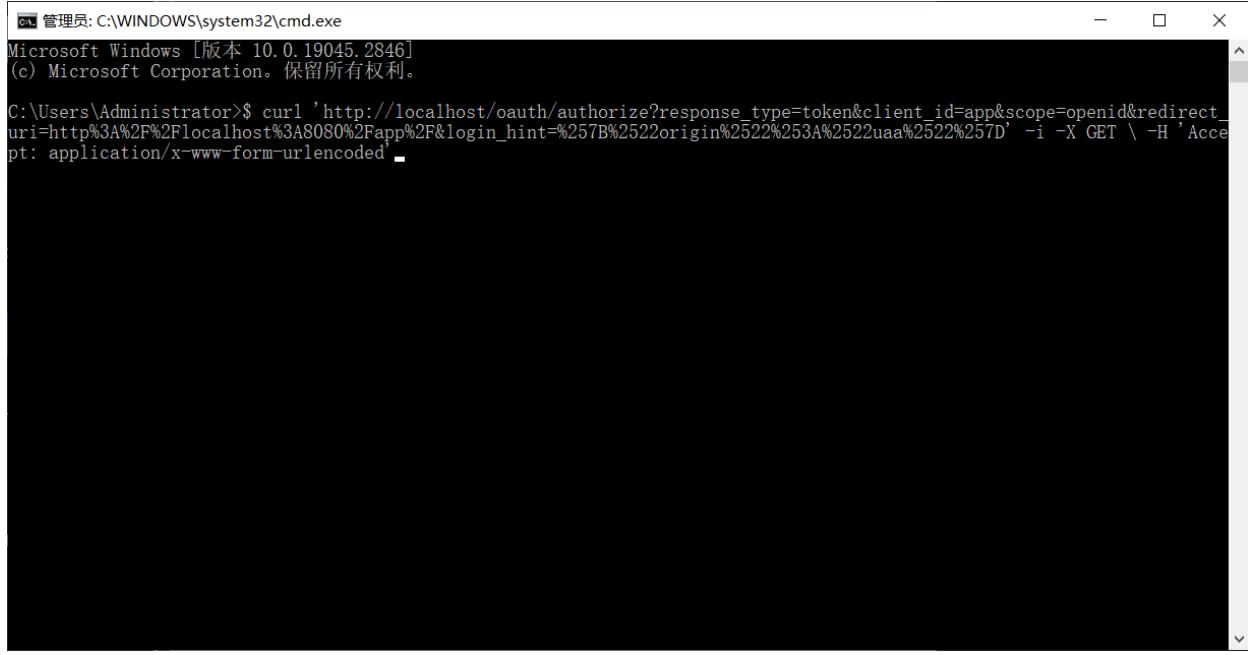
Now, you need to set up a password for your user, which you can do by clicking on "Manage your password".

Choose a password for your user and confirm it.

## Step 3: Build the Cloud Foundry App

Start the Cloud Foundry by following these steps.

- `$ git clone git://github.com/cloudfoundry/uaa.git`
- `$ cd uaa`
- `$ ./gradlew run`

A screenshot of a Windows Command Prompt window titled "管理员: C:\WINDOWS\system32\cmd.exe". The window shows the following command being run:  
C:\Users\Administrator>\$ curl 'http://localhost/oauth/authorize?response\_type=token&client\_id=app&scope=openid&redirect\_uri=http%3A%2F%2Flocalhost%3A8080%2Fapp%2F&login\_hint=%257B%2522origin%2522%253A%2522uaa%2522%257D' -i -X GET \ -H 'Accept: application/x-www-form-urlencoded'  
The command is intended to fetch an OAuth token from a local server, but the output is completely blacked out.

## Step 4: Integrate Casdoor

Now open another command line and input:

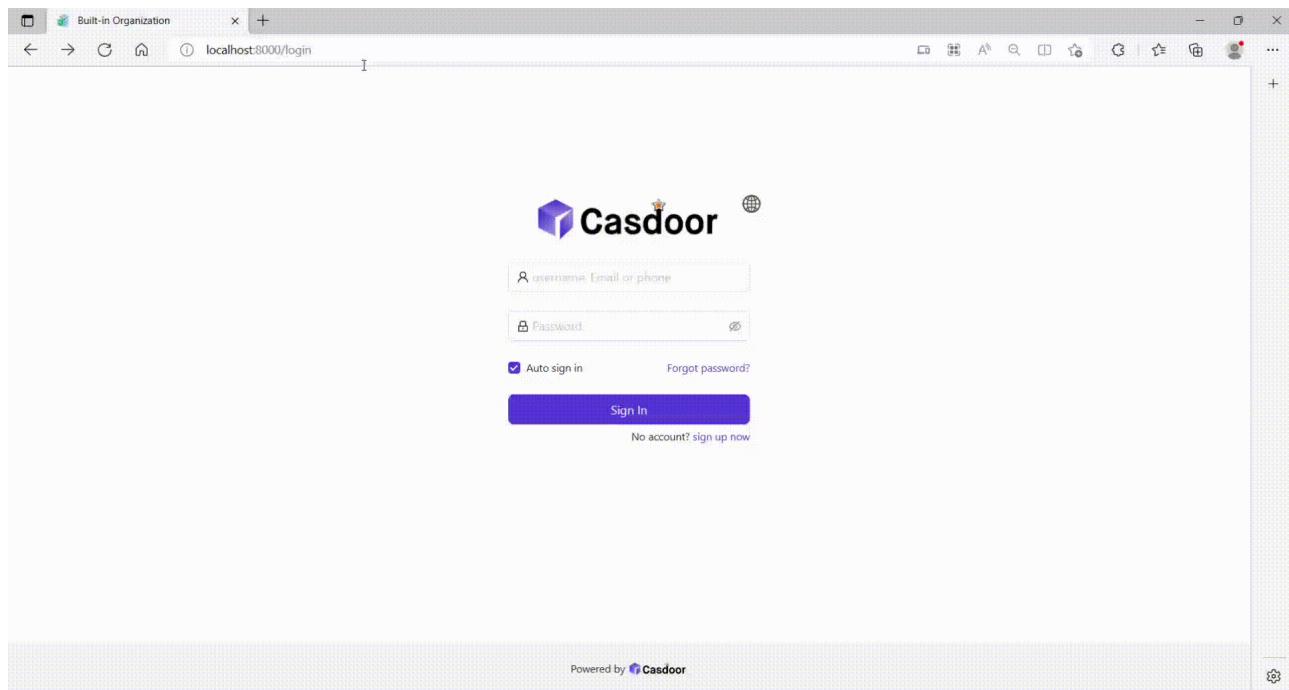
```
curl '<http://localhost/oauth/
authorize?response_type=token&client_id=app&scope=openid&redirect_uri=http%3A%2F%2Flocalhost%3A8080%2Fapp%2F>' 
-i -X GET \
-H 'Accept: application/x-www-form-urlencoded'
```

We have already obtained the client ID and redirect URI before; we input these parameters.

Parameter	Type	Constraints	Description
response_type	String	Required	Space-delimited list of response types. Here, token, i.e. an access token
client_id	String	Required	a unique string representing the registration information provided by the client
scope	String	Optional	requested scopes, space-delimited
redirect_uri	String	Optional	redirection URI to which the authorization server will send the user-agent back once access is granted (or denied), optional if pre-registered by the client

Execute the command, and we can get the result below, which means that we have successfully integrated Casdoor with Cloud Foundry.

```
HTTP/1.1 302 Found
Content-Security-Policy: script-src 'self'
Strict-Transport-Security: max-age=31536000
Set-Cookie: X-Uaa-Csrf=09mMqMDhcwHGLMufnb4YA1; Path=/; Max-Age=86400; Expires=Fri, 5 May 2023 14:53:54 GMT; HttpOnly; SameSite=Lax
Cache-Control: no-store
Content-Language: en
X-XSS-Protection: 1; mode=block
X-Frame-Options: DENY
X-Content-Type-Options: nosniff
Location: http://localhost:8080/app/#token_type=bearer&access_token=eyJhbGciOiJIUzI1NiIsImprdsI6Imh0dHBzO18vbG9jYWxob3N0OjgwODAvdWFhL3Rva
```



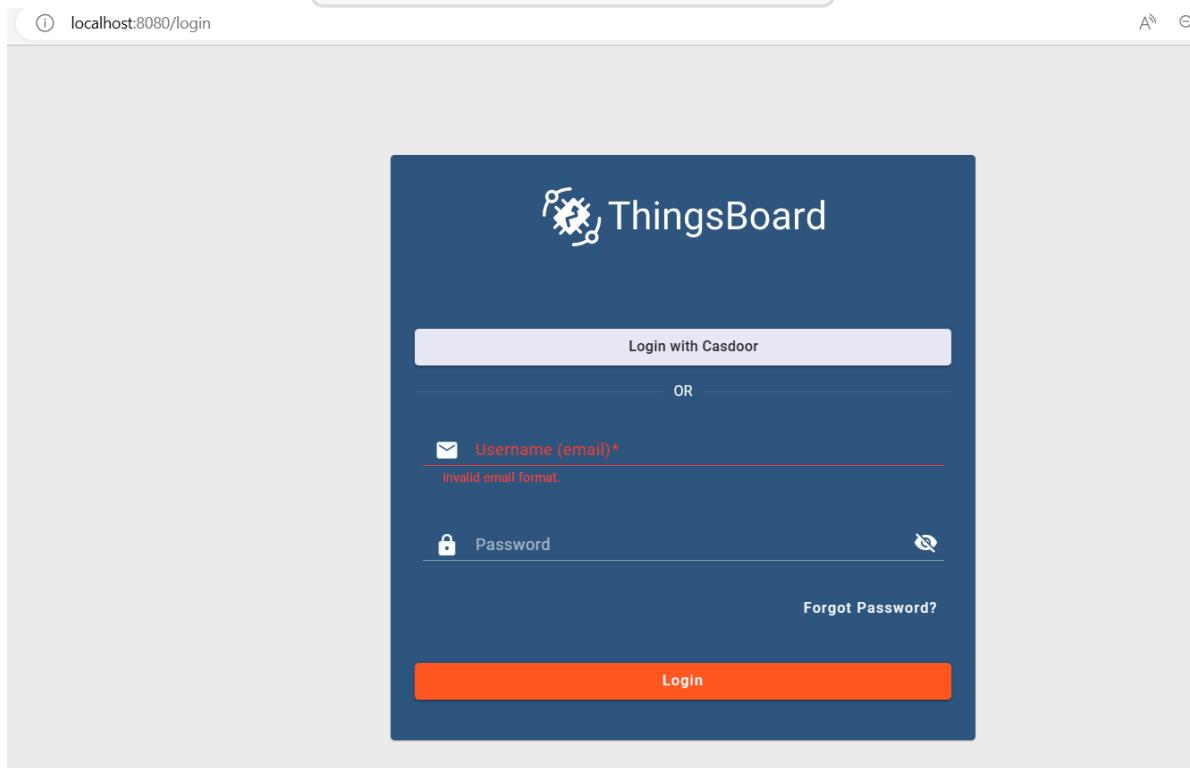
# Thingsboard

Before the integration, we need to deploy Casdoor locally.

Then, we can quickly implement a Casdoor-based login page in our own app by following these steps.

## Step 1: Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Add a redirect URL: `http://CASDOOR_HOSTNAME/login`



3. Copy the client ID and client secret. We will need them in the following steps.

## Step 2: Add a user in Casdoor

Now that you have the application, you need to create a user and assign a role.

Go to the "Users" page and click on "Add user" in the top right corner. This will open a new page where you can add the new user.

Save the user after adding a username and selecting the organization "Thingsboard" (other details are optional).

Next, you need to set up a password for the user. You can do this by clicking on "Manage your password".

Choose a password for the user and confirm it.

## Step 3: Prerequisites and Build Thingsboard App

First of all, Thingsboard only supports Java 11 (OpenJDK).

You can download it from the following link:

[JDK Download Page](#)

To start Thingsboard, follow these steps (for Windows system):

- Download and extract the package. [Download the package](#)
- Configure Thingsboard in \thingsboard\conf\thingsboard.yml according to your preferences, including the configuration of Kafka, PostgreSQL, and others.

- Run `install.bat -loadDemo` in the command line in the Thingsboard folder to install and add demo data.

```
C:\Program Files (x86)\thingsboard>install.bat --loadDemo  
Detecting Java version installed.  
CurrentVersion 110  
Java 11 found!  
Installing thingsboard ...  
...  
ThingsBoard installed successfully!
```

- Run `net start thingsboard` in the command line to start Thingsboard. You should see the following output:

```
The ThingsBoard Server Application service is starting.  
The ThingsBoard Server Application service was started successfully.
```

---

## Step 4: Integrate Casdoor

Now open <http://localhost:8080/> and log in to the admin account:

Account: [sysadmin@thingsboard.org](mailto:sysadmin@thingsboard.org) / Password: sysadmin

After successfully logging in, click the OAuth2 button at the bottom left of the page.

The screenshot shows the ThingsBoard Home dashboard. On the left, a sidebar menu includes: Home, Tenants, Tenant profiles, Resources (with a dropdown arrow), Notification center, Settings, Security (with a dropdown arrow), General, Two-factor authentication, and OAuth2.

The main dashboard area displays the following information:

- Tenants**: 2 (with a + button)
- Tenant profiles**: 2 (with a + button)
- CPU**: 15% | 8 cores
- Devices**: 9
- Assets**: 2
- Users**: 8
- Customers**: 3
- Realtime - last h**: A chart showing CPU usage over time, ranging from 0% to 100% with a peak around 75% at 13:40.
- Documentation**: Includes links to Getting started, Tenant profiles, API, and Widgets Library.
- Configured features**: Includes Email, SMS, Slack, OAuth 2, and 2FA.
- Transport messages**: History - last 30 days, showing 0k messages from May 02 to May 05.

Fill in the blanks as follows:

## Providers

Custom

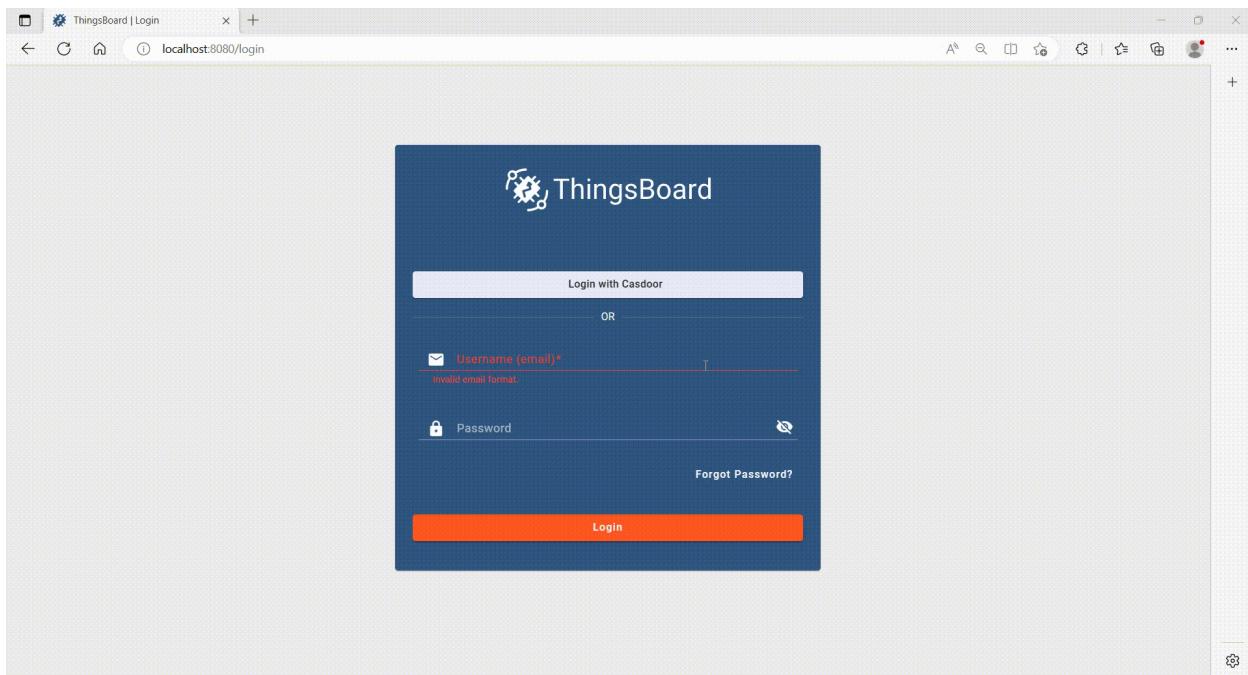
Login provider*	Custom	Allowed platforms	Web, Android, iOS
Client ID*	e324f9a3f55e1adac4ef	Client secret*	28b3f98c1f55c1cc57f74b9b1a68b5d2e79
General		Mapper	
Access token URI*	http://localhost:8000/api/login/oauth/access_token	Authorization URI*	http://localhost:8000/login/oauth/authorize
JSON Web Key URI	http://localhost:8000/.well-known/jwks	User info URI	http://localhost:8000/api/userinfo
Client authentication method*	POST		
Provider label*	Casdoor	Login button icon	
<input checked="" type="checkbox"/> Allow user creation			

You can get these values from the following link: [OIDC discovery URL](#)

```
{  
  "issuer": "https://door.casdoor.com",  
  "authorization_endpoint": "https://door.casdoor.com/login/oauth/authorize",  
  "token_endpoint": "https://door.casdoor.com/api/login/oauth/access_token",  
  "userinfo_endpoint": "https://door.casdoor.com/api/userinfo",  
  "jwks_uri": "https://door.casdoor.com/.well-known/jwks",  
  "introspection_endpoint": "https://door.casdoor.com/api/login/oauth/introspect",  
  "response_types_supported": ["code"]}
```

After filling in these blanks, you have successfully integrated Casdoor with Thingsboard. When you log in to <http://localhost:8080/>, you should see the

following:



# JavaScript

## Firebase

Firebase project using Casdoor as Identity Provider

## WeChat MiniProgram

Using Casdoor in WeChat MiniProgram

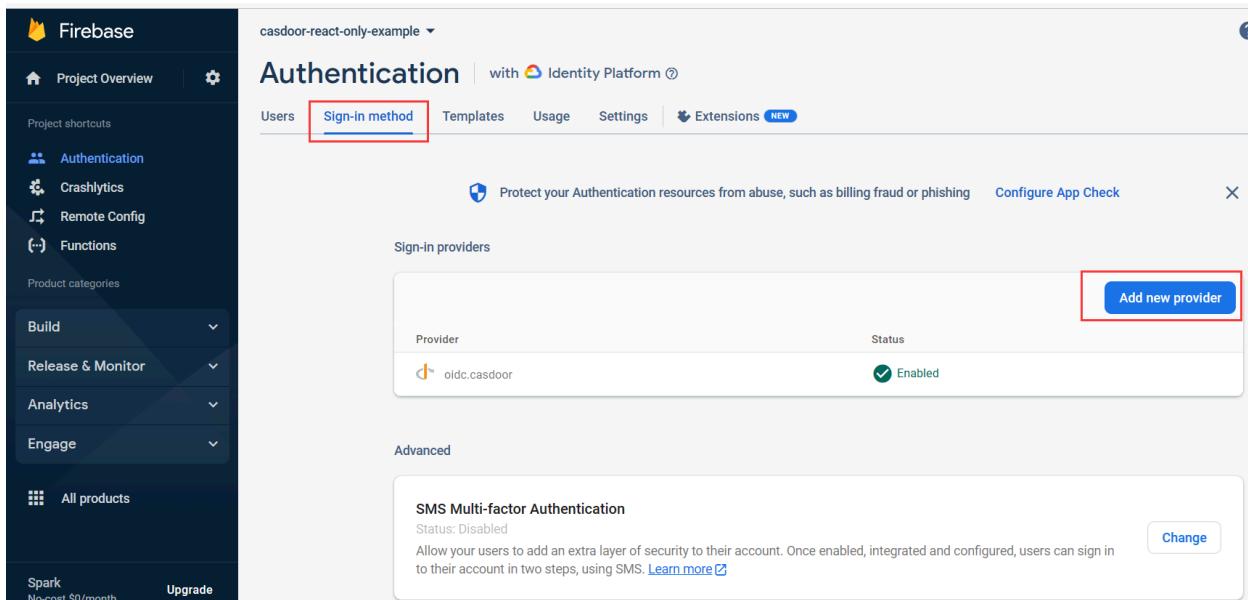
# Firebase

Firebase supports OIDC as an Identity Provider, you can use Casdoor as an OIDC provider for Firebase web app.

## 1. Create a Firebase project

Go to [Firebase Console](#) to create a project.

### 1.1 Add Casdoor as provider



The screenshot shows the Firebase Authentication console for a project named "casdoor-react-only-example". The "Sign-in method" tab is selected. In the "Sign-in providers" section, there is a table with one row:

Provider	Status
oidc.casdoor	Enabled

A red box highlights the "Add new provider" button at the top right of the "Sign-in providers" section.

You need to enable "Identity Platform" feature first to enable OIDC integration on Firebase.

Select `OpenID Connect` in Custom providers, fill in the following information:

Name (in order)	Description	Example value
Name	Any be any string you would like	casdoor
Client ID	Client ID for the Casdoor application	294b09fbc17f95daf2fe
Issuer (URL)	Casdoor server URL	<a href="https://door.casdoor.com">https://door.casdoor.com</a>
Client Secret	Client secret for Casdoor application	dd8982f7046ccba1bbd7851d5c1ece4e52bf039d

← → ⌂ door.casdoor.com/applications/casbin/app-vue-python-example

 Casdoor [Home](#) [User Management](#) [Identity](#) [Authorization](#) [Logging & Auditing](#) [Business & Payments](#) [Admin](#)

Edit Application [Save](#) [Save & Exit](#)

Name ⓘ: app-vue-python-example

Display name ⓘ: Casdoor Vue Python Example

Logo ⓘ:  URL ⓘ: [https://cdn.casbin.org/img/casdoor-logo\\_1185x256.png](https://cdn.casbin.org/img/casdoor-logo_1185x256.png)

Preview: 

Home ⓘ: <https://demo.gsoc.com.cn>

Description ⓘ:

Organization ⓘ: casbin

Tags ⓘ:

Client ID ⓘ: 294b09fbc17f95daf2fe

Client secret ⓘ: dd8982f7046ccba1bbd7851d5c1ece4e52bf039d

Cert ⓘ: cert-built-in

The above examples values can be retrieved from Casdoor demo site: [app-vue-python-example](#)



Enable

### 1 Define new OIDC provider

Grant type

Code flow     Implicit flow (id\_token)

Name

casdoor

Provider ID: oidc.casdoor

Client ID

294b09fbc17f95daf2fe

Issuer (URL)

https://door.casdoor.com

Client secret

dd8982f7046ccba1bbd7851d5c1ece4e52bf039d

**Next**



Configure OIDC integration

## 1.2 Add callback url

Add Callback URL to Casdoor application Redirect URLs:

 OpenID Connect  Enable

 Define new OIDC provider  
Name: casdoor, Provider ID: oidc.casdoor, Client ID: 76dfa0e75796f8443b5e, Issuer (URL): h...

**2 Configure OIDC integration**

When completing set up, add this authorization callback URL to your OIDC app configuration.

Callback URL

 To complete set up, follow the steps for your platform

[Apple ↗](#) [Android ↗](#) [Web ↗](#)

 Delete provider Cancel

← → C [door.casdoor.com/applications/casbin/app-vue-python-example](https://door.casdoor.com/applications/casbin/app-vue-python-example)

Tags  :

Client ID  : 294b09fb17f95daf2fe

Client secret  : dd8982f7046ccba1bbd7851d5c1ece4e52bf039d

Cert  : cert-built-in

**Redirect URLs  :**  Redirect URLs

Redirect URL
 http://localhost:
 http://127.0.0.1:5000/callback
 https://fb-casdoor.firebaseio.com/_/auth/handler

Token format  : JWT

Token expire  : 168 Hours

Refresh token expire  : 0 Hours

Enable password  :

Enable signup  :

Signin session  :

Here we provide an example [casdoor-firebase-example](#) for you to use Casdoor

authentication in your app. To see more details for how to use Casdoor authentication in your app, please refer to [Firebase document](#).

# WeChat MiniProgram



INFO

Casdoor now supports WeChat Mini Program starting from version 1.41.0.

## Introduction

Since WeChat Mini Program does not support standardized OAuth, it cannot redirect to the self-hosted Casdoor webpage for login. Therefore, the process of using Casdoor for WeChat Mini Program is different from that of regular programs.

This document will explain how to integrate Casdoor into WeChat Mini Program. You can find an example for this integration on GitHub here: [casdoor-wechat-miniprogram-example](#). For more detailed information, please refer to the WeChat Mini Program [login document](#).

The configuration includes the following names:

`CASDOOR_HOSTNAME`: The domain name or IP address where the Casdoor server is deployed, e.g., <https://door.casbin.com>.

## Step 1: Deploy Casdoor

Firstly, the [Casdoor server](#) should be deployed.

After successfully deploying Casdoor, you need to ensure:

1. Casdoor can be accessed and used normally.

2. Set Casdoor's `origin` value (conf/app.conf) to `CASDOOR_HOSTNAME`.

```
conf > ⚙ app.conf
 8  dbName = casdoor
 9  redisEndpoint =
10 defaultStorageProvider =
11 isCloudIntranet = false
12 authState = "casdoor"
13 httpProxy = "127.0.0.1:10808"
14 verificationCodeTimeout = 10
15 initScore = 2000
16 logPostOnly = true
17 origin = "http://10.144.1.2:8000"|  
    CASDOOR_HOSTNAME
```

## Step 2: Configure Casdoor Application

1. Create a WeChat IDP in Casdoor and provide the `APPID` and `APPSECRET` given to you by the WeChat Mini Program development platform.

New Provider [Save](#) [Save & Exit](#) [Cancel](#)

Name [?](#) : provider\_Mini Program

Display name [?](#) : Mini Program

Category [?](#) : OAuth

Type [?](#) : WeChat Mini Program

Client ID [?](#) : \*\*\*

Client secret [?](#) : \*\*\*

Provider URL [?](#) : <https://github.com/organizations/xxx/settings/applications/1234567>

[Save](#) [Save & Exit](#) [Cancel](#)

2. Create a new Casdoor application or use an existing one.
3. Add the IDP created in the previous step to the application you want to use.

**!** TIPS

For convenience, Casdoor will treat the first WeChat type IDP in the application as the WeChat Mini Program IDP by default.

Therefore, if you want to use WeChat Mini Program in this app, do not add multiple WeChat type IDPs in one app.

# Step 3: Write WeChat MiniProgram Code

WeChat Mini Program provides an API to internally log in and obtain the code. The code should then be sent to Casdoor. Casdoor will use this code to retrieve information (such as OpenID and SessionKey) from the WeChat server.

The following code demonstrates how to accomplish the above process:

```
// Login in mini program
wx.login({
  success: res => {
    // This is the login code that needs to be sent to Casdoor
    console.log(res.code)

    wx.request({
      url: `${CASDOOR_HOSTNAME}/api/login/oauth/access_token`,
      method: "POST",
      data: {
        "tag": "wechat_miniprogram", // Required
        "client_id": "6825f4f0af45554c8952",
        "code": res.code,
        "username": this.data.userInfo.nickName, // Update user
        profile when you log in.
        "avatar": this.data.userInfo.avatarUrl,
      },
      header: {
        "content-type": "application/x-www-form-urlencoded",
      },
      success: res => {
        console.log(res)
        this.globalData.accessToken = res.data.access_token // Get
        Casdoor's access token
      }
    })
  }
})
```

It is important to note that the `tag` parameter is mandatory to inform Casdoor that this is a request from the WeChat Mini Program.

The above code includes the username and avatar URL of the WeChat Mini Program user during login. You can choose to pass these two parameters separately and then pass them to Casdoor after a successful login and obtaining the access token:

```
wx.getUserProfile({
  desc: 'share your info to Casdoor',
  success: (res) => {
    this.setData({
      userInfo: res.userInfo,
      hasUserInfo: true
    })
    console.log(app.globalData.accessToken)
    wx.request({
      url: `${CASDOOR_HOSTNAME}/api/update-user`, // Casdoor URL
      method: "POST",
      data: {
        "owner": "test",
        "name": "wechat-oGk3T5tIiMFo3SazC075f0HEiE7Q",
        "displayName": this.data.userInfo.nickName,
        "avatar": this.data.userInfo.avatarUrl
      },
      header: {
        "Authorization": "Bearer " + app.globalData.accessToken,
        // Bearer token
        "content-type": "application/json"
      },
      success: (res) => {
        console.log(res)
      }
    })
  }
})
```

Additionally, you can use the access token as a bearer token for any Casdoor operation you require.

 TIPS

Currently, Casdoor is unable to bind existing accounts to WeChat Mini Program users. After Casdoor retrieves the OpenID from WeChat, it will either create a new user if the ID does not exist, or use the existing user if it does.

# Lua



Using Casdoor in APISIX

# APISIX

Currently, there are 2 methods to use Casdoor to connect to APISIX via APISIX plugins and protect the APIs behind APISIX: using APISIX's Casdoor plugin or using APISIX's OIDC plugin.

## Connect Casdoor via APISIX's Casdoor plugin

This plugin, `authz-casdoor`, can protect APIs behind APISIX, forcing every single request to get authenticated without modifying the code of the API.

### How to enable it

You need to specify this plugin when creating the route and provide all the required fields. Here is an example.

```
curl "http://127.0.0.1:9180/apisix/admin/routes/1" -H "X-API-KEY: edd1c9f034335f136f87ad84b625c8f1" -X PUT -d '
{
  "methods": ["GET"],
  "uri": "/anything/*",
  "plugins": {
    "authz-casdoor": {
      "endpoint_addr": "http://localhost:8000",
      "callback_url": "http://localhost:9080/anything/callback",
      "client_id": "7ceb9b7fda4a9061ec1c",
      "client_secret": "3416238e1edf915eac08b8fe345b2b95cdba7e04"
    }
  },
  "upstream": {
```

In this example, we created a route "/anything/\*" pointed to "httpbin.org:80" using APISIX's admin API, with the "authz-casdoor" plugin enabled. This route is now under the authentication protection of Casdoor.

## Attributes

Name	Type	Requirement	Default	Valid	Description
endpoint_addr	string	required			The URL of Casdoor.
client_id	string	required			The client ID in Casdoor.
client_secret	string	required			The client secret in Casdoor.
callback_url	string	required			The callback URL which is used to receive state and code.

*endpoint\_addr and callback\_url should not end with '/'*

In the configuration of the "authz-casdoor" plugin, we can see four parameters.

The first one is "callback\_url". This is the callback URL in OAuth2. It should be emphasized that this callback URL must belong to the "uri" you specified for the route. For example, in this example, <http://localhost:9080/anything/callback> obviously belongs to "/anything/\*". Only by this way, the visit toward the callback\_url can be intercepted and utilized by the plugin (so that the plugin can

get the code and state in OAuth2). The logic of the `callback_url` is implemented completely by the plugin, so there is no need to modify the server to implement this callback.

The second parameter "endpoint\_addr" is obviously the URL of Casdoor. The third and fourth parameters are "client\_id" and "client\_secret", which you can acquire from Casdoor when you register an app.

## How it works?

Suppose a new user who has never visited this route before is going to visit it (<http://localhost:9080/anything/d?param1=foo&param2=bar>). Considering that "authz-casdoor" is enabled, this visit would be processed by the "authz-casdoor" plugin first. After checking the session and confirming that this user hasn't been authenticated, the visit will be intercepted. With the original URL the user wants to visit kept, they will be redirected to the login page of Casdoor.

After successfully logging in with a username and password (or whatever method they use), Casdoor will redirect this user to the "callback\_url" with GET parameters "code" and "state" specified. Because the "callback\_url" is known by the plugin, when the visit toward the "callback\_url" is intercepted this time, the logic of the "Authorization code Grant Flow" in OAuth2 will be triggered. This means that the plugin will request the access token to confirm whether this user is really logged in. After this confirmation, the plugin will redirect this user to the original URL they want to visit, which was kept by us previously. The logged-in status will also be kept in the session.

Next time this user wants to visit the URL behind this route (for example, <http://localhost:9080/anything/d>), after discovering that this user has been authenticated previously, this plugin won't redirect this user anymore. This way, the user can visit whatever they want under this route without being interfered.

# Connect Casdoor via APISIX's OIDC plugin

Casdoor can use the OIDC protocol to connect to APISIX, and this document will show you how to do it.

The following are some of the names used in the configuration:

`CASDOOR_HOSTNAME`: Domain name or IP where the Casdoor server is deployed.

`APISIX_HOSTNAME`: Domain name or IP where APISIX is deployed.

## Step 1: Deploy Casdoor and APISIX

Firstly, deploy [Casdoor](#) and [APISIX](#).

After a successful deployment, you need to ensure:

1. Casdoor can be logged in and used normally.
2. Set Casdoor's `origin` value (conf/app.conf) to `CASDOOR_HOSTNAME`.

```
conf > ⚙ app.conf
 8  dbName = casdoor
 9  redisEndpoint =
10 defaultStorageProvider =
11 isCloudIntranet = false
12 authState = "casdoor"
13 httpProxy = "127.0.0.1:10808"
14 verificationCodeTimeout = 10
15 initScore = 2000
16 logPostOnly = true
17 | origin = "http://10.144.1.2:8000"|
          CASDOOR_HOSTNAME
```

## Step 2: Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Add a redirect URL: `http://APISIX_HOSTNAME/REDIRECTWHATYOUWANT`, and replace `REDIRECTWHATYOUWANT` with the desired redirect URL.
3. Select "JWT-Empty" for the Token format option.
4. Add the desired provider and configure other settings.

The screenshot shows the Casdoor application settings page. It includes fields for Client ID (07860a229bd0b162cd1a), Client secret (ea021...9373fe3e), Redirect URLs (with an 'Add' button and a listed URL http://localhost:9000/callback), and Token format (JWT-Empty selected).

On the application settings page, you will find the `Client ID` and `Client Secret` values as shown in the picture above. We will use them in the next step.

Open your favorite browser and visit: `http://CASDOOR_HOSTNAME/.well-known/openid-configuration`, where you will find the OIDC configuration of Casdoor.

## Step 3: Configure APISIX

APISIX has official [OIDC](#) support, which is implemented using [lua-resty-openidc](#).

You can customize the settings according to the APISIX OIDC documentation. The following routing settings will be used:

```
# Use your own X-Api-Key
$ curl -X POST APISIX_HOSTNAME/apisix/admin/routes -H "X-Api-Key:
edd1c9f034335f136f87ad84b625c8f1" -d '{
```

Now, visit `http://APISIX_HOSTNAME/get`, and the browser will redirect you to the Casdoor login page. After successfully logging in, you will see that a request has been sent to `httpbin.org` as shown in the screenshot below.



# PHP

## Zabbix

Using Casdoor for authentication in Zabbix

## WordPress

Integrating CAS (Central Authentication Service) into WordPress using Casdoor (identity provider) and the wp-cassify plugin.

## Zentao

Using Casdoor for authentication in Zentao

## Using Casdoor as an OAuth2 Server in ShowDoc

Using Casdoor as an OAuth2 server in ShowDoc

## Flarum

Using OAuth2 to connect various applications, like Flarum

## Moodle

Using OAuth to connect Moodle

# Zabbix

Zabbix acts as a Service Provider (SP), while CASdoor acts as an Identity Provider (IdP). They communicate and collaborate through the SAML2 protocol to achieve single sign-on (SSO) functionality for users in Zabbix.

## Step 1: Deploy Casdoor and Zabbix

Firstly, deploy [Casdoor](#) and [Zabbix](#). After a successful deployment, make sure:

1. Casdoor can be logged in and used successfully.
2. You can successfully log in and use Zabbix.

## Step 2: Adding Certificates

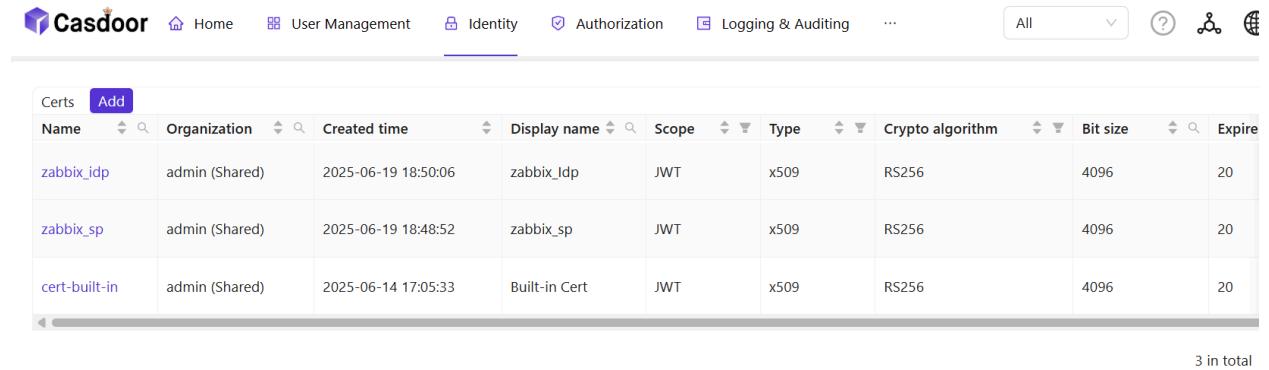
To ensure the security of communication, certificates need to be configured between Zabbix and CASdoor. Private keys and certificates should be stored in the `/etc/zabbix/conf/certs/` directory, unless a custom path is provided in `zabbix.conf.php`.

By default, the `zabbix - web - nginx - mysql` Docker container looks for the following locations:

- `/etc/zabbix/conf/certs/sp.key` - SP private key file
- `/etc/zabbix/conf/certs/sp.crt` - SP certificate file
- `/etc/zabbix/conf/certs/idp.crt` - IDP certificate file

**Creating Certificates in CASdoor:** Log in to the CASdoor management interface and follow the system prompts to create two certificates. These two certificates

will be used for communication encryption between Zabbix and CASdoor.



Name	Organization	Created time	Display name	Scope	Type	Crypto algorithm	Bit size	Expire
zabbix_idp	admin (Shared)	2025-06-19 18:50:06	zabbix_Idp	JWT	x509	RS256	4096	20
zabbix_sp	admin (Shared)	2025-06-19 18:48:52	zabbix_sp	JWT	x509	RS256	4096	20
cert-built-in	admin (Shared)	2025-06-14 17:05:33	Built-in Cert	JWT	x509	RS256	4096	20

3 in total

**Copying Certificates and Private Keys:** Copy the created certificate and private key files to the Zabbix configuration directory `/etc/zabbix/conf/certs`. If you are using Docker for deployment, you can map local certificate files to the container using volume mounting.

## Step 3:Configuring Zabbix

For SAML configuration in Zabbix, three required fields need to be set: `Single Sign - On`, `Issuer`, and `Public Certificate`.

Log in to the Zabbix management interface, click `User` → `authentication` → `SAML settings`.

Configure Zabbix according to the SAML metadata in the CASdoor configuration:

- idP entity ID (Issuer): Corresponds to `entityID="http://localhost:8000"`. This value identifies the entity ID of CASdoor, and Zabbix will communicate with CASdoor based on this ID.
- SSO service URL: Corresponds to `Location="http://localhost:8000/api/saml/redirect/admin/zabbix"`. This is the URL of the single sign - on service provided by CASdoor. When a user initiates a single sign - on request in Zabbix, they will be redirected to this URL for authentication.
- username attribute: The SAML attribute used as the username when logging in to Zabbix. Here, `Name` is used, indicating that Zabbix will use the `Name` attribute in the SAML assertion as the user's login name.
- SP entity ID: A unique SP ID that can be set arbitrarily. This ID is used to identify the Zabbix service provider and needs to be consistent with the

configuration in CASdoor.

## Step 4: Configuring CASdoor

Some necessary configurations need to be made in CASdoor to ensure the normal operation of the integration with Zabbix.

**Editing Name and Logo:** Log in to the CASdoor management interface, find the relevant settings, and edit the application's name and logo for better presentation to users.

Screenshot of the CASdoor 'Edit Application' form showing configuration for the Zabbix integration:

Edit Application		Save	Save & Exit
Name ⓘ:	zabbix		
Display name ⓘ:	zabbix		
Is shared ⓘ:	<input checked="" type="checkbox"/>		
Logo ⓘ:	URL ⓘ:	<a href="https://blog.zabbix.com/wp-content/uploads/2020/06/zabbix_blog_327x44.png">https://blog.zabbix.com/wp-content/uploads/2020/06/zabbix_blog_327x44.png</a>	
Preview:	 The logo consists of the words "ZABBIX BLOG" in a bold, sans-serif font. "ZABBIX" is in red and "BLOG" is in black.		
Home ⓘ:	<a href="#">Home</a>		
Description ⓘ:			

**Selecting a Certificate:** In CASdoor, select `zabbix_idp` as the certificate for signing and encrypting SAML messages to ensure communication security.

Cert ⓘ: `zabbix_idp`

**Redirect URL:** Enter a unique name. In your SP (Zabbix), this may be called **Audience** or **Entity ID**. Ensure that the **Redirect URL** you enter here is consistent with that in your SP; otherwise, single sign - on may fail.

The screenshot shows a configuration interface for "Redirect URLs". At the top, there's a header with "Redirect URLs" and a question mark icon, followed by a "Add" button. Below this, a section titled "Redirect URL" contains a text input field with the value "zabbix\_sp\_id".

**Reply URL:** Enter the URL of the ACS (Assertion Consumer Service) for validating SAML responses. This URL is the address where Zabbix receives SAML assertions sent by CASdoor.

The screenshot shows a configuration interface for SAML settings. It includes fields for "SAML reply URL" (set to "http://localhost:8080/index\_sso.php?acs"), "Enable SAML compression" (disabled), "Enable SAML C14N10" (disabled), "Use Email as NamelID" (disabled), and "Enable SAML POST binding" (enabled).

## Step 5: Creating a Zabbix User

Create a test user in Zabbix to verify the single sign - on functionality.

1. Log in to the Zabbix management interface and find the user management module.
2. Create a user with the username "test" (you can customize the username; this

is just an example).

Username	Name	Last name	User role	Groups	Is online?	Login	Frontend access	API access	Debug mode	Status	P
Admin	Zabbix	Administrator	Super admin role	Internal, Zabbix administrators	Yes (2025-06-20 03:21:35 PM)	Ok	Internal	Enabled	Disabled	Enabled	
guest			Guest role	Disabled, Guests, Internal	No	Ok	Internal	Disabled	Disabled	Disabled	
test	test		Guest role	Guests	No	Ok	System default	Disabled	Disabled	Enabled	

## Step 6: Creating a CASdoor User

Add a user in CASdoor with the same username as the one set in Zabbix.

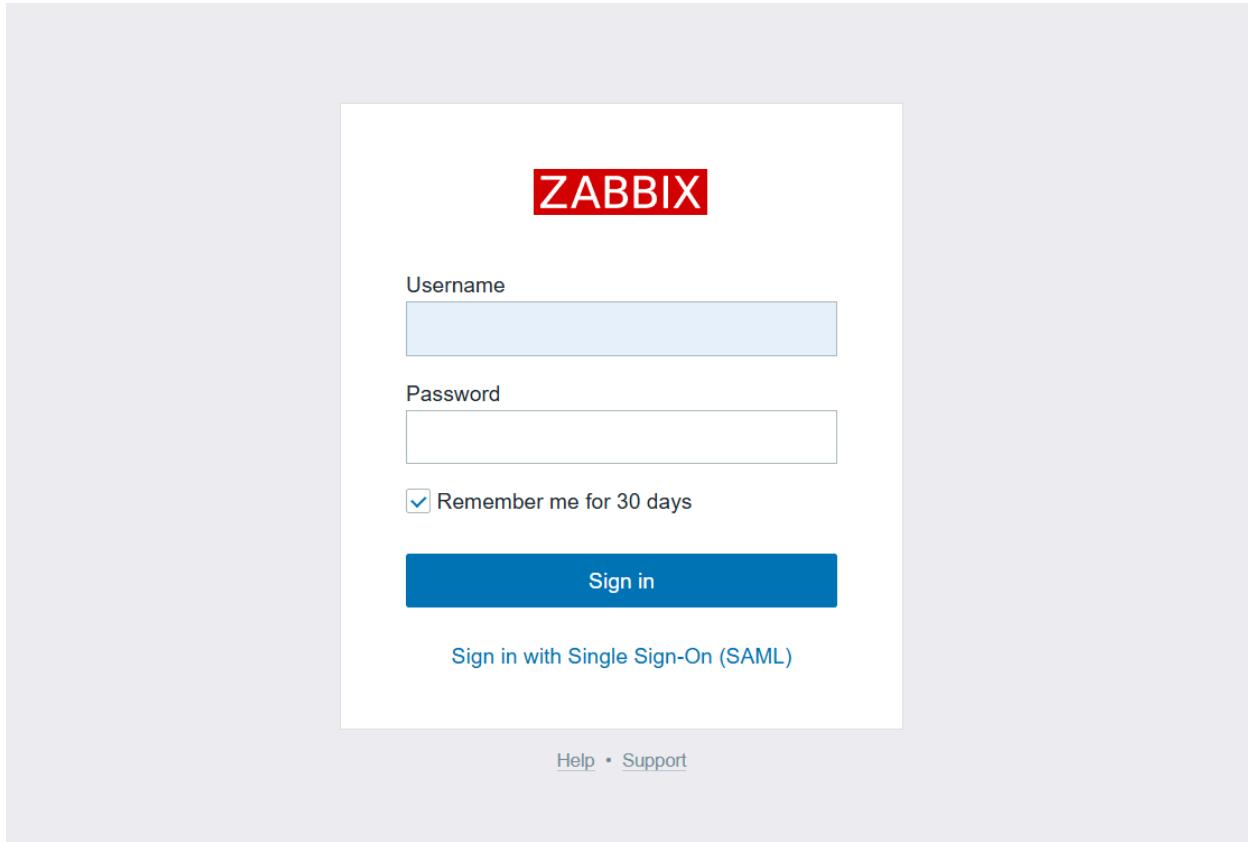
1. Log in to the CASdoor management interface and find the user management module.
2. Add a new user with the same username as the one created in Zabbix.
3. Select Zabbix and enter the user's email address.

Users									Add	Upload (xlsx)
Organization	Application	Name	Created time	Display name	Avatar	Email	Phone	Affiliation	Action	
built-in	zabbix	test	2025-06-18 17:06:54	test		jlapmu@example.com	17636092052	Example Inc.	<button>Edit</button> <button>Delete</button>	
built-in	app-built-in	admin	2025-06-14 17:05:33	Admin		admin@example.com	12345678910	Example Inc.	<button>Edit</button> <button>Delete</button>	

## Step 7: Zabbix Login Process

After completing the above configurations and user creation, you can test the single sign - on functionality.

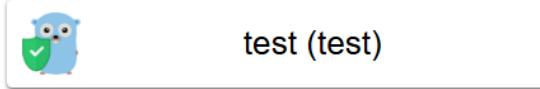
Open a browser and visit `localhost/index.php`.



Click [Sign in with Single Sign - On\(SAML\)](#).

You will be redirected to the CASdoor page. On the CASdoor page, enter the corresponding username and password to log in.

Continue with :



Or sign in with another account :



[Password](#)   [Code](#)   [WebAuthn](#)   [Face ID](#)

Auto sign in   [Forgot password?](#)

[Sign In](#)

No account? [sign up now](#)

If the login is successful, you will be redirected back to

<https://localhost:8080/zabbix.index.php>, indicating that the single sign - on functionality is working properly.

The screenshot shows the Zabbix Global view dashboard. On the left, there's a sidebar with navigation links: Dashboards, Monitoring, Services, Inventory, Reports, Support, Integrations, Help, User settings, and Sign out. The main area has a title "Global view" and a breadcrumb "All dashboards / Global view". It features several widgets: "Top hosts by CPU utilization" (empty, showing "No data found"), "Performance" (error message: "No permissions to referred object or it does not exist!"), "System information" (Zabbix server is running: Yes, Zabbix frontend version: 7.2.7, New update available), a large digital clock "16:06" for Shanghai, a "Host availability" chart (0 Available, 0 Not ava..., 0 Mixed, 0 Unknown), a "Problems by severity" chart (0 Disaster, 0 High, 0 Average, 0 Warning, 0 Information, 0 Not class...), a "Current problems" table header (Time, Info, Host, Problem • Severity, Duration, Update, Actions, Tags), and a "Geomap" showing a map of Riga with various monitoring points.

Through the above steps, you can successfully complete the integration of Zabbix and CASdoor and achieve single sign - on functionality for users. If you encounter any problems during the configuration process, please refer to relevant documentation or community forums for help.

# WordPress

This guide walks you through configuring CAS-based single sign-on (SSO) for WordPress, using:

- [wp-cassify](#): A WordPress plugin that enables CAS authentication, allowing users to log into WordPress via a CAS server (e.g., Casdoor).

## Step 1: Deploy Casdoor and WordPress

First, deploy Casdoor (as the CAS server) and WordPress.

### 1.1 Deploy Casdoor

Refer to the official Casdoor installation guide: [Casdoor Server Installation](#).

After deployment:

1. Access the Casdoor web UI via its public/private URL (e.g.,  
`http://<casdoor-server-ip>:8000`).
2. Log in with the default admin credentials (or your custom credentials set during deployment).
3. Confirm you can navigate the dashboard (e.g., access "Applications", "Users")—this ensures Casdoor is ready to act as a CAS IdP.

### 1.2 Deploy WordPress

Deploy WordPress using your preferred method:

- **Docker**: Use the official WordPress Docker image for quick setup (see

[WordPress Docker Docs](#)).

- **Traditional Hosting:** Install WordPress on a LAMP/LEMP stack (follow [WordPress Official Installation](#)).

1. Access the WordPress site via its URL (e.g., <http://<wordpress-server-ip>>).
2. Complete the initial WordPress setup (create an admin account, site title).
3. Log in to the WordPress Admin Dashboard (<http://<wordpress-server-ip>/wp-admin>) to confirm functionality.

## Step 2: Create a Casdoor Application

Casdoor requires an "Application" to act as a bridge between the CAS server and WordPress. Follow these steps to create one:

1. Log in to the Casdoor Admin Dashboard.
2. Navigate to Applications > Add Application
3. Click Save to create the application.

The screenshot shows the Casdoor Admin Dashboard with the 'Edit Application' form open. The form fields are as follows:

- Name: wordpress\_cas
- Display name: wordpress\_cas
- Is shared: (checkbox)
- Logo URL: <https://cdn-icons-png.flaticon.com/128/174/174881.png> (Preview shows the WordPress logo)
- Home: (dropdown)
- Description: (text input)
- Organization: built-in (dropdown)
- Tags: (dropdown)
- Client ID: 842525b46c801cb8ad20
- Client secret: c8b093bd3b52640d13a23693202d4a9d3af2de47
- Cert: cert-built-in (dropdown)
- Redirect URLs: (table)
  - Redirect URLs: Add
  - Redirect URL: (empty)

# Step 3: Configure the wp-cassify Plugin

The wp-cassify plugin connects WordPress to your Casdoor CAS server. Follow these steps to install and configure it:

## 3.1 Install wp-cassify

1. Log in to the WordPress Admin Dashboard (<http://<wordpress-server-ip>/wp-admin>).
2. Navigate to Plugins > Add New.
3. In the search bar, type "wp-cassify" and select the plugin by "wp-cassify".
4. Click Install Now, then Activate to enable the plugin.

## 3.2 Configure wp-cassify Settings

1. In the WordPress Admin Dashboard, navigate to Settings > WP-Cassify (the plugin's configuration page).
2. Configure User General Settings.

wp-cassify Setting	Value to Enter
CAS Server Base URL	Your Casdoor CAS endpoint (e.g., <a href="http://&lt;casdoor-server-ip&gt;:7001/cas/&lt;organization-name&gt;/&lt;application name&gt;">http://&lt;casdoor-server-ip&gt;:7001/cas/&lt;organization-name&gt;/&lt;application name&gt;</a> ).
Create	Enable

wp-cassify Setting	Value to Enter
user if not exist	

WP Classify

Settings saved successfully

General Settings

CAS Server base url	<input type="text" value="http://192.168.101.4:7001/cas/built-in/wordpress_cas/"/>
Example : https://you-cas-server/cas/	
CAS Version protocol	<input type="text" value="3"/>
Default value : 3	
Disable CAS Authentication	<input type="checkbox"/>
Create user if not exist	<input checked="" type="checkbox"/>
Create wordpress user account if not exist.	
Log out on errors	<input type="checkbox"/>
Disconnect cas user session on authentication errors without displaying any error message (silent mode).	
Enable Gateway Mode	<input type="checkbox"/>
Enable support for auto-login (Gateway Mode).	
Enable SLO (Single Log Out)	<input type="checkbox"/>
Enable support for central logout (Single Sign Out).	
SSL Cipher used for query CAS Server with HTTPS Webrequest to validate service ticket	<input type="text" value="CURL_SSLVERSION_DEFAULT"/>
Default value : CURL_SSLVERSION_DEFAULT	
Enable SSL Certificate Check	<input type="checkbox"/>
cURL extra-options	

### 3. Configure User Attribute Synchronization.

WordPress User Field	Casdoor Attribute Name	Example Value
<input type="text" value="user_email"/>	<input type="text" value="email"/>	user@example.org
<input type="text" value="user_nickname"/>	<input type="text" value="displayName"/>	John Doe
<input type="text" value="display_name"/>	<input type="text" value="displayName"/>	John Doe



## Step 4: Test CAS Authentication

Verify the integration works by logging into WordPress via Casdoor:

1. Log out of the WordPress Admin Dashboard (if logged in).
2. Access the WordPress login page (<http://<wordpress-server-ip>/wp-admin/index.php>).
3. You'll be redirected to the Casdoor login page. Enter valid Casdoor user credentials.
4. After successful authentication, Casdoor will redirect you back to WordPress—you should now be logged in (as the synced user).

127.0.0.1:8167/wp-admin/profile.php

攻击25 home Howdy, alice

Dashboard Profile Collapse menu

Toolbar  Show Toolbar when viewing site

Language Site Default

Name

Username  Usernames cannot be changed.

First Name

Last Name

Nickname (required)

Display name publicly as

Contact Info

Email (required)   
If you change this, an email will be sent at your new address to confirm it. The new address will not become active until confirmed.

Website

About Yourself

Biographical Info

Share a little biographical information to fill out your profile. This may be shown publicly.

The screenshot shows a WordPress profile edit page. The 'Name' section is highlighted with a red box. It contains fields for Username, First Name, Last Name, Nickname, and Display name publicly as, all currently set to 'alice'. Below this is a 'Contact Info' section with an Email field set to '8op3zg@example.com'. A note below the email field states: 'If you change this, an email will be sent at your new address to confirm it. The new address will not become active until confirmed.' There are also fields for Website and Biographical Info, both currently empty.

# Zentao

Zentao is an agile (scrum) project management system/tool, but it does not support OIDC itself. To integrate Zentao with Casdoor SSO, we need to use a 3rd-party OIDC module called [zentao-oidc](#), and this document will show you how to do it.

## Step 1: Deploy Casdoor and Zentao

Firstly, deploy [Casdoor](#) and [Zentao](#). After a successful deployment, make sure:

1. Casdoor can be logged in and used successfully.
2. You can successfully log in and use Zentao.

## Step 2: Integrate Zentao OIDC third-party module

Install [zentao-oidc](#) by running the following command:

```
git clone https://github.com/casdoor/zentao-oidc.git
```

Alternatively, you can download the ZIP and unzip it.

This module is used to integrate Zentao with SSO for OpenId. Here's how to use it:

1. Copy the entire `oidc` directory to the module of Zentao and use it as a module of Zentao. Rename the downloaded package to "oidc".

## 2. Configure the filter.

Since the Zentao framework filters the parameters in the URL and does not allow spaces, you need to put the following code at the end of `/config/my.php`.

```
$filter->oidc = new stdclass();
$filter->oidc->index = new stdclass();
$filter->oidc->index->paramValue['scope'] = 'reg::any';
```

## 3. Modify `/module/common/model.php`.

Add 'oidc' to the anonymous access list and add a line to the `isOpenMethod` method of `model.php`.

```
public function isOpenMethod($module, $method)
{
    if ($module == 'oidc' and $method == 'index') {
        return true;
    }
}
```

## 4. If you don't want the Zentao login screen to appear, go directly to the Casdoor login screen.

Modify the last line of code in `public function checkPriv()` in `/module/common/model.php`.

```
//return print(js::locate(helper::createLink('user', 'login',
"referer=$referer")));
return print(js::locate(helper::createLink('oidc', 'index',
```

5. Modify the `setSuperVars()` method inside `framework/base/router.class.php` and comment out the following statements.

```
public function setSuperVars()  
// unset($_REQUEST);
```

## Step 3: Configure Casdoor Application

1. Create a new Casdoor application or use an existing one.
2. Add your redirect URL.

Client ID <small>?</small>	d8d7715e24f077066a20						
Client secret <small>?</small>	[REDACTED]						
Cert <small>?</small>	cert-built-in						
Redirect URLs <small>?</small>	<table border="1"><tr><td>Redirect URLs</td><td>Add</td></tr><tr><td colspan="2">Redirect URL</td></tr><tr><td colspan="2">🔗 http://127.0.0.1/zentao/oidc-index.html</td></tr></table>	Redirect URLs	Add	Redirect URL		🔗 http://127.0.0.1/zentao/oidc-index.html	
Redirect URLs	Add						
Redirect URL							
🔗 http://127.0.0.1/zentao/oidc-index.html							

3. Add the provider you want and fill in other required settings.

## Step 4: Configure Zentao

Configure the `config.php` file in the `oidc` directory.

```
$config->oidc->clientId = "<Your ClientId>";
```

Set your redirect URL in `module/oidc` in the `public function index()` method.

```
$oidc->setRedirectURL($path."/zentao/oidc-index.html");
```

 NOTE

The URL here refers to calling the 'index' method in the 'oidc' module. You also need to set a variable separator. By default, the framework uses a dash (""). Please refer to the official Zentao framework for more details.

"zentaoPHP◇◇"

# Using Casdoor as an OAuth2 Server in ShowDoc

## Using Casdoor for Authentication in ShowDoc

ShowDoc is an online API documentation and technical documentation tool that is perfect for IT teams. ShowDoc makes it easy to use Markdown syntax to write beautiful API documents, data dictionary documents, technical documents, online Excel documents, and more.

ShowDoc supports 3rd-party authentication, including OAuth2. Here is a tutorial for achieving this.

### Step 1: Create a Casdoor Application

Go to your Casdoor and add a new application called ShowDoc. Here is an example of creating the ShowDoc application in Casdoor.

[Edit Application](#)[Save](#)[Save & Exit](#)Name [?](#) :

myApplication

Display name [?](#) :

myApplication

Logo [?](#) :URL [?](#) :[https://cdn.casdoor.com/logo/casdoor-logo\\_1185x256.png](https://cdn.casdoor.com/logo/casdoor-logo_1185x256.png)

Preview:

Home [?](#) :[🔗](#)Description [?](#) :Organization [?](#) :

built-in

Client ID [?](#) :

208d745196c23df9fd5b

Client secret [?](#) :

4c89f447af77bc276431ab885463ebcb8d6efc3c

Cert [?](#) :

cert-built-in

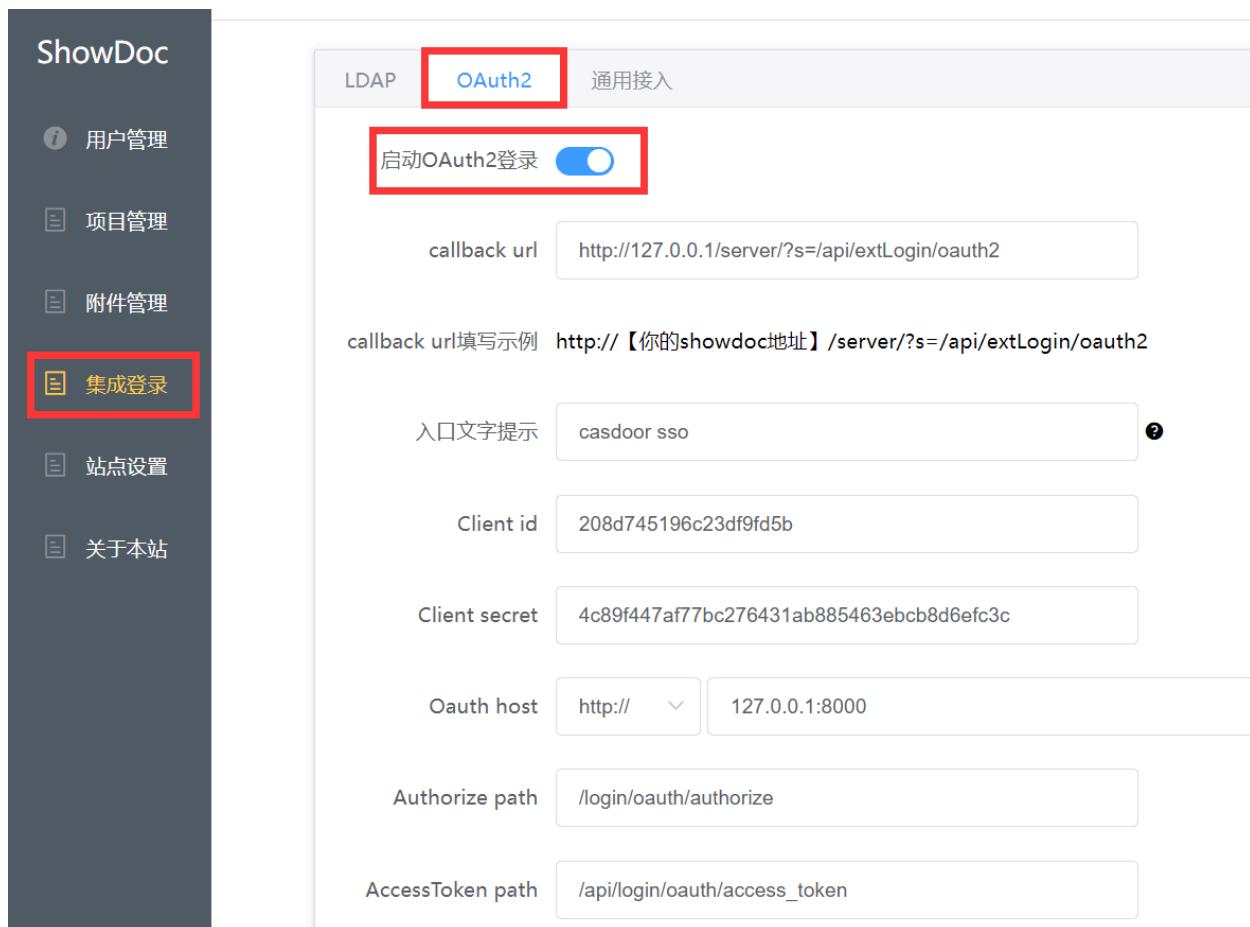
Please remember the `client ID` and `client Secret` for the next step.

**!** INFO

Please don't fill in the **callback URL** in this step. The URL depends on the configurations on **ShowDoc** in the next step. We will come back to set a correct callback URL later.

## Step 2: Configure ShowDoc

First, enable the OAuth2 login button. Then, fill in the `callback URL` as shown in the example. Fill in the `client ID` and `client secret` that were remembered in the previous step.



`Authorize path`, `AccessToken path`, and `User info path` are required. You can fill them in as shown below.

```
Authorize path: /login/oauth/authorize
AccessToken path: /api/login/oauth/access_token
User info path: /api/get-account
```

## Step 3: Configure the Callback URL in Casdoor

Go back to the application edit page in step 1 and add the `callback URL` that you filled in ShowDoc.

Redirect URLs (?):

Redirect URLs Add

Redirect URL

 <http://127.0.0.1/server/?s=/api/extLogin/oauth2>

## Step 4: Have a Try on ShowDoc

You should see the following on the login page:

# 登录

用户名/邮箱

密码

验证码



登录

[注册新账号](#)

[casdoor sso](#)

Congratulations! You have completed all the steps. Press the 'Casdoor SSO' button, and you will be redirected to the Casdoor login page.

# Flarum

Casdoor can use OAuth2 to connect various applications. In this example, we will show you how to use OAuth2 to connect Flarum to your applications.

Here are some configuration names you will need:

`CASDOOR_HOSTNAME`: The domain name or IP where the Casdoor server is deployed.

`Flarum_HOSTNAME`: The domain name or IP where Flarum is deployed.

## Step 1: Deploy Casdoor and Flarum

First, deploy [Casdoor](#) and [Flarum](#).

After a successful deployment, make sure:

1. You have downloaded the Flarum plugin [FoF Passport](#).
2. Casdoor can be logged in and used normally.
3. You can set `CASDOOR_HOSTNAME = http://localhost:8000` when deploying Casdoor in `prod` mode. See [production mode](#).

## Step 2: Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Find the redirect URL: `<CASDOOR_HOSTNAME>/auth/passport`.
3. Add the redirect URL to the Casdoor application:

The screenshot shows the 'Application Settings' section of the Casdoor interface. It includes fields for 'Client ID' (014ae4bd048734ca2dea), 'Client secret' (f26a4115725867b7bb7b668c81e1f8ffae1544d), 'Cert' (cert-built-in), and a 'Redirect URLs' section containing a single entry: <your flarum install>/auth/passport.

On the application settings page, you will find two values: `Client ID` and `Client secret`. We will use these values in the next step.

Open your favorite browser and visit: `http://CASDOOR_HOSTNAME/.well-known/openid-configuration`. You will see the OIDC configuration of Casdoor.

## Step 3: Configure Flarum

1. Install the plugin [FoF Passport](#).
2. Configure the app:

 **FoF Passport**

The OAuth2 (and Laravel passport) compatible oauth extension

Enabled

**OAuth authorization URL**  
https://door.casdoor.com/login/oauth/authorize

**OAuth token URL**  
https://door.casdoor.com/api/login/oauth/access\_token

**Api URL providing user details when authenticated**  
https://door.casdoor.com/api/user

**OAuth application ID**  
014ae4bd048734ca2dea

**OAuth application secret**  
f26a4115725867b7bb7b668c81e1f8f7fae1544d

**OAuth scopes to request**  
openid profile email

**Label for login button**  
Casdoor SSO

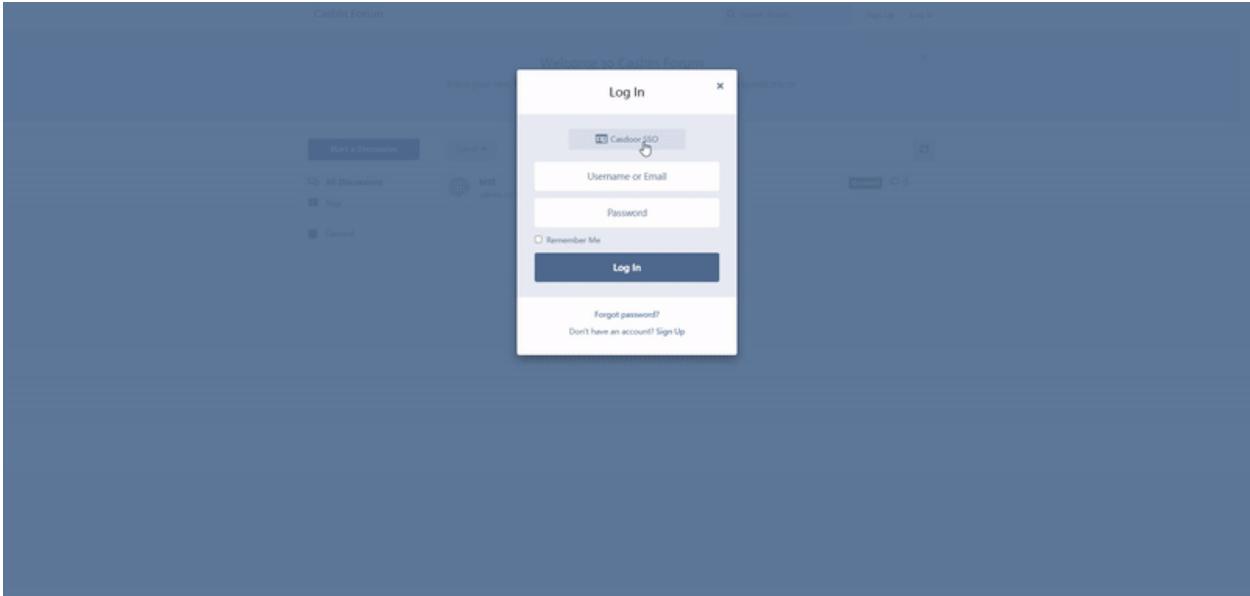
**Icon for login button**  
far fa-id-card

**Save Changes**

3. Find the Client ID and Client Secret in the Casdoor application page.

- Token server URL: http://**CASDOOR\_HOSTNAME**/api/login/oauth/access\_token
- Authorization server URL: http://**CASDOOR\_HOSTNAME**/login/oauth/authorize
- UserInfo server URL: http://**CASDOOR\_HOSTNAME**/api/get-account
- Scopes: address phone openid profile offline\_access email

Log out of Flarum and test SSO.



# Moodle

Casdoor can be used to connect [Moodle](#) using OAuth.

The following are some configuration settings:

- `CASDOOR_HOSTNAME`: The domain name or IP where the Casdoor server is deployed.
- `Moodle_HOSTNAME`: The domain name or IP where Moodle is deployed.

## Step 1: Deploy Casdoor and Moodle

First, deploy [Casdoor](#) and [Moodle](#).

After successful deployment, ensure the following:

1. Casdoor can be logged in and used without issues.
2. You can set `CASDOOR_HOSTNAME` as `http://localhost:8000` when deploying Casdoor in `prod` mode. See [production mode](#).

## Step 2: Configure Casdoor Application

1. Create a new Casdoor application or use an existing one.
2. Find the redirect URL: `Moodle_HOSTNAME/admin/oauth2callback.php`.
3. Add the redirect URL to the Casdoor application.

For more information on OAuth, refer to [OAuth](#).

# Step 3: Configure Moodle

## 1. Locate OAuth

MyMoodle Home Dashboard My courses Site administration AU Edit mode

Site administration

General Users Courses Grades Plugins Appearance Server Reports Development

Your site is not yet registered. [Register your site](#)

**Server**

- System paths
- Support contact
- Session handling
- HTTP
- Maintenance mode
- Cleanup
- Environment
- PHP info
- Performance
- Update notifications
- File types
- OAuth 2 services**

## 2. Configure this application

MyMoodle Home Dashboard My courses Site administration AU Edit mode

Detailed instructions on configuring the common OAuth 2 services

Name: Casdoor

Client ID: 154fb67917b18c0a1850 → **your Client ID**

Client secret: 380a93b5717ab0f8545fbc → **your Client secret**

Service base URL: https://demo.casdoor.com → **your Casdoor Home**

Logo URL: https://cdn.casdoor.com/s

This service will be used: Login page and internal services

Name displayed on the login page:

Scopes included in a login request: openid profile email

Scopes included in a login request for offline access: openid profile email

Additional parameters included in a login request:

Additional parameters included in a login request for offline access:

Login domains:

Require email verification

I understand that disabling email verification can be a security issue.

**Save changes** Cancel

## 3. Configure this mapping

## User field mappings for issuer: Casdoor

External field name	Internal field name	Edit
address	address	
email	email	
name	firstname	
phone	phone1	
picture	picture	
preferred_username	username	

Create new user field mapping for issuer "Casdoor"

## 4. Locate the OAuth2 plugin

General    Users    Courses    Grades    Plugins    Appearance    Server    Reports    Development

Your site is not yet registered. [Register your site](#)

**Plugins** [Install plugins](#) [Plugins overview](#)

**Activity modules**

- Manage activities
- Common activity settings
- Assignment
- Assignment settings
- Submission plugins
  - Manage assignment submission plugins
  - File submissions
  - Online text submissions
- Feedback plugins
  - Manage assignment feedback plugins
  - Feedback comments
  - Annotate PDF
  - File feedback
  - Offline grading worksheet
- Book
- Chat
- Database
- External tool
- Manage tools
- Feedback
- File
- Folder
- Forum
- Glossary
- HSP
- IMS content package
- Lesson
- Page
- Quiz
- General settings
- Safe Exam Browser templates
- Safe Exam Browser access rules
- SCORM package
- Text and media area
- URL
- Workshop

**Admin tools**

- Manage admin tools
- Accessibility
- Brickfield registration
- Accessibility toolkit settings
- Reports
- Recycle bin

**Antivirus plugins** [Manage antivirus plugins](#)

**Authentication**

- Manage authentication
- Email-based self-registration
- Manual accounts
- OAuth 2

## 5. Enable the OAuth2 plugin

### Manage authentication

#### Available authentication plugins

Name	Users	Enable	Up/Down	Settings	Test settings	Uninstall
Manual accounts	2			<a href="#">Settings</a>		
No login	0					
Email-based self-registration	0			<a href="#">Settings</a>		<a href="#">Uninstall</a>
OAuth 2	8			<a href="#">Settings</a>	<a href="#">Test settings</a>	

## 6. If you want to prevent the editing of Casdoor's email

### Lock user fields

You can lock user data fields. This is useful for sites where the user data is maintained by the administrators manually by editing user records or uploading using the 'Upload users' facility. If you are locking fields that are required by Moodle, make sure that you provide that data when creating user accounts or the accounts will be unusable.

Consider setting the lock mode to 'Unlocked if empty' to avoid this problem.

Lock value (First name) auth_oauth2   field_lock_firstname	<input type="button" value="Unlocked"/> Default: Unlocked
Lock value (Last name) auth_oauth2   field_lock_lastname	<input type="button" value="Unlocked"/> Default: Unlocked
Lock value (Email address) auth_oauth2   field_lock_email	<input type="button" value="Locked"/> Default: Unlocked
Lock value (City/town) auth_oauth2   field_lock_city	<input type="button" value="Unlocked"/> Default: Unlocked
Lock value (Country) auth_oauth2   field_lock_country	<input type="button" value="Unlocked"/> Default: Unlocked
Lock value (Language) auth_oauth2   field_lock_lang	<input type="button" value="Unlocked"/> Default: Unlocked

here is switch to lock email

For more information on Moodle, refer to [Moodle](#) and [Fields mapping](#).

Log out of Moodle and test SSO.

## MyMoodle Website



# Ruby



GitLab

Using Casdoor for authentication in a self-developed GitLab server

# GitLab

Casdoor can use the OIDC protocol to link to a self-deployed GitLab server, and this document will show you how to do it.

## ⚠ CAUTION

As the [GitLab docs](#) state, GitLab only works with OpenID providers that use HTTPS, so you need to deploy Casdoor with HTTPS, such as putting Casdoor behind an NGINX reverse proxy with an SSL certificate setup. Casdoor itself only listens on port 8000 by default via HTTP and has no HTTPS-related functionality.

The following are some of the names mentioned in the configuration:

`CASDOOR_HOSTNAME`: The domain name or IP where the Casdoor server is deployed, e.g., `https://door.casbin.com`.

`GITLAB_HOSTNAME`: The domain name or IP where GitLab is deployed, e.g., `https://gitlab.com`.

## Step 1: Deploy Casdoor and GitLab

Firstly, Casdoor and GitLab should be deployed.

After a successful deployment, you need to ensure:

1. Casdoor can be logged into and used normally.
2. Set Casdoor's `origin` value (`conf/app.conf`) to `CASDOOR_HOSTNAME`.

```
conf > ⚙ app.conf
 8  dbName = casdoor
 9  redisEndpoint =
10 defaultStorageProvider =
11 isCloudIntranet = false
12 authState = "casdoor"
13 httpProxy = "127.0.0.1:10808"
14 verificationCodeTimeout = 10
15 initScore = 2000
16 logPostOnly = true
17 origin = "http://10.144.1.2:8000"| CASDOOR_HOSTNAME
```

## Step 2: Configure Casdoor application

1. Create or use an existing Casdoor application.
2. Add a redirect URL: [http://GITLAB\\_HOSTNAME/users/auth/openid\\_connect/callback](http://GITLAB_HOSTNAME/users/auth/openid_connect/callback).
3. Add the provider you want and supplement other settings.

Description <a href="#">?</a> :	GitLab	
Organization <a href="#">?</a> :	built-in	
Client ID <a href="#">?</a> :	eab9...35b6	Client ID
Client secret <a href="#">?</a> :	95e7...b3a0188a5	Client secret
Redirect URLs <a href="#">?</a> :	<a href="#">Add</a>	
<a href="#">Redirect URL</a>		
<a href="http://GITLAB_HOSTNAME/users/auth/openid_connect/callback">http://GITLAB_HOSTNAME/users/auth/openid_connect/callback</a>		GitLab redirect url

Notably, you can get two values on the application settings page: [Client ID](#) and [Client secret](#) (see the picture above), and we will use them in the next step.

Open your favorite browser and visit: [http://\*\*CASDOOR\\_HOSTNAME\*\*.well-known/openid-configuration](http://<CASDOOR_HOSTNAME>.well-known/openid-configuration), where you will see the OIDC configuration of Casdoor.

## Step 3: Configure GitLab

You can follow the steps below to set this up, or make custom changes according to [this document](#) (e.g., if you are installing GitLab using source code rather than the Omnibus).

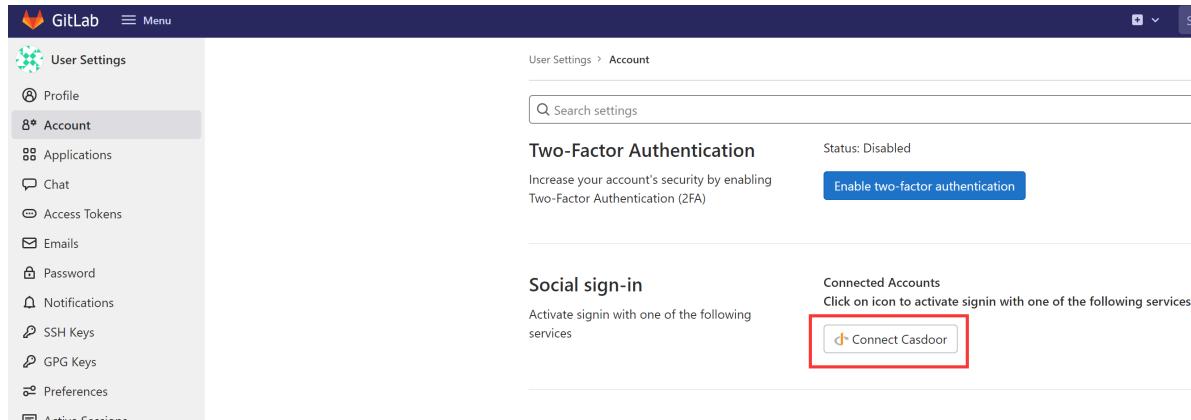
1. On your GitLab server, open the configuration file.

```
sudo editor /etc/gitlab/gitlab.rb
```

2. Add the provider configuration. (The HOSTNAME URL should include http or https)

```
gitlab_rails['omniauth_providers'] = [
  {
    name: "openid_connect",
    label: "Casdoor", # optional label for the login
button, defaults to "Openid Connect"
    args: {
      name: "openid_connect",
      scope: ["openid", "profile", "email"],
      response_type: "code",
      issuer: "<CASDOOR_HOSTNAME>",
      client_auth_method: "query",
      discovery: true,
      uid_field: "preferred_username",
      client_options: {
        identifier: "<YOUR CLIENT ID>",
        secret: "<YOUR CLIENT SECRET>",
        redirect_uri: "<GITLAB_HOSTNAME>/users/auth/"
      }
    }
  }
]
```

3. Reboot your GitLab server.
4. Each registered user can open `GITLAB_HOSTNAME/-/profile/account` and connect the Casdoor account.



The screenshot shows the GitLab User Settings page with the 'Account' tab selected. In the 'Social sign-in' section, there is a button labeled 'Connect Casdoor' which is highlighted with a red box.

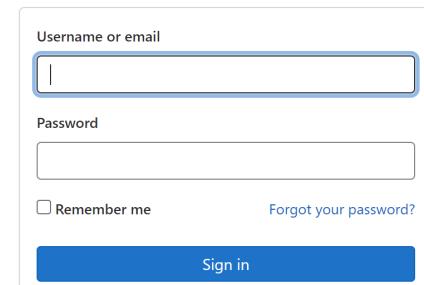
5. Finish. Now, you can log in to your own GitLab using Casdoor.

## GitLab

### A complete DevOps platform

GitLab is a single application for the entire software development lifecycle. From project planning and source code management to CI/CD, monitoring, and security.

This is a self-managed instance of GitLab.



The screenshot shows the GitLab login page. At the bottom right, there is a 'Sign in with' section containing a 'Casdoor' button, which is highlighted with a red box.

[Don't have an account yet? Register now](#)

# Haskell



Hasura

Before the integration, we need to deploy Casdoor locally.

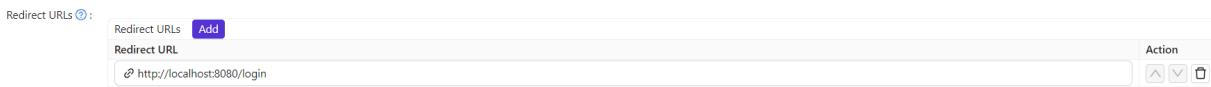
# Hasura

Before the integration, we need to deploy Casdoor locally.

Then we can quickly implement a Casdoor-based login page in our own app with the following steps.

## Configure Casdoor application

1. Create or use an existing Casdoor application.
2. Add a redirect URL: `http://CASDOOR_HOSTNAME/login`



The screenshot shows a table titled "Redirect URLs" with one row. The "Redirect URL" column contains `http://localhost:8080/login`. The "Action" column has two buttons: "Edit" and "Delete".

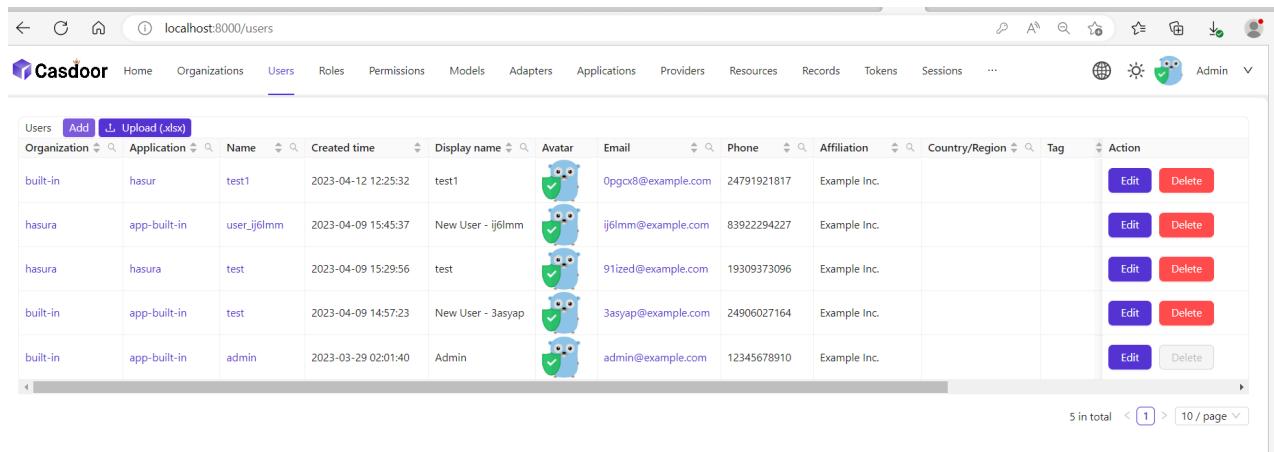
Redirect URLs	Action
<code>http://localhost:8080/login</code>	<button>Edit</button> <button>Delete</button>

3. Copy the client ID; we will need it in the following steps.

## Add a user in Casdoor

Now that you have the application, but not a user. That means you need to create a user and assign the role.

Go to the "Users" page and click on "Add user" in the top right corner. That opens a new page where you can add the new user.



The screenshot shows a table of users with the following data:

Organization	Application	Name	Created time	Display name	Avatar	Email	Phone	Affiliation	Country/Region	Tag	Action
built-in	hasur	test1	2023-04-12 12:25:32	test1		0pgox8@example.com	24791921817	Example Inc.			<button>Edit</button> <button>Delete</button>
hasura	app-built-in	user_ij6lmm	2023-04-09 15:45:37	New User - ij6lmm		ij6lmm@example.com	83922294227	Example Inc.			<button>Edit</button> <button>Delete</button>
hasura	hasura	test	2023-04-09 15:29:56	test		91lized@example.com	19309373096	Example Inc.			<button>Edit</button> <button>Delete</button>
built-in	app-built-in	test	2023-04-09 14:57:23	New User - 3asyap		3asyap@example.com	24906027164	Example Inc.			<button>Edit</button> <button>Delete</button>
built-in	app-built-in	admin	2023-03-29 02:01:40	Admin		admin@example.com	12345678910	Example Inc.			<button>Edit</button> <button>Delete</button>

At the bottom, there is a pagination bar showing "5 in total" and "10 / page".

Save the user after adding a username and adding the organization Hasura (other details are optional).

Now you need to set up a password for your user, which you can do by clicking "manage your password."

Choose a password for your user and confirm it.

# Build the Hasura App

Start the Hasura by Docker or Hasura Cloud.

Now create a `users` table with the following columns:

- `id` of type Text (Primary Key)
- `username` of type Text

Refer to the image below for reference.

The screenshot shows the Hasura Data Manager interface. On the left, there's a sidebar with 'Data Manager' and 'Databases (1)'. Under databases, it lists 'default' and 'public'. The 'SQL' tab is selected. In the main area, the title is 'Add a New Table'. The 'Table Name' field contains 'users'. The 'Table Comment' field contains 'comment'. Under 'CONFIGURE FIELDS', there's a section for 'Columns' with three rows. Each row has a column name ('id', 'username', 'column\_name'), a type ('Text'), a dropdown for 'default\_value', and checkboxes for 'Nullable' and 'Unique'. The 'Primary Key' section shows 'id' selected. There's also a 'Foreign Keys' section. A yellow circular icon with a hand icon is in the bottom right corner.

The next step is to create a `user` role for the app. Users should be able to see only their records but not other people's records.

Configure the `user` role as shown in the image below. For more information, read about [configuring permission rules in Hasura](#).

The screenshot shows the Hasura Cloud interface with the 'DATA' tab selected. A table lists roles and their permissions:

Role	insert	select	update	delete
admin	✓	✓	✓	✓
user	✗	✗	✗	✗

A modal window is open for the 'user' role's 'select' permission. It shows a custom check configuration:

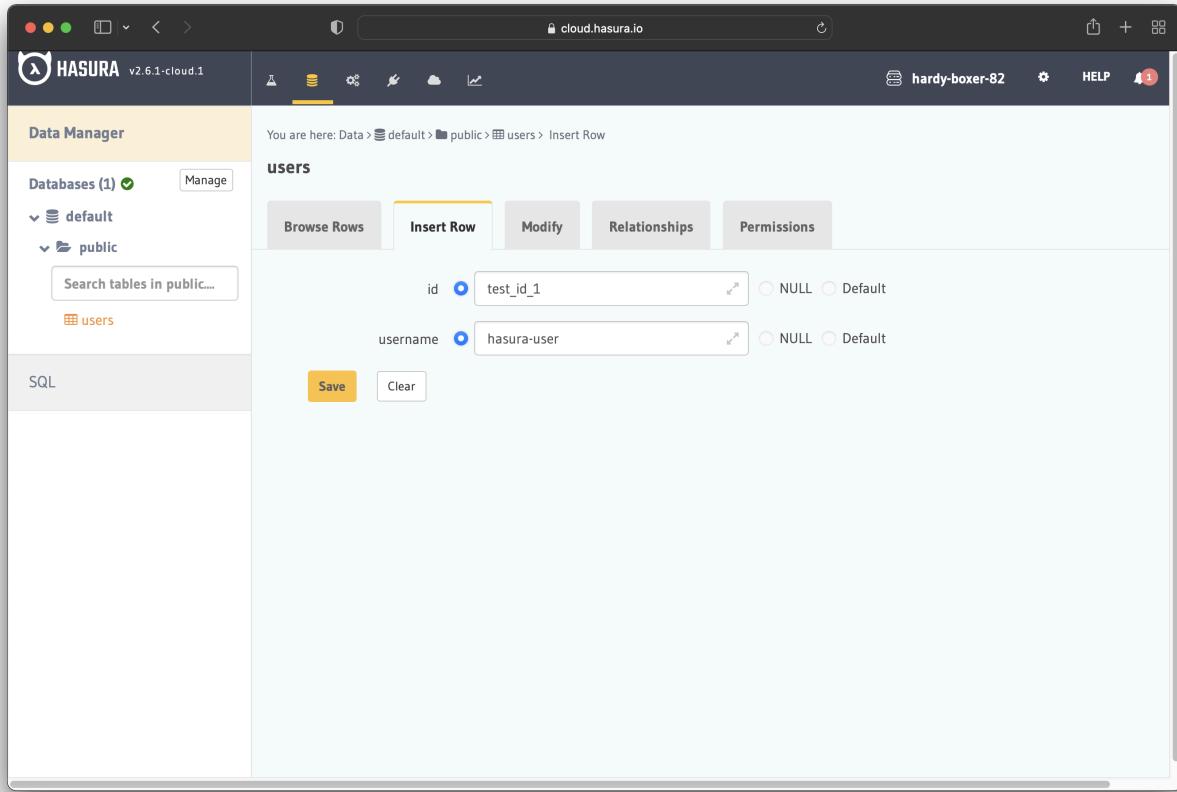
```
1  {"id": {"_eq": "X-Hasura-User-Id"}}

{
  "id": {
    "eq": "X-Hasura-User-Id"
  }
}
```

Below the modal, under 'Column select permissions', 'id' and 'username' are selected.

This way, users cannot read other people's records. They can only access theirs.

For testing purposes, add a dummy user. This is to ensure that when you use the JWT token, you only see your user's details and not other users' details.



Now you need to set the `JWT_SECRET` in Hasura.

## Configure Hasura with Casdoor

In this step, you need to add the `HASURA_GRAPHQL_JWT_SECRET` to Hasura.

To do so, go to the Hasura docker-compose.yaml and then add the new `HASURA_GRAPHQL_JWT_SECRET` as below.

The `HASURA_GRAPHQL_JWT_SECRET` should be in the following format. Remember to change `<Casdoor endpoint>` to your own Casdoor's URL (like <https://door.casdoor.com>)

```
HASURA_GRAPHQL_JWT_SECRET: '{"claims_map": {  
    "x-hasura-allowed-roles": {"path": "$.roles"},  
    "x-hasura-default-role": {"path": "$.roles[0]"},  
    "x-hasura-user-id": {"path": "$.id"}  
}, "jwk_url": "<Casdoor endpoint>/.well-known/jwks"}'
```

Save the change and reload the docker.

```
## enable debugging mode. It is recommended to disable this in production
HASURA_GRAPHQL_DEV_MODE: "true"
HASURA_GRAPHQL_ENABLED_LOG_TYPES: startup, http-log, webhook-log, websocket-log, query-log
HASURA_GRAPHQL_ADMIN_SECRET: myadminsecretkey
HASURA_GRAPHQL_JWT_SECRET: '{"claims_map": {
  "x-hasura-allowed-roles": ["user", "editor"],
  "x-hasura-default-role": "user",
  "x-hasura-user-id": "4ec7ccee-ec7b-4191-a78d-e11f50686f8b"
}, "jwk_url": "https://door.casdoor.com/.well-known/jwks"}'
```

## Retrieve the JWT Token

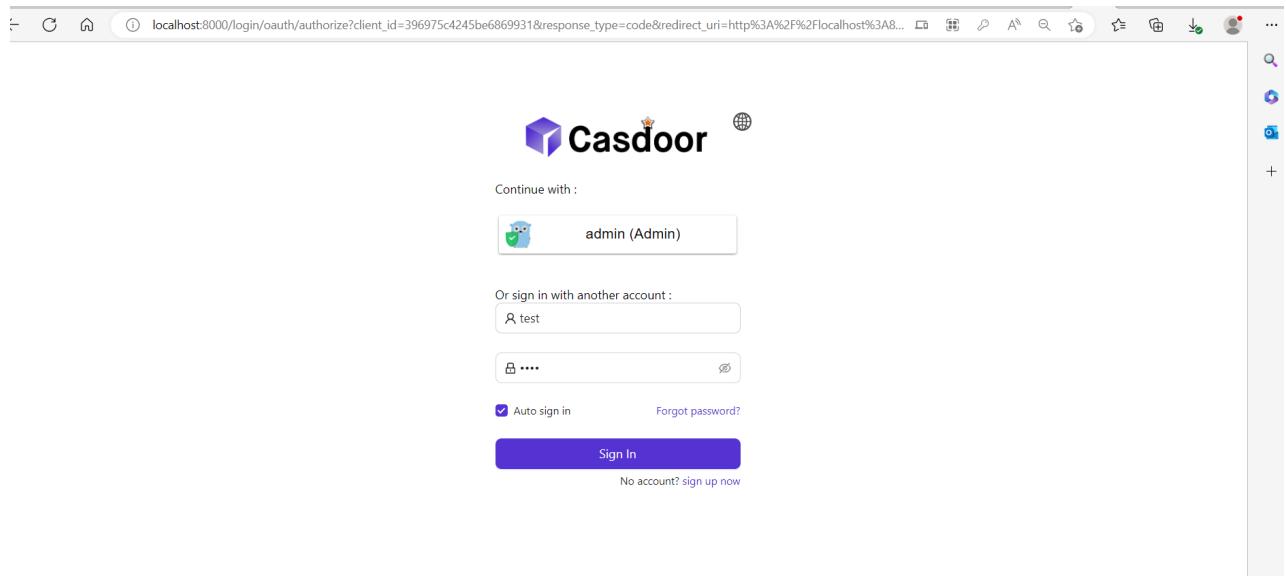
Since there is no client implementation, you can get your access token by making a request by the below URL:

```
http://localhost:8000/login/oauth/authorize?client_id=<client
ID>&response_type=code&redirect_uri=http%3A%2F%2Flocalhost%3A8080%2Flogin&scope=read&state=app-
built-in<public certificate>>
```

Change `client ID` to the ID you copied before and input the public certificate of Casdoor, which you can find in Casdoor's Certs page.

Then input the username and password you created for Hasura before.

Click "Sign in"



Go back to the Casdoor/Token page.

localhost:8000/tokens

Name	Created time	Application	Organization	User	Authorization code	Access token	Action
b6ea3e35-abcf-41d8-a1a2-01f00fd8264b	2023-04-12 13:06:53	hasura	hasura	test	433b504b4f6a593e4a11	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
16024557-df21-4779-bfb9-959e5dae078c	2023-04-12 12:51:47	hasura	built-in	test1	2879fbcc282019cf7f23c	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
f3cb1070-c2d4-40f0-8bc0-59919d26d162	2023-04-11 15:04:00	hasura	hasura	test	2a370971798d403fc6ef	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
64993582-2322-4df7-ab20-cb23201bc77b	2023-04-11 00:37:22	springboot	built-in	admin	a2396037c3ba4fd9221e	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
f65a3813-a655-47f0-9c9a-f08ce4607815	2023-04-11 00:31:37	springboot	built-in	admin	d048c7f9cd1469fd829d	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
5828069e-15eb-4c92-933c-feeding621c	2023-04-11 00:06:54	springboot	built-in	admin	7cc27dc752cc4188ac8d	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
2277e0f2-7e78-462f-a654-3c53759784af	2023-04-11 00:05:17	springboot	built-in	admin	56141e709a06931b7faa	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
55bd324a-6039-40f6-b707-2a55d78ae911	2023-04-11 00:05:07	springboot	built-in	admin	9a1413bc172591a64353	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>
4b30acbe-fa22-4387-8098-9a46e70f6972	2023-04-10 23:59:19	springboot	built-in	admin	88b0997b675917f20fdc	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0e	<button>Edit</button> <button>Delete</button>

Find the Username you input before, then click "edit"

Copy the Access Token

Edit Token		<button>Save</button>	<button>Save &amp; Exit</button>
Name:	b6ea3e35-abcf-41d8-a1a2-01f00fd8264b		
Application:	hasura		
Organization:	hasura		
User:	test		
Authorization code:	433b504b4f6a593e4a11		
Access token:	eyJhbGciOiJSUzI1NlsltmpZC16ImNlcnQtYnVpbHQtaW4iLCJ0eXAiOiJKV1QiLCJyIjoiZXRpbWUiOlyMDIzLTA0LTAsVDE0Ij50JU2KzA4OjAwIiwidXBkYXRlZFRpBWUiOiiLCjPZC16jRly		
Expires in:	604800		
Scope:	read		
Token type:	Bearer		
<button>Save</button>		<button>Save &amp; Exit</button>	

Now you can use the access token to make the authenticated request. Hasura returned the appropriate user rather than returning all the users from the database.

HASURA v2.22.0 API DATA ACTIONS REMOTE SCHEMAS EVENTS SETTINGS HELP Allow List

GraphQL REST

> GraphQL Endpoint  
Request Headers

ENABLE	KEY	VALUE
<input type="checkbox"/>	Hasura-Client-Name	casdoor
<input checked="" type="checkbox"/>	content-type	application/json
<input type="checkbox"/>	x-hasura-admin-secret	*****
<input checked="" type="checkbox"/>	Authorization	Bearer eyJhbGciOiJSUzI1NiIsImtpZCI6ImNlcnQtYnVpbHQtaW4iLCJ0eXAiOiJV1QfQeyJvd25ci6lmhhc3VyYSlsIm5hbWL
Enter Key		Enter Value

Explorer X GraphiQL ▶ Prettify History Explorer Code Exporter REST Derive action Analyze ◀ Docs

query MyQuery {  
 users {  
 id  
 username  
 }  
}

1  
2  
3  
4  
5  
6  
7

{  
 "data": {  
 "users": [  
 {  
 "id": "4ec7ccce-ec7b-4191-a78d-e11f50686f8b",  
 "username": "test"  
 }  
 ]  
 }  
}

QUERY VARIABLES

# Python



JumpServer

Using CAS to connect JumpServer

# JumpServer

Casdoor can be used to connect JumpServer.

The following are some of the names in the configuration:

`CASDOOR_HOSTNAME`: The domain name or IP where Casdoor server is deployed.

`JumpServer_HOSTNAME`: The domain name or IP where JumpServer is deployed.

## Step 1: Deploy Casdoor and JumpServer

Firstly, deploy Casdoor and JumpServer.

After successful deployment, ensure the following:

1. Casdoor can be logged in and used normally.
2. You can set `CASDOOR_HOSTNAME` to `http://localhost:8000` when deploying Casdoor in `prod` mode. See [production mode](#).

## Step 2: Configure Casdoor application

1. Create a new Casdoor application or use an existing one.
2. Find a redirect URL: `CASDOOR_HOSTNAME/cas/your_organization/your_application/login`.
3. Add your redirect URL to the Casdoor application: `JumpServer_HOSTNAME`.

For more information about [CAS](#), refer to the documentation.

# Step 3: Configure JumpServer

## 1. Find Auth:

The screenshot shows the 'Auth' configuration page in the JumpServer web interface. The 'Auth' tab is selected in the sidebar, and the 'CAS' tab is selected in the top navigation bar. The main area displays basic CAS authentication settings, including the 'Enable CAS Auth' toggle switch, 'Server url' (set to `http://101.43.192.216:8000/cas/jump/jumpServer/login`), 'Proxy server url' (set to `http://8.140.18.157`), and 'Version' (set to 3). Below these, there are sections for 'Other' settings like 'Logout completely' and a 'User attr map' section containing the JSON code: `1 = [ 2 "uid": "username" 3 ]`. There are also 'Create user if not' and 'Submit' buttons at the bottom.

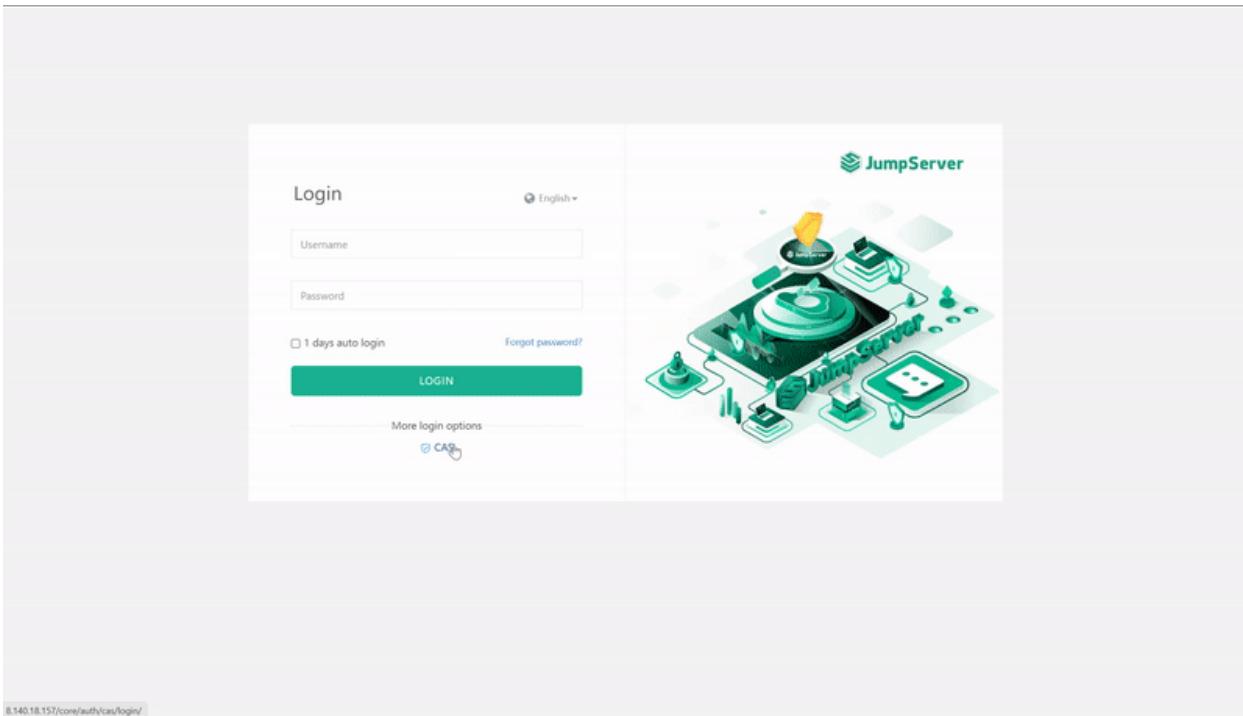
## 2. Configure this app:

This screenshot is identical to the one above, showing the 'Auth' configuration page in the JumpServer web interface. The 'Auth' tab is selected in the sidebar, and the 'CAS' tab is selected in the top navigation bar. The main area displays basic CAS authentication settings, including the 'Enable CAS Auth' toggle switch, 'Server url' (set to `http://101.43.192.216:8000/cas/jump/jumpServer/login`), 'Proxy server url' (set to `http://8.140.18.157`), and 'Version' (set to 3). Below these, there are sections for 'Other' settings like 'Logout completely' and a 'User attr map' section containing the JSON code: `1 = [ 2 "uid": "username" 3 ]`. There are also 'Create user if not' and 'Submit' buttons at the bottom. Red arrows highlight the 'Enable CAS Auth' switch, the 'Server url' field, and the 'User attr map' code editor.

- `/login` endpoint: <https://door.casdoor.com/cas/casbin/cas-java-app/login>.
- `/logout` endpoint: <https://door.casdoor.com/cas/casbin/cas-java-app/logout>.
- `/serviceValidate` endpoint: <https://door.casdoor.com/cas/casbin/cas-java-app/serviceValidate>.
- `/proxyValidate` endpoint: <https://door.casdoor.com/cas/casbin/cas-java-app/proxyValidate>.

For more information about [CAS](#) and [JumpServer](#), refer to the documentation.

Log out of JumpServer and test SSO:



# Monitoring

## Web UI

Monitor runtime information on the Casdoor web page

## Prometheus

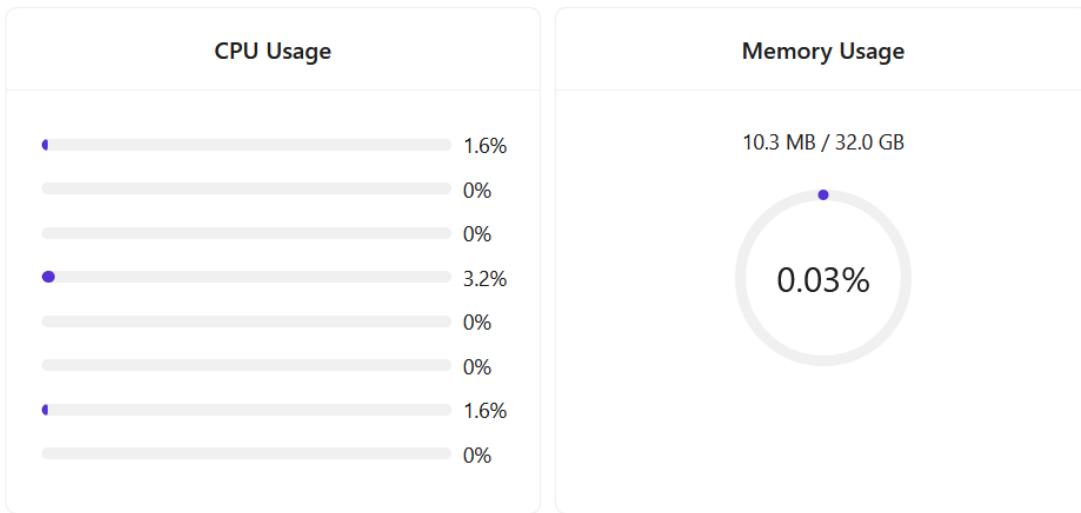
Use Prometheus to collect information about running Casdoor.

# Web UI

You can monitor the runtime information of Casdoor on the [Casdoor web page](#), including CPU Usage, Memory Usage, API Latency, and API Throughput.

On the UI, you can view the following information:

- CPU Usage and Memory Usage



- API Latency, including count times and average latency

API Latency				
Method	Endpoint	Latency (ms)	Avg Latency (ms)	Throughput (req/s)
GET	/api/get-cert	3	0.667	
GET	/api/get-certs	27	1.333	
GET	/api/get-chats	27	1.519	
GET	/api/get-default-application	3	5.333	
GET	/api/get-email-and-phone	1	1.000	
GET	/api/get-global-providers	58	1.202	

- API Throughput, including total throughput and throughput per API

API Throughput			
Total Throughput: 2			
Name	Method	Throughput	
/api/get-prometheus-info	GET	1	
/api/get-system-info	GET	1	

# Prometheus

To collect Casdoor's runtime metrics, such as API Throughput, API Latency, CPU Usage, Memory Usage, and more, you need to configure your Prometheus profile.

```
global:  
  scrape_interval: 10s # The time interval for fetching metrics  
  
scrape_configs:  
  - job_name: 'prometheus'  
    static_configs:  
      - targets: ['localhost:9090']  
  - job_name: 'casdoor' # Name of the application to be monitored  
    static_configs:  
      - targets: ['localhost:8000'] # Back-end address of Casdoor deployment  
    metrics_path: '/api/metrics' # Path for collecting indicators
```

After successful configuration, you will find the following information in Prometheus:



# Internationalization

Casdoor supports multiple languages. By deploying the translations to [Crowdin](#), we can provide support for Spanish, French, German, Chinese, Indonesian, Japanese, Korean, and more.

Casdoor utilizes the official Crowdin CLI to synchronize translations from Crowdin. If you wish to add support for additional languages, please submit your proposal in [our community](#). Moreover, if you would like to contribute to expediting the translation work, kindly consider assisting us in translating on [Crowdin](#).

# Contributor Guide

Welcome to Casdoor! This document serves as a guideline on how to contribute to Casdoor.

If you find any incorrect or missing information, please leave your comments or suggestions.

## Get Involved

There are many ways to contribute to Casdoor. Here are some ideas to get started:

- Use Casdoor and report issues. When using Casdoor, report any issues - whether they're bugs or proposals - on [GitHub Discussions](#) or on [Discord](#) before filing an issue on GitHub.

 INFO

Please use English to describe the details of your problem when reporting an issue.

- Help with documentation. Starting your contribution work with docs is a good choice.
- Help solve issues. We have a table that contains easy tasks suitable for beginners under [Casdoor Easy Tasks](#), with different levels of challenges labeled with different tags.

# Contributing

If you are ready to create a PR, here is the workflow for contributors:

1. Fork to your own repository.
2. Clone your fork to a local repository.
3. Create a new branch and work on it.
4. Keep your branch in sync.
5. Commit your changes. Make sure your commit message is concise.
6. Push your commits to your forked repository.
7. Create a pull request from your branch to our **master** branch.

# Pull Requests

## Before You Get Started

Casdoor uses GitHub as its development platform, and pull requests are the primary source of contributions.

Here are some things you need to know before opening a pull request:

- You need to sign the CLA when you first create a pull request.
- Explain why you are submitting the pull request and what it will do to the repo.

- Only one commit is allowed. If the PR does more than one thing, please split it.
- If there are any newly added files, please include the Casdoor license at the top of the new file(s).

```
// Copyright 2022 The Casdoor Authors. All Rights Reserved.  
//  
// Licensed under the Apache License, Version 2.0 (the "License");  
// you may not use this file except in compliance with the License.  
// You may obtain a copy of the License at  
//  
//     http://www.apache.org/licenses/LICENSE-2.0  
//  
// Unless required by applicable law or agreed to in writing,  
// software  
// distributed under the License is distributed on an "AS IS"  
// BASIS,  
// WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or  
// implied.  
// See the License for the specific language governing permissions  
// and  
// limitations under the License.
```

## Semantic PRs

Your pull requests should follow the Conventional Commits spec. The basic requirement is that only the PR title or at least one commit message. For example, three commonly used PR titles are given below:



PR titles must be in lowercase.

1. fix: a commit of the type `fix` patches a bug in your codebase.

fix: prevent racing of requests

2. **feat**: a commit of the type `feat` introduces a new feature to the codebase.

feat: allow provided config object to extend other configs

3. **docs**: a commit of the type `docs` adds or improves documentation.

docs: correct spelling of CHANGELOG

For more details, please refer to the [Conventional Commits](#) page.

## Linking PRs with Issues

You can link a pull request to an issue to show a fix is in progress and to automatically close the issue when the pull request is merged.

### Linking a Pull Request to an Issue Using a Keyword

You can link a pull request to an issue by using a supported keyword in the pull request's description or in a commit message. The pull request **must be** on the default branch.

- close
- fix
- resolve

An issue in the same repository, for instance:

Fix: #902

For more details, please refer to [Linking a Pull Request to an Issue](#).

## Modifying PRs

Your PR may need revision. Please modify the same PR when the code needs changes; don't close the PR and open a new one. Here is an example:

- Modify the code on your local.
- Modify your commit.

```
git commit --amend
```

- Push to your remote repository.

```
git push --force
```

Then, you will have successfully modified the PR!

## Code Related

Some Principles:

- Readability: important code should be well-documented. Code style should comply with the existing one.

## Naming Convention

For instance, `signupUrl` for variable names, `Signup URL` for UI.

## How to Update i18n Data?

Please note that we use [Crowdin](#) as a translating platform and i18next as a translating tool. When you add strings using i18next in the `web/` directory, you can run the `i18n/generate_test.go` to auto-generate `web/src/locales/**/data.json`.

Run `i18n/generate_test.go`:

```
cd i18n && go test
```

All languages are filled in English by default. After your PR has been merged, you are encouraged to help translate the newly added strings in `web/src/locales/zh/data.json` by [Crowdin](#).

 CAUTION

If you are not familiar with a language, please do not translate it; keep the file as it is.

## License

By contributing to Casdoor, you agree that your contributions will be licensed under the Apache License.