

Cacoo Enterprise Installation Manual

Nulab, Inc.
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Update History

Version	Date	Changes
1	March 30, 2011	First edition
2	March 31, 2011	SSL+Reverse Proxy settings, Additional notes for SMTPAuth
3	January 23, 2012	Added description about wkhtmltoimage Added description about creating custom stencils and managing samples
4	January 17, 2013	Updated to the newest version Updated OS and other software versions for installation examples
5	May 10, 2013	Added troubleshooting for the previous version
6	May 15, 2013	Updated to the latest API version
7	May 16, 2013	Added steps for S3 connection
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9	March 26, 2014	Updated to the latest version
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15	Feb 7, 2019	Added step to purchase license
16	April 10, 2020	Updated to the latest(16) version

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System Requirements

Server - Hardware

CPU	3GHz or above
Memory	16GB or above
Hard disk	500GB or above To save one diagram, usually the following will be required: <ul style="list-style-type: none">- 5MB per diagram- 0.5MB per saving a diagram to record history

Server - Software

OS	Linux (RHEL 7 or CentOS 7 or above)
AWS CLI	1.14 or above
Docker	17.09.1 or above
Database	PostgreSQL 9.5 or 9.6
SMTP Server	SMTP server Sendmail, which comes with Red Hat Enterprise Linux or CentOS by default, can be used.
Font	Selected languages' fonts (used for creating PDF file on the server)

Client

HTML5 version

OS	Windows 7+ or Mac OS X
Browser	Microsoft Edge (After Creators Update) Safari 10.1 or above Mozilla Firefox

	Google Chrome
FlashPlayer	FlashPlayer 11.2 or above (only for detecting installed fonts)

Contents of package

cacoo-docker/setenv.sh	Cacoo environment configuration shell script
cacoo-docker/.env	Cacoo environment configuration file
cacoo-docker/docker-compose.yml	Cacoo environment Docker file
cacoo-docker/cert/*	Cacoo environment certification files
cacoo-docker/jobs/*	Cacoo environment job setting file
database/*.sql	SQL for creating database
misc/blazeds_patch.zip	Patch for BlazeDS revision file
misc/Acknowledgments.txt	OSS information which Cacoo uses
update/*.sql	SQL for updating from previous version

Example of extraction package

```
# mkdir /root/temp
# unzip cacoo-enterprise-3.00.zip -d /root/temp/
```

Preparation

Please install the modules listed under System Requirements: Server - Software.

- PostgreSQL
- SMTP Server
- AWS CLI
- Docker
- Font

Installation method varies depending on the environment. The example below shows when the modules are installed on CentOS 7.4(x86_64) by the **root** user. The destination of download is set along with CentOS 7.4(x86_64) but it needs to be adjusted depending on your environment (OS version/CPU). Also the URL could be changed and you might not be able to refer. In that case, please update the URL published. Change the settings, such as memory size, depending on your server's spec.

Example of installing PostgreSQL

Install pgdg repository to install with yum.

```
# yum install -y
https://download.postgresql.org/pub/repos/yum/9.5/redhat/rhel-7-x86_64/pgdg-centos95-9.5-3.noarch.rpm
```

Install PostgreSQL with yum.

```
# yum install -y postgresql95-server postgresql95
```

Note: About PostgreSQL version

We checked that Cacao works with PostgreSQL 9.5 or 9.6. For backup and other purposes, we recommend you to use the latest but below PostgreSQL 9.6 version.

Initialize database.

```
# /usr/pgsql-9.5/bin/postgresql95-setup initdb
```

Change local connection's authentication setting.

```
# vi /var/lib/pgsql/9.5/data/pg_hba.conf
```

```
# IPv4 local connections:
host    all             all             127.0.0.1/32      md5
# IPv6 local connections:
host    all             all             ::1/128           md5
# Docker internal network:
host    all             all             127.17.0.0/16     md5
```

*** "127.17.0.0/16" means Docker's default network address. Please set actual address on the server environment.**

Adjust other settings, etc. if necessary.

```
# vi /var/lib/pgsql/9.5/data/postgresql.conf
```

```
shared_buffers = 512MB          # min 128kB
...
work_mem = 4MB                  # min 64kB
...
effective_cache_size = 1024MB
```

※ Please set the memory size depending on the server specification and the usage.

Note: About PostgreSQL memory setting

Please make sure to set PostgreSQL memory. Not setting the memory often causes performance decrement and errors.

Set so that the service will launch automatically.

```
# systemctl enable postgresql-9.5.service
```

Launch the service.

```
# systemctl start postgresql-9.5
```

Installing AWS CLI (Command Line Interface)

To install Cacoo, you need to get Docker images etc. distributed by AWS (Amazon Web Service). Please install AWS CLI for using AWS.

To install AWS CLI, Python (version 2.6.5 or above, or version 3.3 or above) is required. Please check the version of installed Python by the following command and install or upgrade as necessary.


```
# python --version
```

Download the AWS CLI bundle installer and execute install.

```
# curl "https://s3.amazonaws.com/aws-cli/awscli-bundle.zip" -o  
"awscli-bundle.zip"  
# unzip awscli-bundle.zip  
# ./awscli-bundle/install -i /usr/local/aws -b /usr/local/bin/aws
```

For more details on installing AWS CLI, please visit the following site.

<http://docs.aws.amazon.com/cli/latest/userguide/awscli-install-bundle.html>

Installing Docker

Cacoo environment builds an operating environment on Docker.

Add a yum repository for installing Docker and execute install.

```
# yum install -y yum-utils device-mapper-persistent-data lvm2  
# yum-config-manager --add-repo  
https://download.docker.com/linux/centos/docker-ce.repo  
# yum-config-manager --disable docker-ce-edge  
# yum install -y docker-ce
```

Set the service to start up automatically.

```
# systemctl enable docker
```

Start up the service.

```
#systemctl start docker
```

Then, install docker-compose command.

```
# sudo curl -L  
https://github.com/docker/compose/releases/download/1.18.0/docker-compose-  
`uname -s`-`uname -m` -o /usr/local/bin/docker-compose  
# chmod +x /usr/local/bin/docker-compose  
# docker-compose --version  
docker-compose version 1.18.0, build 8dd22a9
```

For more details on installing Docker, please visit the following site.

<https://docs.docker.com/engine/installation/linux/docker-ce/centos/>

For more details on installing docker-compose, please also visit the following site.

<https://docs.docker.com/compose/install/#install-compose>

Installation

1. Create database

Cacoo connects to the database using the following initial setting.

Host	IP address in setting file
Port	5432
Database name	cacoo
Database user name	postgres
Database password	postgres

Above settings can be changed in settings file (Refer [Change database connection](#)).

[Content] Add data using enterprise.sql, stencils.sql and templates.sql.

Example of Command for creating

```
# cp /root/temp/cacoo/database/*.sql /var/lib/pgsql
# su - postgres
$ psql
postgres=# alter role postgres with password 'postgres';
postgres=# create database cacoo;
postgres=# \c cacoo
cacoo=# \i enterprise.sql
cacoo=# \i stencils.sql
cacoo=# \i templates.sql
cacoo=# \q
```

2.Configure Cacoo

First, please configure Cacoo by using the "cacoo-docker/setenv.sh" shell script which is included with the distributed package.

```
# cd cacoo-docker
# ./setenv.sh
Configure your Cacoo Enterprise.
...
```

"setenv.sh" is an interactive shell script so please answer each question as your environment to set up Cacoo. Your configurations are saved as the ".env" file and Cacoo will load the file on boot time.

3.Start and stop Cacoo

After configuration of Cacoo, you can start Cacoo with the following step. Please specify AWS_ACCESS_KEY_ID and AWS_SECRET_ACCESS_KEY as instructed separately.

```
# export AWS_ACCESS_KEY_ID=*****
# export AWS_SECRET_ACCESS_KEY=*****
```

Then please login to download files to install the Cacoo operating environment with the following command.

```
# aws ecr get-login --region ap-northeast-1 --no-include-email | sh -
```

After the login step, start the environment of Cacoo with the docker-compose command.

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

If you need to change any configuration, you need to stop Cacoo with the docker-compose command once then execute "setenv.sh" again or modify the ".env" file.

```
# docker-compose down
```

You can skip the login step from the second time.

Environment check before start Cacoo

Please confirm that your database and smtp mail server are working and connection from Cacoo's Docker environment is allowed. Especially, the default PostgreSQL configuration does not allow the connection from Cacoo's Docker even if the database works in the same server machine.

Installing Font


To export diagrams to PDF on the server, fonts need to be installed. Please copy fonts you are going to use into the fonts directory then start Cacoo. If the specific font used in the diagram is not available on the server, it will be replaced with other fonts.

Initial Settings

Access [http://\(installed host:port\)/](http://(installed host:port)/).

On the sign in page, sign in with Email : **admin** and password : **cacoo** .

* After all settings below are done, please change the admin's password.



Please Sign in

[Sign in](#)

[Forgot your password?](#)

License settings

After signing in, the license settings page will be shown. Enter the received license code and save the settings.

License

Settings

*License Code

[illegible]

Please scroll down to read all of these terms of use.

Terms to use the Enterprise (Server Licence Package)

Section 1 (Purpose)

These terms ("Terms") to use the Enterprise provide the terms and conditions applicable where the User who is licensed by Nulab Inc. ("Nulab") to use the following Enterprise software ("Software") and to install the Software in the User's server:

1. Project management tool 'Backlog'
2. Visual collaboration tool 'Cacoo'

Accept this terms of use and start using the application

License Code	To use this application, license code is required. Please enter the license code provided to register. When you see "License is activated", you can use this application.
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About license code

To use this application, licence code is necessary. Without license code, this application cannot be used.

Users with valid license code will see the license information on the bottom of the site and “About Cacao (shown when Cacao logo is clicked)”. This setting cannot be changed. If you only have the temporal license code, most pages cannot be accessed after the term ends.

About Extending Your License

When you need to extend your license after a trial or for the next term, please contact us using the inquiry form below, making sure to tell us your "Customer No" displayed on the license setting page.

Inquiry Form : <https://cacoo.com/contact>

Set language and timezone

Please set language and timezone on Settings > Account.

Change password

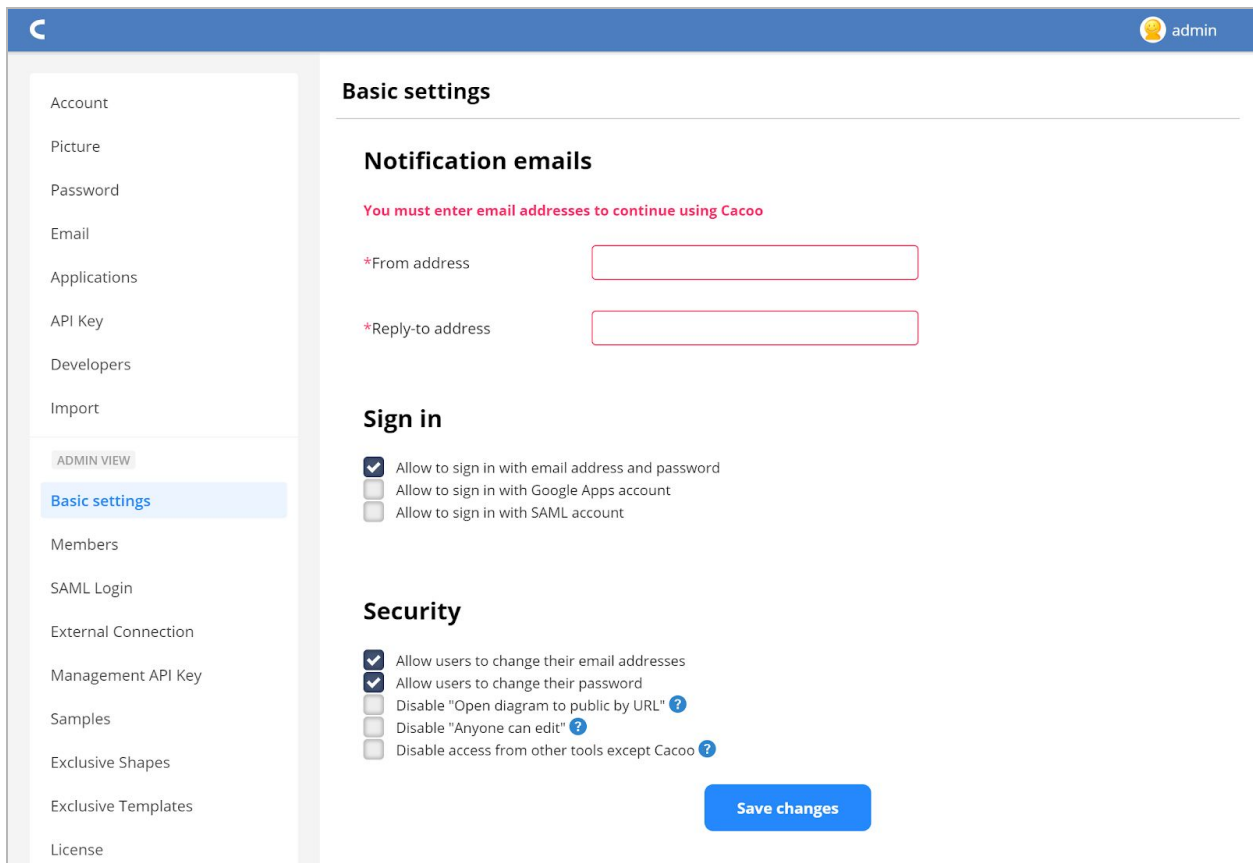
Please change password on Settings > Password tab.

Set email address

Please change email address on Settings > Email tab.

Basic Settings

Set general settings on Management > Basic Setting tab.



The screenshot shows the 'Basic settings' page in the Cacoo application. The left sidebar contains a menu with options: Account, Picture, Password, Email, Applications, API Key, Developers, Import, ADMIN VIEW, Basic settings (highlighted), Members, SAML Login, External Connection, Management API Key, Samples, Exclusive Shapes, Exclusive Templates, and License. The main content area is titled 'Basic settings' and includes a sub-section 'Notification emails' with a red warning message: 'You must enter email addresses to continue using Cacoo'. Below this are two input fields for '*From address' and '*Reply-to address'. The 'Sign in' section has three checkboxes: 'Allow to sign in with email address and password' (checked), 'Allow to sign in with Google Apps account' (unchecked), and 'Allow to sign in with SAML account' (unchecked). The 'Security' section has four checkboxes: 'Allow users to change their email addresses' (checked), 'Allow users to change their password' (checked), 'Disable "Open diagram to public by URL"' (unchecked), 'Disable "Anyone can edit"' (unchecked), and 'Disable access from other tools except Cacoo' (unchecked). A blue 'Save changes' button is at the bottom right.

Basic settings

Notification emails

You must enter email addresses to continue using Cacoo

*From address

*Reply-to address

Sign in

- ☒ Allow to sign in with email address and password
- ☐ Allow to sign in with Google Apps account
- ☐ Allow to sign in with SAML account

Security

- ☒ Allow users to change their email addresses
- ☒ Allow users to change their password
- ☐ Disable "Open diagram to public by URL" ?
- ☐ Disable "Anyone can edit" ?
- ☐ Disable access from other tools except Cacoo ?

Save changes

Notification mails

Sender email address for notification mails	When users are invited to the diagrams, Cacao sends notification mails. Please specify the email address of the sender (From).
Return-to email address for notification mails	When users are invited to the diagrams, Cacao sends notification mails. Please specify the email address to reply (Reply-to).

Sign in

Sign in setting	<p>Allow to sign in with email address and password Tick this box to let users sign in their email addresses and passwords.</p> <p>Allow to sing in with Google Apps account Tick this box to let users sign in to Cacao with their Google Apps' account information. Users won't need to enter their email addresses and passwords.</p> <p>Allow to sing in with SAML account Tick this box to let users sign in to Cacao with their own SAML account information from IdP. Users won't need to enter their email addresses and passwords.</p> <p>At least one of them needs to be selected.</p>
-----------------	--

* Even if you don't check the "Allow to sign in with email address and password" box for the sign in setting, administrators can sign in with his email address and password. An administrator will see the email address and password fields on the sign in panel.

Security

Change email address	「Choosing "Allow users to change their email addresses" will allow users to change their email addresses on the settings page.
Change password	Choosing "Allow users to change their password" will allow users to change their passwords on their settings pages.
Public diagram	Choosing "Disable Open diagram to public by URL"

	cancels the sharing option even if the user changes it to "Open diagram to public by URL".
Editing diagram	Choosing "Disable Anyone can edit" cancels the sharing option even the user changes it to "Anyone can edit".
API Access	Choosing "Disable access from other tools except Cacao" disables access to the diagrams in the organization with API.

External connection setting

Set connected services on Management > External connection setting menu.

Google Apps Setting

This setting is only available when "Allow to sign in with Google Apps account" is selected on the Settings page.

Domains permitted to access from	Specify the allowed Google Apps' domain for signing in to Cacao.
----------------------------------	--

	<p>You can set multiple domains by separating them with comma (,).</p> <p>All Google Apps domains will be accepted if this field is left empty.</p> <p>When multiple domains are entered or no domain is entered, users need to enter the domain name on the sign in page after clicking Google Apps button.</p> <p>When only one domain is entered, users do not need to enter the domain name after clicking Google Apps button on the sign in page.</p> <p>* Alias domains don't need to be specified.</p>
Create accounts automatically	<p>Create user accounts when they first sign in</p> <p>When you select this option, users without a Cacoo account can sign in with their Google Apps accounts. Their Cacoo account will be created automatically when they sign in. If this option is not selected, users cannot sign in with their Google Apps accounts until their accounts (email addresses) are registered on Cacoo.</p> <p>Register API Access file.</p> <p>To use Google Apps account, API access file needs to be registered. Please follow "Cacoo Enterprise Google Apps / Drive Setup Guide" to register the file.</p>

Google Drive setting

Domains permitted to access from	List Google account domains permitted to connect with Google Drive.
Other settings	<p>Use Google Drive connection</p> <p>Select this option to let users create, edit and share their diagrams created on Cacoo Enterprise on Google Drive.</p> <p>To connect to Google Drive, each user needs to connect to his Google Drive account on Settings > Account page.</p> <p>Connect to Google Drive when user signs in</p> <p>When this option is selected, each user doesn't need to connect to his Google Drive on Settings > Account page. Users' Cacoo accounts will be automatically connected to their Google Drive accounts. Select this option to let all Google Apps users to connect their</p>

	<p>Cacoo accounts to Google Drive.</p> <p>Register API Access file.</p> <p>To use Google Drive connection, API access file needs to be registered. Please follow "Cacoo Enterprise Google Apps / Drive Setup Guide" to register the file.</p>
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SAML login setting

Setting for Cacoo

Set using SAML account to login on Management >SAML Login setting menu.

C

admin

Account

Picture

Password

Email

Applications

API Key

Developers

Import

ADMIN VIEW

Basic settings

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Exclusive Shapes

Exclusive Templates

SAML Login settings

Identity Provider (IdP) information

*Identifier of the IdP entity

http://idp.example.com/saml2/idp/metadata.ph

*SSO endpoint info of the IdP

http://idp.example.com/saml2/idp/SSOService.p

SLO endpoint info of the IdP

http://idp.example.com/saml2/idp/SingleLogout

*Public x509 certificate of the IdP

MIIDXTCCAkWgAwIBAgIJALmVVuDWu4NYMA0GCSqGSIb3DQEBCwUAMEUxCzAJBgNVBAYTAkFVMRMwEQYDVQQIDApTb211LVN0YXRIMSEwHwYDVQQKDBhjbnRlcm5ldCBXaWRnaXRzIFB0eSBMdGQwHhcNMjYxMjMxMTQzNDQ3WjcNNnDgwNjI1MTQzNDQ3WjBFMQswCQYDVQQGEwJBVTETMBEGA1UECAwKU29tZS1TdGF0ZTEhMB8GA1UECgwYSW50ZXJuZXQgV2lkZ2l0cyBQdHkgTHRkMIIIBjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAEzUCFozgNb1h1M0jzNRSCjhOB

Service Provider (SP) information

*NameID Format

urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified

*Account Mapping

☒ Mail Address

☐ Internal User ID

SAML Login Button

*Login Button Label

SAML Login

Save changes

Identifier of the IdP entity	Enter your IdP identifier
------------------------------	---------------------------

SSO endpoint info of the IdP	Enter the のHTTP-Redirect URL of the single-sign-on endpoint of your IdP.
SLO endpoint info of the IdP	Enter the のHTTP-Redirect URL of the single-logout endpoint of your IdP. With this setting, users will logout from SAML IdP automatically then they log out from Cacoo. Users will not log out from Cacoo automatically with SAML IdP though.
Public x509 certificate of the IdP	Enter the x509 certificate of your IdP
NameID Format / Account Mapping	<p>Choose a NameID format of your IdP to connect between SAML authentication information and Cacoo accounts.</p> <ul style="list-style-type: none"> urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified With this format, you can choose the email address of a Cacoo account or internal user ID (uid) to map both accounts. urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress With this format, the email address of a Cacoo account will be used as the mapping of accounts. urn:oasis:names:tc:SAML:2.0:nameid-format:persistent With this format, the internal user ID (uid) of a Cacoo account will be used as the mapping of accounts. <p>[Note] Please use administrator API to specify uid of each account.</p>
Login Button Label	Enter the label text of the login button from the SAML IdP.

Setting for SAML IdP

Set the below SP (ServiceProvider) configuration to SAML IdP system.

AssertionConsumerService (ACS) / Login callback URL	{Cacoo URL}/signin/saml/acs
NameIDFormat / NameID Format	Selection in the SAML login setting
SingleLogoutService / Single logout callback URL	{Cacoo URL}/signout/saml/sls

X509 certificate	Do not set
------------------	------------

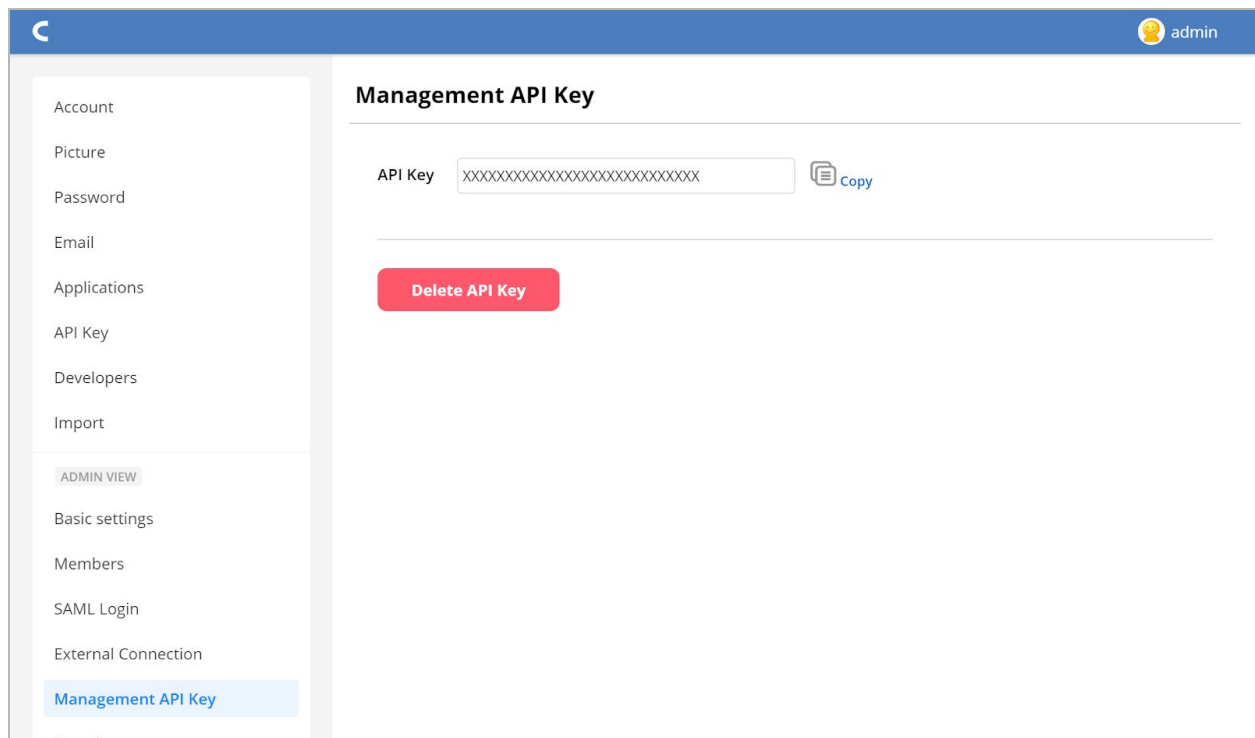
The metadata of SP configuration is also available by the following address.

```
{Cacoo URL}/signin/saml/metadata
```

Management API Key

Administrators can manage Cacoo's accounts by management API without using Cacoo's pages.

To use management API, please generate management API Key first on Management > Management API Key menu.



Variation of the management API

You can choose the format of the result from API in XML or JSON. The format will be specified by the end of the URL of the API is ".xml" or ".json"

Account list (GET Method)

```
{Cacoo URL}/api/management/member/list.xml?apiKey={Management API Key}
{Cacoo URL}/api/management/member/list.json?apiKey={Management API Key}
```

This API shows all registered accounts like the following.

```
<member_list>
  <members>
    <member>
```

```

    <uid>admin</uid>
    <nickName>Cacoo Administrator</nickName>
    <mailAddress></mailAddress>
    <lastLoginTime>2019-07-22 17:54:04.826</lastLoginTime>
    <role>admin</role>
    <uniqueId>null</uniqueId>
    <created>2017-12-20 07:27:45.579</created>
    <updated>2019-07-25 10:50:21.803</updated>
  </member>
  <member>
    <uid>tKElQi9kINL2cirw</uid>
    <nickName>test</nickName>
    <mailAddress>test@example.com</mailAddress>
    <role>user</role>
    <uniqueId>test</uniqueId>
    <created>2019-07-01 18:12:08.403</created>
    <updated>2019-07-01 18:12:08.403</updated>
  </member>
</members>
<count>2</count>
</member_list>

```

Properties :

Property	Content
uid	Account internal user ID (uid)
nickName	Account nickname
mailAddress	Account email address
uniqueId	Account unique ID (used as the mentioning target, etc.)
lastLoginTime	Account last login date time
role	Account role: <ul style="list-style-type: none"> • admin - Administrator • user - Member • guest - Guest user
created	Registered account date time
updated	Last updated account date time

Add an account (POST method)

```
{Cacoo URL}/api/management/member/add.xml?apiKey={Management API Key}
```

```
{Cacoo URL}/api/management/member/add.json?apiKey={Management API Key}
```

This API adds a new account with the following parameters.

Parameter	Content	Required (default)
uid	Account internal user ID (uid)	No (set random unique ID)
nickName	Account nickname	Yes
mailAddress	Account email address	Yes
uniqueId	Account unique ID	No (set unique value from email address)
password	Account password	No - the account will not be able to login with email address and password pair but able to login by SAML or Google Apps.
role	Account role: <ul style="list-style-type: none">• admin - Administrator• user - Member• guest - Guest user	No (set "user" automatically)
sendEmail	Set "true" to send a notification email to the added account.	No ("false")
language	Account language setting: <ul style="list-style-type: none">• en - English• ja - Japanese	No ("en")
timezone	Account timezone setting. e.g.) Asia/Tokyo	No (set system timezone)

As the result of this API, added account information will be returned.

Modify an account (POST method)

```
{Cacoo URL}/api/management/member/modify.xml?apiKey={Management API Key}  
{Cacoo URL}/api/management/member/modify.json?apiKey={Management API Key}
```

This API modifies an existing account with the following parameters.

Parameter	Content	Required (default)
uid	Specify internal user ID (uid) of the account to modify. - or - Modified account internal user	Yes to specify the account to modify by uid.

	ID	
nickName	Account nickname	No
mailAddress	Specify email address of the account to modify. - or - Modified account email address	Yes to specify the account to modify by email address.
uniqueId	Account unique ID	No
password	Account password	No
removePassword	Set "true" to remove password	No
role	Account role: <ul style="list-style-type: none"> • admin - Administrator • user - Member • guest - Guest user 	No

As the result of this API, modified account information will be returned.

Delete account (POST method)

```
{Cacoo URL}/api/management/member/delete.xml?apiKey={Management API Key}
{Cacoo URL}/api/management/member/delete.json?apiKey={Management API Key}
```

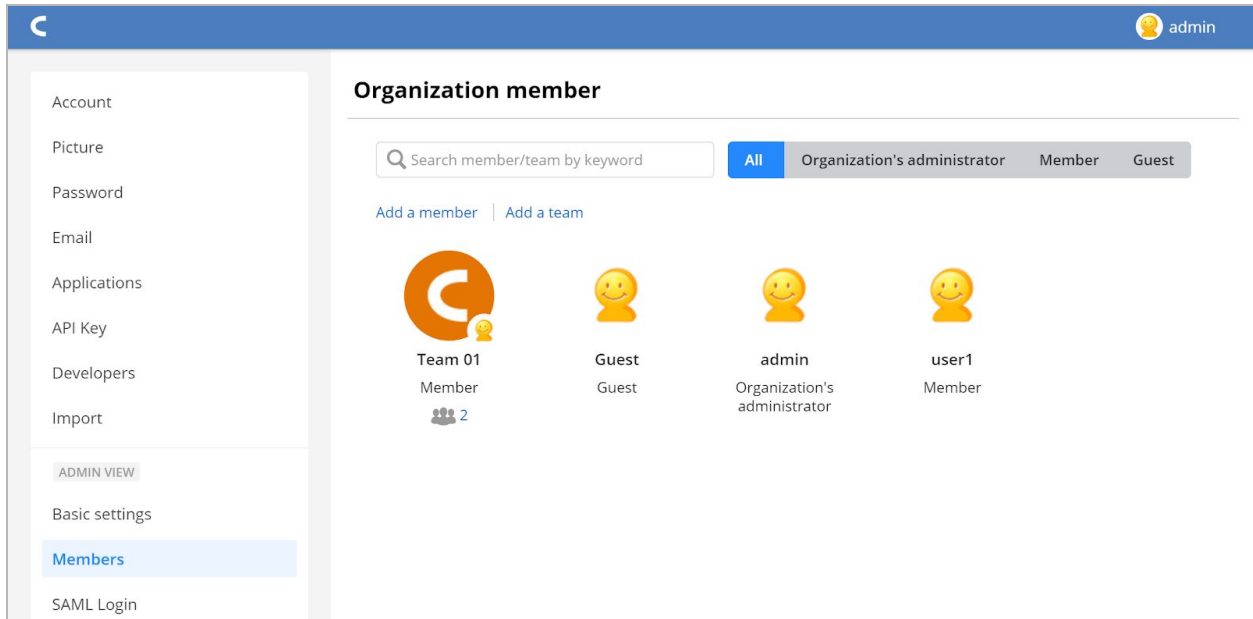
This API deletes an existing account with the following parameters.

Parameter	Content	Required (default)
uid	Account internal user ID (uid) to delete.	Yes to specify the account to modify by uid.
mailAddress	Account email address to delete.	Yes to specify the account to modify by email address.

As the result of this API, deleted account information will be returned.

Organization member

Show account list on Management > Members.



Adding an account

Click the "Add Account" link and the fields to add accounts will appear. Please enter the user's name and email address then press the "Add" button. Entering default password is optional.

Press "Add a member" button and a pop-up window will appear. Enter the user's name, email address and default password (optional) and press "Add" button.

Please note that once the number of users for the license reaches to its maximum number, you will not be able to add more accounts.

Explain about account roles.

Organization Administrator

The Administrators can do the following operations:

- Go to the organization settings page and change settings
- Set the project member's roles
- Show all diagrams in the organization and change their settings
- Edit, delete and change the owner of all diagrams in the organization
- Create projects

Users

Users have the access to the regular Cacoo functions.

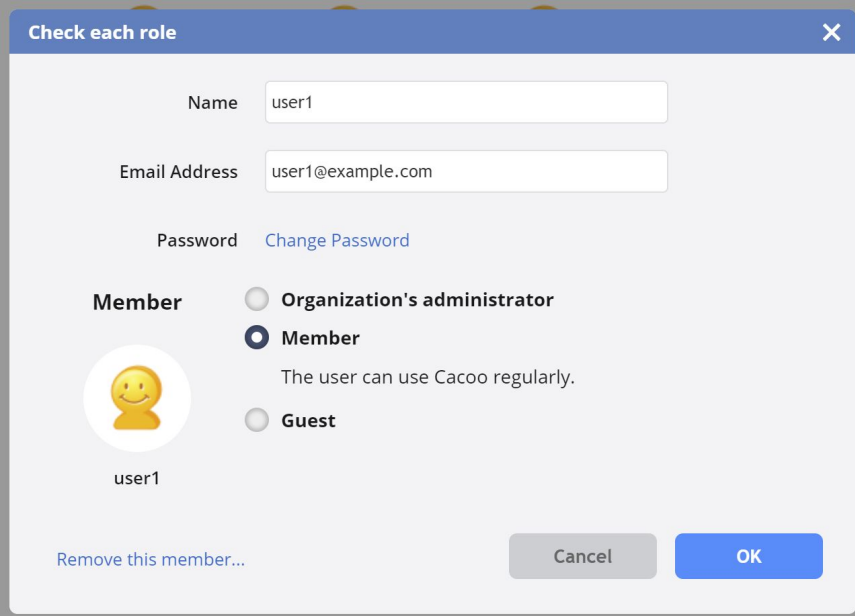
Guest

Users have the access to the regular Cacoo functions. Guests have the following restrictions:

- Cannot be a project creator.
- Cannot be an administrator.
- Cannot see the organization's settings.
- Can only see the other members of the groups they belong to and not all of the members in the organization.

Editing and deleting accounts

Click the user's account, a pop-up window to edit the account will appear. The account information can be edited or the account can be deleted from this window. Deleting an account will not delete the diagrams created in that account. All diagrams can be checked in the "Diagrams in the organization" page.

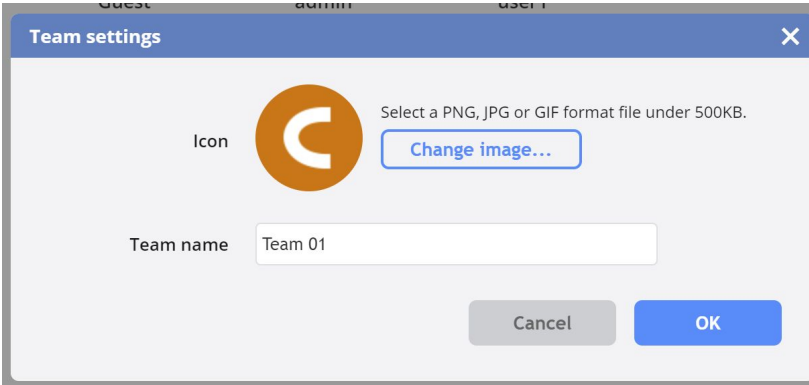


The screenshot shows a pop-up window titled "Check each role" with a close button (X) in the top right corner. The window contains the following fields and options:

- Name:** user1
- Email Address:** user1@example.com
- Password:** Change Password
- Member:** A section with a user icon (a yellow smiley face) and the name "user1".
- Role Selection:** Three radio buttons are present:
 - ☐ Organization's administrator
 - ☒ Member (The user can use Cacoo regularly.)
 - ☐ Guest
- Buttons:** "Remove this member..." (blue text), "Cancel" (grey button), and "OK" (blue button).

Adding groups

Click the "Add group" button and a pop-up window to add a group will appear. Specify the group creator and click the "Add" button. The roles of the group are always set to "Member".

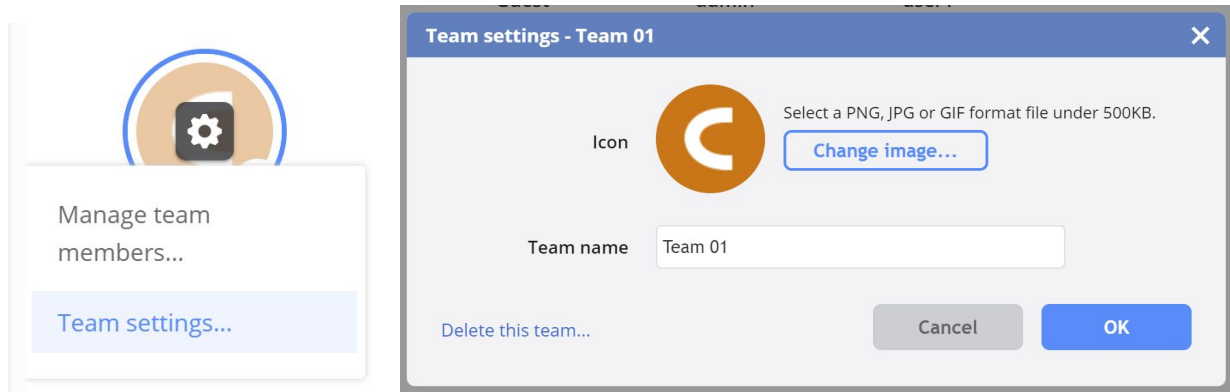


The screenshot shows a pop-up window titled "Team settings" with a close button (X) in the top right corner. The window contains the following fields and options:

- Icon:** A large orange circle with a white "C" inside. To its right is the text "Select a PNG, JPG or GIF format file under 500KB." and a "Change image..." button.
- Team name:** Team 01
- Buttons:** "Cancel" (grey button) and "OK" (blue button).

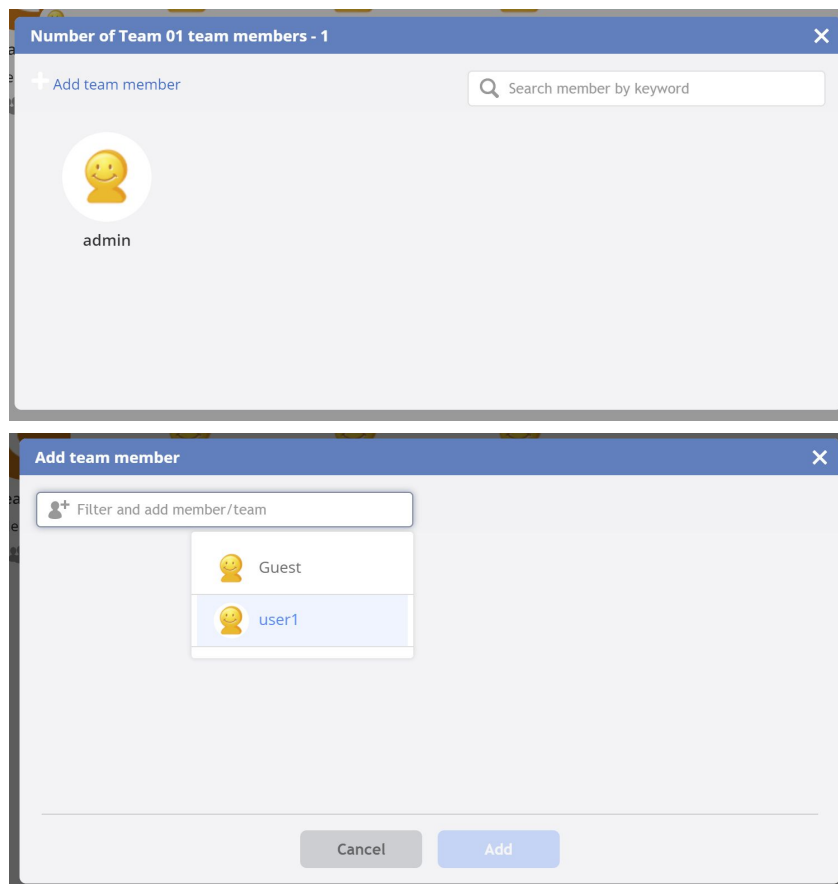
Editing and deleting groups

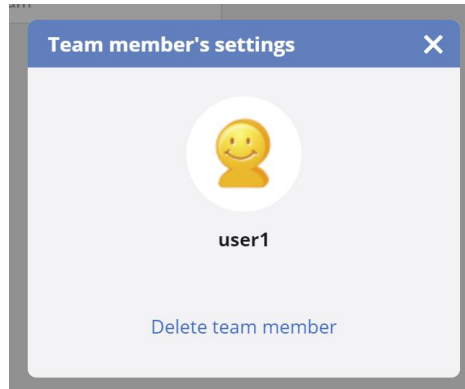
Click Group's icon > Group settings to show the Group settings panel. Enter the Group name and set the group creator. The group can be deleted from here, too.



Manage team members

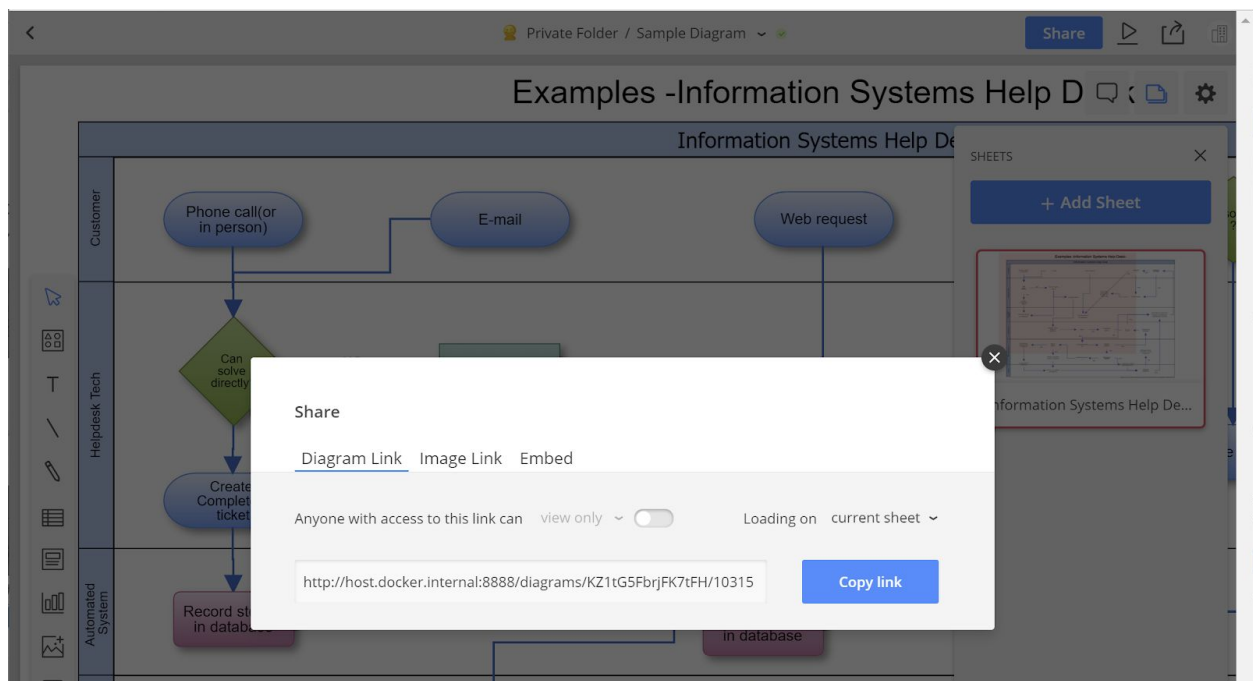
Click Team's icon > Manage team members. You may add and delete members in the pop-up panel.





Managing samples

The default diagrams can be preset so that users will see them when they sign in. Create a diagram and add the diagram's URL on the "Samples" page. You can get the diagram's URL from the address bar of your browser or the "Share" dialog in the Editor.



Enter the diagram's URL and click the "Add" button then you can add a sample diagram.

C

admin

Account

Picture

Password

Email

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Exclusive Shapes

Samples

Please input Diagram URL.

Add

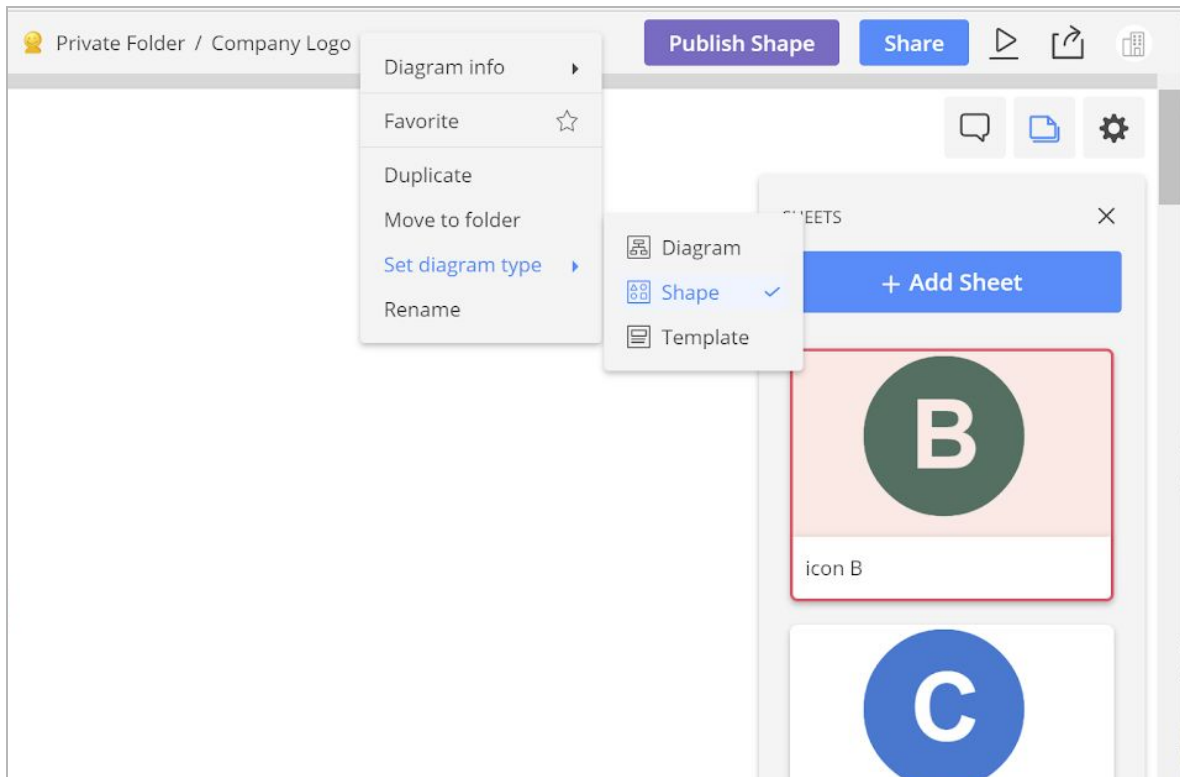
Cancel

	Title	Owner	Updated	Action
	Sample Diagram	 admin	3 days ago	Remove

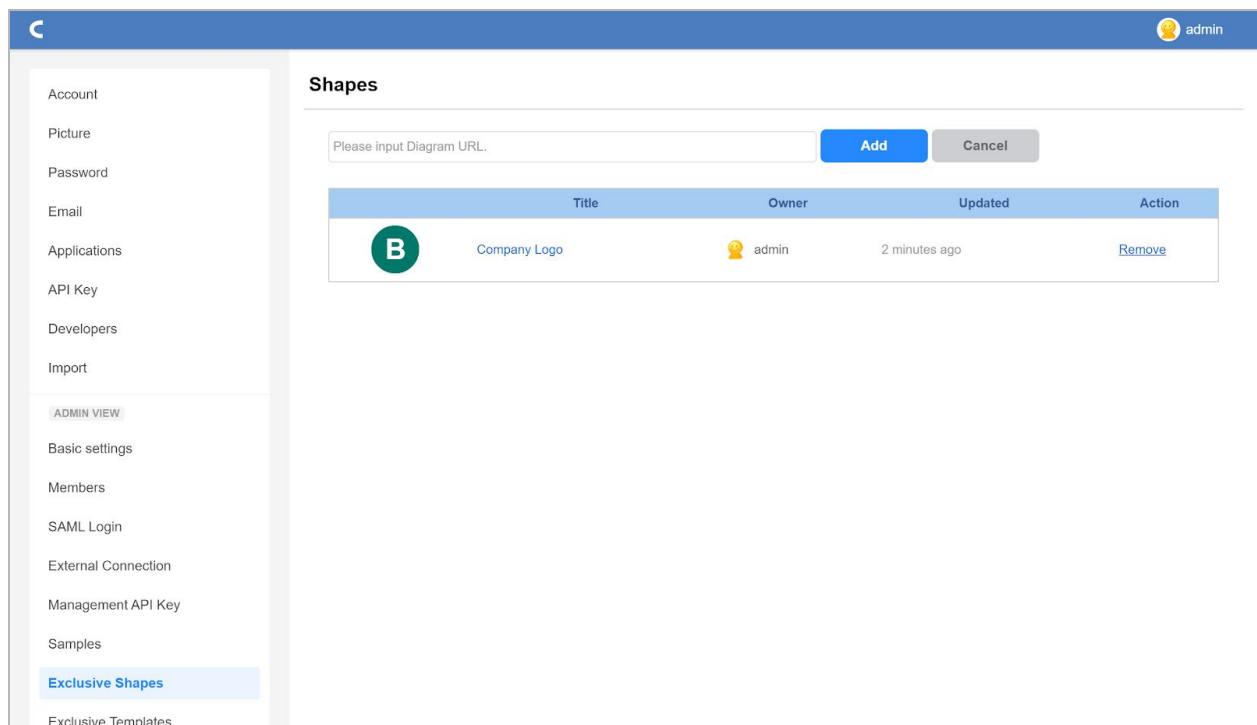
To delete the samples, press the "Remove" link. The original diagrams will not be deleted. Please note that deleting the original diagrams will delete it from the samples.

Managing exclusive shape

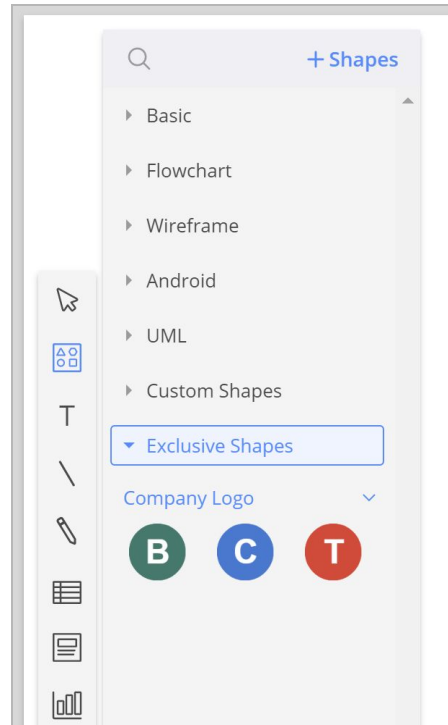
Manage the exclusive stencils that are available for all users using this software. To create an original template diagram set its type as "Shape" then click the "Publish Shape" button.



Add the diagram's URL on the "Exclusive Shapes" page.



Users can use added exclusive shapes from the Shape panel in the Editor.



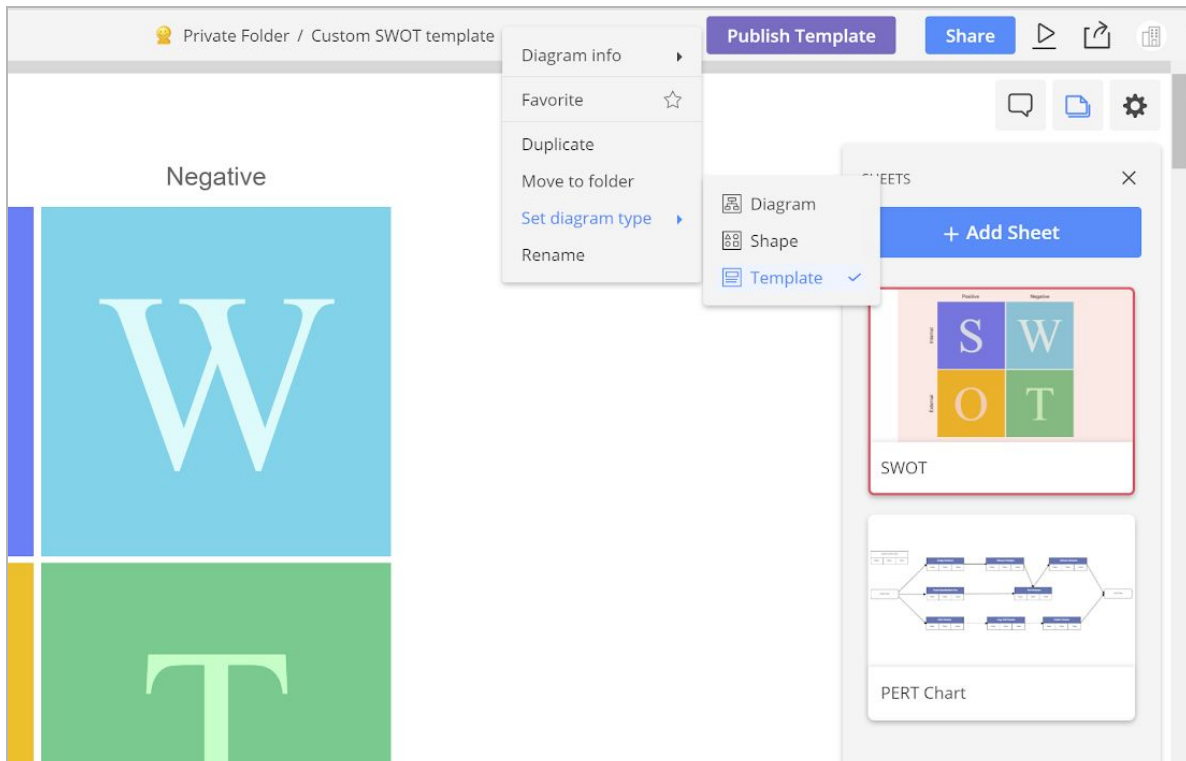
Changes to the shape will be automatically applied to the registered stencils. To delete the stencil, press the "Remove" link. The original diagram will not be deleted.

Please note that deleting the original diagram will delete it from the list of exclusive shapes.

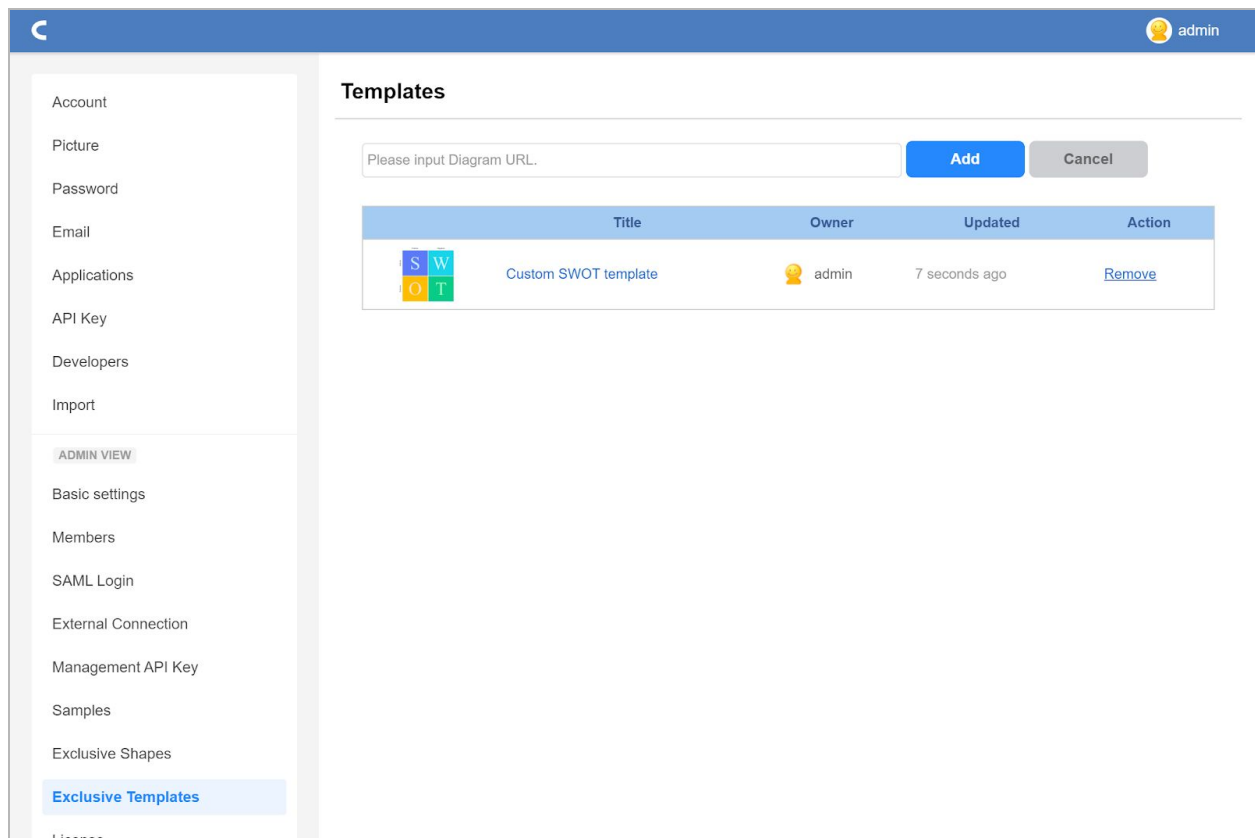
The exclusive shapes will be listed as they were added and the order cannot be changed. To change the order, please delete them all and add them again.

Manage exclusive templates

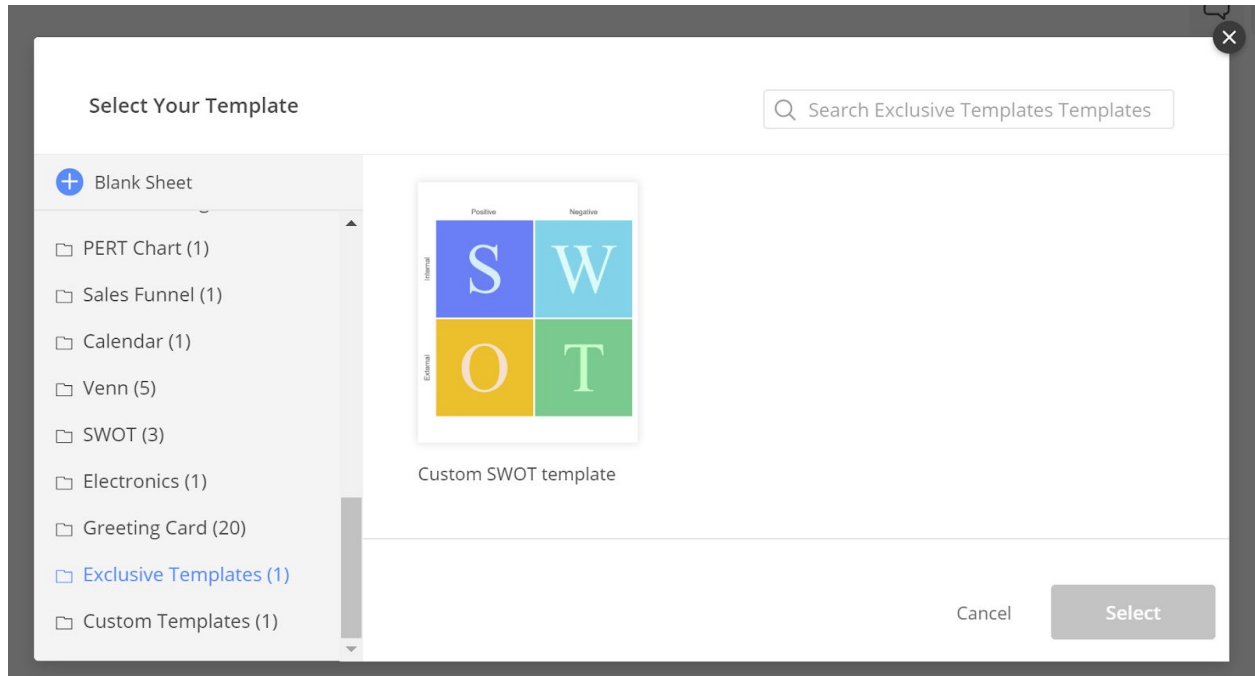
Manage the exclusive templates that are available for all users using this software. To create an original template diagram set its type as "Template" then click the "Publish Template" button.



Add diagram's URL on the "Exclusive Templates" page.



Changes to the templates will be automatically applied to the registered templates.



To delete the exclusive template, press the "Remove" link. The original diagram will not be deleted.

Please note that deleting the original diagram will delete it from the list of exclusive templates.

The templates will be listed as they were added and the order cannot be changed. To change the order, please delete them all and add them again.

All folders in the organization

Select "Folders" in the left menu of the Organization settings to see and change settings of each folder, manage folder members and diagrams in the folder.

C

Cacoo

Account

Picture

Password

Email

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API Key

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License

Diagrams

Folders

Folder Management

Home (admin)

1

5 Diagrams

Home (Guest)

1

1 Diagram

Presentations

1

1 Diagram

Share UI Design

2

0 Diagram

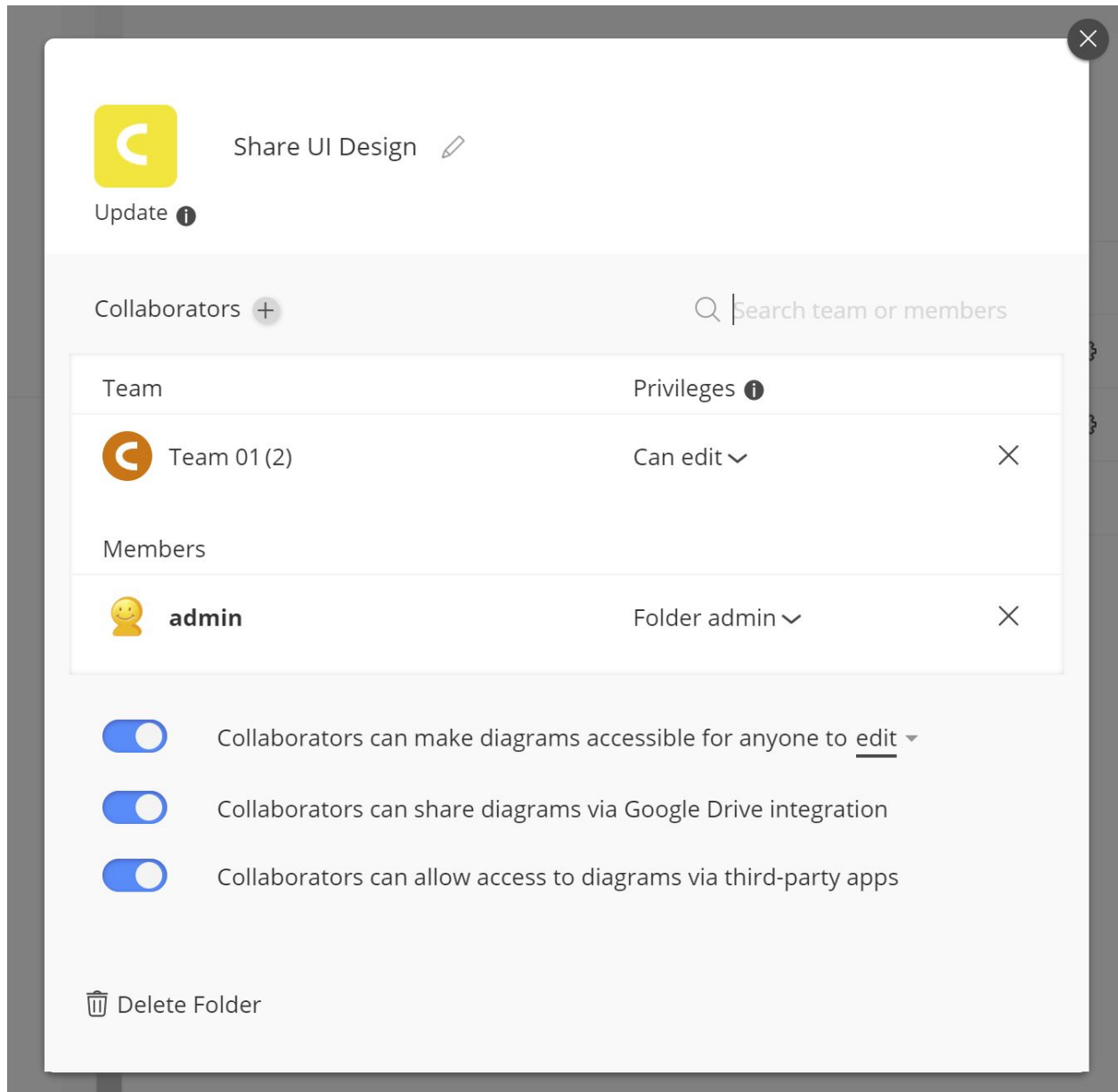
Home (user1)

1

1 Diagram

Folder settings

Click the gear icon in a row and the Folder settings panel will appear. Changing the icon, name, collaborators, security settings or deleting the folder can be done in this panel.



Managing diagrams in a folder

Clicking the diagrams number link in a row will show the list of diagrams in the folder.



Cacoo

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Diagrams

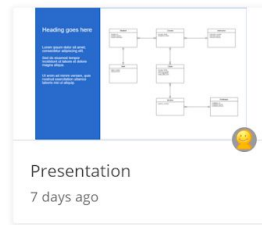
Shared



Diagram Management

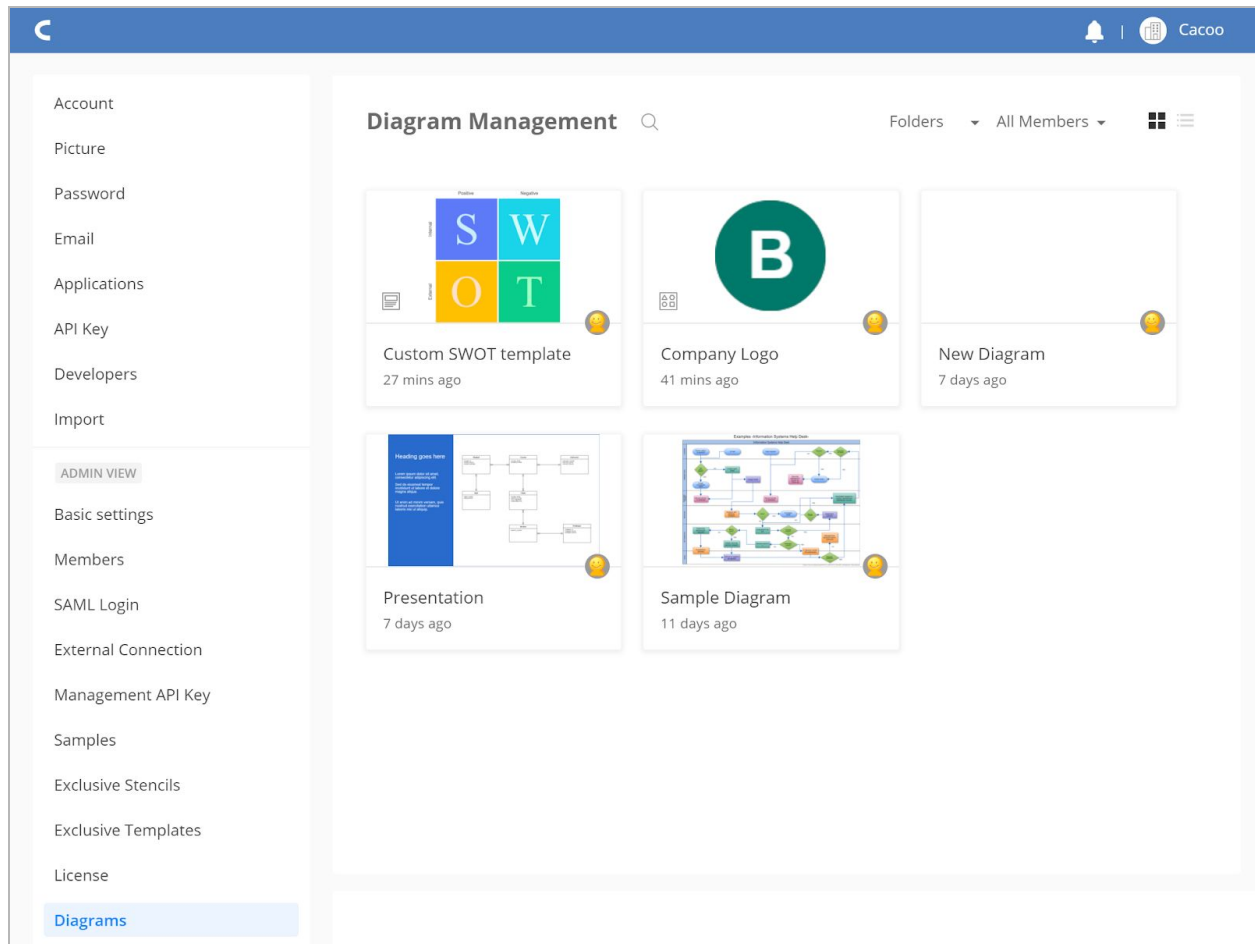


Presentations ▾ All Members



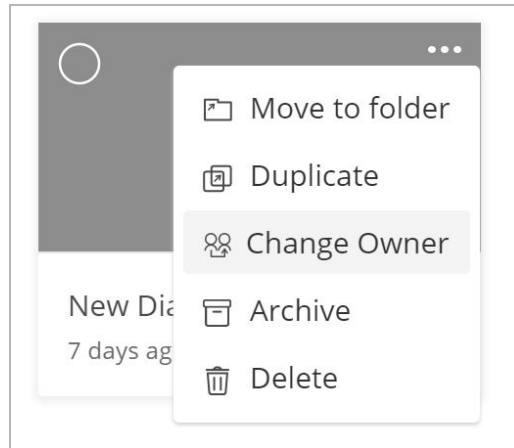
All diagrams in the organization

Go to Management > Diagrams to show all diagrams in the organization. All diagrams, regardless of the folders or diagram creator, will be shown. On this page, some diagram operations can be done.



Changing the diagram's owner

Click the "... " icon top-right the diagram thumbnail and select "Change Owner" from the menu.



Troubleshooting

How to check logs

If your Cacoo server is not running as expected, it may be possible to identify the cause by checking the logs. To check Cacoo's logs, please run the "docker-compose logs -t" command in the same directory with the Cacoo's docker-compose.yml file.

```
# docker-compose logs -t
```

If you need to write the log into a file, please send the docker-compose logs command result to a specific file, like below.

```
# docker-compose logs -t > cacoo-enterprise-200410.log
```

When you need any technical support, please contact us via <https://cacoo.com/contact> with the log file.

Getting error page after starting up Cacoo

In case your Cacoo cannot connect to the database, an error page will be shown after starting up Cacoo. Please check the network condition and PostgreSQL server configuration with referring to the next section "Cannot connect to the database".

HTTP Status 500 – Internal Server Error

Type Exception Report

Message [ESSR0046]Component(class cacoo.helper.CookieHelper) not found

Description The server encountered an unexpected condition that prevented it from fulfilling the request.

Exception

```
org.seasar.framework.container.ComponentNotFoundException: [ESSR0046]Component(class cacoo.helper.CookieHelper) not found
    org.seasar.framework.container.impl.S2ContainerBehavior$DefaultProvider.acquireFromGetComponentDef(S2ContainerBehavior.java:165)
    org.seasar.framework.container.impl.S2ContainerBehavior$DefaultProvider.acquireFromGetComponent(S2ContainerBehavior.java:158)
    org.seasar.framework.container.impl.S2ContainerBehavior.acquireFromGetComponent(S2ContainerBehavior.java:62)
    org.seasar.framework.container.impl.S2ContainerImpl.getComponent(S2ContainerImpl.java:124)
    org.seasar.framework.container.SingletonS2Container.getComponent(SingletonS2Container.java:43)
    cacoo.util.LocaleUtils.createLocaleContext(LocaleUtils.java:103)
    cacoo.servlet.filter.CacooFilter.doFilter(CacooFilter.java:52)
    org.seasar.framework.container.hotdeploy.HotdeployFilter.doFilter(HotdeployFilter.java:71)
    org.seasar.framework.container.filter.S2ContainerFilter.doFilter(S2ContainerFilter.java:79)
    org.seasar.cubby.filter.EncodingFilter.doFilter(EncodingFilter.java:176)
```

Note The full stack trace of the root cause is available in the server logs.

Apache Tomcat/8.5.41

Cannot connect to the database

If you see some errors like below in the "cacoo-enterprise-app" log, please check the connection settings to PostgreSQL server.

```
ERROR 2018-01-15 07:12:40,386 [localhost-startStop-1]
##### DB connection error
com.zaxxer.hikari.pool.HikariPool$PoolInitializationException: Failed to
initialize pool: Connection to 192.168.0.190:5432 refused. Check that the
hostname and port are correct and that the postmaster is accepting TCP/IP
connections.
```

Please confirm the network of Docker is allowed in PostgreSQL's "postgresql.conf" and "pg_hba.conf" too.

Opened the editing page but cannot edit the diagram

If the result below shows something other than 0, it means stencils.sql has not executed. Please enter (refer [1. Create database](#)):

```
cacoo=# select count(*) from stencil_data;
```

No notification emails are sent

If you see errors like those below in the "cacoo-enterprise-app" log, please check the connection settings to SMTP server.

```
Caused by: javax.mail.MessagingException: 501 Syntax: HELO hostname

    at
com.sun.mail.smtp.SMTPTransport.issueCommand(SMTPTransport.java:1634)
~[mail-1.4.2.jar:1.4.2]
    at com.sun.mail.smtp.SMTPTransport.helo(SMTPTransport.java:1070)
~[mail-1.4.2.jar:1.4.2]
    at
com.sun.mail.smtp.SMTPTransport.protocolConnect(SMTPTransport.java:458)
~[mail-1.4.2.jar:1.4.2]
    at javax.mail.Service.connect(Service.java:291)
~[mail-1.4.2.jar:1.4.2]
    at
com.ozacc.mail.impl.SendMailProImpl.connect(SendMailProImpl.java:113)
~[ozacc-mail-1.2.3.jar:na]
```

Very slow response/many errors

When the memory allotment setting for tomcat is too small, bad responses and many errors tend to occur. If the response is very slow or you get many errors, please check the log of "cacoo-enterprise-app" to see whether it's showing the error caused by insufficient memory size.


```
...  
java.lang.OutOfMemoryError: PermGen space  
...
```

If you see "OutOfMemoryError" in the log, please increase the "JAVA_OPTS" value to in the "docker-compose.yml" increase allocated memory on Cacoo's Java.
e.g.

```
...  
  environment:  
    JAVA_OPTS: "-Xms1024m -Xmx2048m"  
    CACOO_URL: "${CACOO_URL}"  
...
```

Each operation takes long time when many users use Cacoo at the same time

When many users use Cacoo at once, the number of connections to the database could reach the limit. In that case, operations of each user will be put in the queue and might take a while to be applied. If you are suspicious that the connection number to the database might be causing the delay, please increase the database connection number configuration value by the setenv.sh shell script.

Then open PostgreSQL's "postgresql.conf" on the database server and change the number of "max_connections" to the same value as the configuration or higher.

```
...  
max_connections = 100  
...
```

After changing these settings, restart PostgreSQL and Cacoo and check the operation. Depending on the PostgreSQL's settings, it might be better to change the "shared_buffers" settings, too. For details, please refer to the PostgreSQL manual and change the settings.

Other information

Backup

All Cacoo data is stored in the PostgreSQL database. Please backup Cacoo data regularly by using PostgreSQL's or system's functionality to backup Cacoo data.

Access Cacoo through Reverse proxy on Apache HTTP Server

If you want to access the Cacoo 443 (HTTPS) through a reverse proxy server that uses the `mod_proxy_http` module, the following setting for Cacoo and Apache HTTP Server is required.

1. Apache HTTP Server setting

Please stop Apache HTTP Server, follow the instruction below and start it again. In this example, we assume Tomcat is running on port 80, the same server (localhost) where `mod_proxy_http` module is installed.

(1) Add the following reverse proxy setting in Apache HTTP Server configuration.

```
...
RequestHeader set X-Forwarded-Proto "http"
ProxyRequests off
ProxyPreserveHost on
ProxyPass /editor-messaging/ ws://localhost:80/editor-messaging/
ProxyPassReverse /editor-messaging/ ws://localhost:80/editor-messaging/
ProxyPass /graphql-event/ ws://localhost:80/graphql-event/
ProxyPassReverse /graphql-event/ ws://localhost:80/graphql-event/
ProxyPass / http://localhost:8080/
ProxyPassReverse / http://localhost:8080/
...
```

If you use 443 port (HTTPS), set `X-Forwarded-Proto` "https".

Please change it to the actual URL that Cacoo is running in "ProxyPass" and "ProxyPassReverse".

2. Cacoo setting

Please stop Cacoo then edit the `.env` file to change "CACOO_PORT" as internal port number. If you use HTTPS with Cacoo, set "CACOO_SSL" to "true". After you edit the `.env` file, please start Cacoo again.

To add database disk

As more you use Cacoo, the disk used by its usage increases. When the empty portion of the disk becomes small, you can add a disk and move all or a part of the data to the new disk.

Note: About moving database to another disc

Before you move the database, please make sure to backup the data so that you'll be able to restore when something unexpected happens.

Also please note that this procedure might take a while. Therefore, we recommend you to plan ahead.

If possible, build a similar environment from the backup and estimate how long it will take. Also please make sure to stop tomcat and stop using Cacoo before you move the database.

1. Move all database to another disk

To move the whole Cacoo database to another disk, please connect to PostgreSQL and do the commands below.

First, create a table space on the new disk.

(In this example, we are going to mount an additional disk on "/disk1" and create a table space called "space1" under the mount point.)

```
# su - postgres
$ psql
postgres=# CREATE TABLESPACE space1 LOCATION '/disk1/pgdata';
```

Next, move the database to this new table space.

```
postgres=# ALTER DATABASE cacoo SET TABLESPACE space1;
```

Cacoo database will be moved to "/disk1" disk. Please restart tomcat after this operation.

2. Move parts of table to new disks

To move parts of the Cacoo database table to different disks, connect to PostgreSQL and do the commands below.

First, add disks and create table spaces on the new disks.

(In this example, we are going to mount additional disks on "/disk1" and "/disk2", and creating table spaces called "space1" and "space2" under the mount points.)

```
# su - postgres
$ psql
postgres=# CREATE TABLESPACE space1 LOCATION '/disk1/pgdata';
postgres=# CREATE TABLESPACE space2 LOCATION '/disk2/pgdata';
postgres=# CREATE TABLESPACE space3 LOCATION '/disk3/pgdata';
```

Next, move large tables to each table space. (Tables shown here are the ones that tend to become large with regular usage. Large tables depend on the usage and

diagrams you create often.)

```
postgres=# \c cacao
cacao=# ALTER TABLE shape_sheet_snapshot SET TABLESPACE space1;
cacao=# ALTER TABLE shape_history SET TABLESPACE space2;
```

With commands above, the shape_sheet_snapshot table is moved to "/disk1" disk, shape_history table is moved to "/disk2. Tables not specified will remain in the disk where the original database directory is stored. Please restart tomcat after this operation.

To find the larger sized tables, following SQL can be used to check each table size.

```
SELECT
    objname as table_name,
    pg_total_relation_size(objname::regclass) as table_size
FROM (
    SELECT tablename as objname
    FROM pg_tables
    WHERE schemaname = 'public'
) as objects
ORDER BY table_size DESC;
```

```
# su - postgres
$ psql
postgres=# \c cacao
cacao=# SELECT
cacao=# objname as table_name,
cacao=# pg_total_relation_size(objname::regclass) as table_size
cacao=# FROM (
cacao=# SELECT tablename as objname
cacao=# FROM pg_tables
cacao=# WHERE schemaname = 'public'
cacao=# ) as objects
cacao=# ORDER BY table_size DESC;
      table_name      | table_size
-----+-----
shape_sheet_snapshot | 131153920
shape_history         | 112500736
image_shape_store     | 73105408
shape_image           | 68853760
shape                 | 44335104
...
```

With general usage, following tables tend to become large.

- shape_image
- image_shape_store
- diagram_shape

Contact us

If you have any questions, please contact us from the inquiry form on <https://cacao.com/contact> .