

TL;DR Installation document

Project L3S1

Members : Hugo Demaret, Luc Salvon, Max Maiche, Nicolas Pluven

Tutors : Ioana Ileana, Benoit Deveaux



Université Paris Cité
UFR de Mathématiques et Informatique

Summary

1	Discord Invitation	3
2	Deployment	4
2.1	Generalities	4
2.1.1	Requirements	4
2.1.2	The process	4
2.2	Docker	6
2.3	Screen	7
2.4	Directly with python	8
2.5	Configuration	9
2.6	Running, stopping and restarting the bot	11
2.6.1	Running the bot	11
2.6.2	Stopping the bot	12
2.6.3	Restarting the bot	12
3	Annex	13

Preamble

This document consists of two main sections. The first section, namely section 1 explains how to invite the bot on your Discord server. This is the simplest way to use the bot, as you need not to bother with the installation and deployment of the bot on your own server. Although lacking some options, this is probably the best way for most use cases.

The second section describes how to install the bot on your Linux server. Although being more complicated (and more expensive, as one needs a server in order to do so), it allows you to configure everything and to manage everything, whilst also being able to add your own modifications to the bot.

1 Discord Invitation

To create and get your Discord bot token follow the tuto in the Annex.

2 Deployment

An automated script is provided alongside the bot on GitHub. The script handles the installation of the bot on the following Linux distributions :

- Debian (and debian-based : Ubuntu, ...) with **apt**
- Archlinux (and archlinux-based : Manjaro, ...) with **pacman**
- CentOS (and based : RockyLinux, AlmaLinux...) with **dnf**
- Fedora and RHEL with **yum**

Support to other distributions is not guaranteed with the script. It is however entirely possible to deploy the bot on such distributions. Although not tested, the bot should work on BSD-based OS (it was tested on MacOS during the development). This has not been tested thoroughly, and our knowledge in BSD-based OS is quite limited, so no official support will be granted. However, we would be happy if someone helped us in doing so !

During development, the bot was tested on Windows 10 and Windows 11. Although being quite sure that it works on Windows, we will not provide any help in doing so as we think that it is a terrible idea.

The install process comes in three different flavours. They are :

1. Docker – the preferred way
2. screen – a good, lightweight and very simple alternative
3. deploying it directly with python – really good for testing purposes and modding

We will first cover the generalities of the installation script in section 2.1. We will then cover the different ways to install the bot provided by the script in section 2.2, section 2.3 and section 2.4.

2.1 Generalities

The script can be found here : <https://github.com/HugoDemaret/TLDR-Bot> under the name `install.sh`. Please refer to section 2 in order to know what Linux distributions are supported.

2.1.1 Requirements

In order to function properly, `install.sh` needs bash to be installed. This should not be a problem, as the distribution supported come with bash pre-installed !

You will also need the rights to the command `sudo`. Please read a tutorial on how to achieve this first if you do not know it yet.

You may install the bot without `sudo` permissions, but we will not cover that. The bot requires a decent server to be run on, and we recommend updating your system regularly !

2.1.2 The process

To run `install.sh`, type :

```
$ sudo install.sh
```


Then, you will be prompted with the following :

```
Do you want to run the bot in a screen session,  
docker container, or just run the bot normally?  
1. Screen Session  
2. Docker Container  
3. Run the bot normally  
Enter your choice:
```

Depending on the choice you made, the script will install the bot differently. Every choice is detailed in its own subsection.

- See section 2.2 for Docker
- See section 2.3 for screen
- See section 2.4 for the python installation

2.2 Docker

Docker is a set of platform as a service (PaaS) products that use OS-level virtualization to deliver software in packages called containers. The service has both free and premium tiers. The software that hosts the containers is called Docker Engine. It was first started in 2013 and is developed by Docker, Inc.

Docker is a tool that is used to automate the deployment of applications in lightweight containers so that applications can work efficiently in different environments. Containers are isolated from one another and bundle their own software, libraries and configuration files; they can communicate with each other through well-defined channels. Because all of the containers share the services of a single operating system kernel, they use fewer resources than virtual machines.

Our bot supports being deployed using Docker, either using the `Dockerfile` or the `docker-compose.yml` one. However, we will not explain how to deploy it using directly Docker, but rather docker-compose. Docker Compose is a tool for defining and running multi-container Docker applications. It uses YAML files to configure the application's services and performs the creation and start-up process of all the containers with a single command. The docker-compose CLI utility allows users to run commands on multiple containers at once, for example, building images, scaling containers, running containers that were stopped, and more. Commands related to image manipulation, or user-interactive options, are not relevant in Docker Compose because they address one container. The `docker-compose.yml` file is used to define an application's services and includes various configuration options. For example, the `build` option defines configuration options such as the Dockerfile path, the `command` option allows one to override default Docker commands, and more.


```

--: sudo bash — Konsole
File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

~/demo took 3m
> sudo bash install.sh

-----
|_  _| |  _  | _ \  \
| | | |  ( ) | | | | |
| | | |__  _  | | | | _ <
|_| |____| ( ) |____|_| \ \
      | /
Too Long ; Didn't Read

Detecting Linux distribution...
Linux distribution detected.
Updating the package manager...
:: Synchronizing package databases...
core is up to date
extra is up to date
community is up to date
multilib is up to date
:: Starting full system upgrade...
there is nothing to do
Package manager updated.
Do you want to run the bot in a screen session, docker container, or just run the bot normally?
1. Screen Session
2. Docker Container
3. Run the bot normally
Enter your choice: 3

```

This will trigger the download of the necessary packages. These are :

- git
- python (3.10)
- pip

2.5 Configuration

Once the necessary packages have been downloaded and installed, you will be prompted to enter a discord token. To generate that token, please refer to section 1. A `.env` will automatically be generated with your token inside it.

```

- : sudo bash — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

there is nothing to do
Package manager updated.
Do you want to run the bot in a screen session, docker container, or just run the bot normally?
1. Screen Session
2. Docker Container
3. Run the bot normally
Enter your choice: 2
Installing packages...
warning: git-2.40.0-1 is up to date -- reinstalling
warning: docker-1:23.0.3-1 is up to date -- reinstalling
warning: docker-compose-2.17.2-1 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

Packages (3) docker-1:23.0.3-1 docker-compose-2.17.2-1 git-2.40.0-1

Total Installed Size: 192.08 MiB
Net Upgrade Size: 0.00 MiB

:: Proceed with installation? [Y/n]
(3/3) checking keys in keyring [#####] 100%
(3/3) checking package integrity [#####] 100%
(3/3) loading package files [#####] 100%
(3/3) checking for file conflicts [#####] 100%
(3/3) checking available disk space [#####] 100%
:: Processing package changes... [#####] 100%
(1/3) reinstalling git [#####] 100%
(2/3) reinstalling docker [#####] 100%
(3/3) reinstalling docker-compose [#####] 100%
:: Running post-transaction hooks...
(1/4) Creating system user accounts...
(2/4) Reloading system manager configuration...
(3/4) Reloading device manager configuration...
(4/4) Arming ConditionNeedsUpdate...
Packages installed.
Downloading the bot from GitHub...
Clonage dans 'TLDR-Bot'...
remote: Enumerating objects: 51, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 51 (delta 3), reused 0 (delta 0), pack-reused 42
Réception d'objets: 100% (51/51), 85.24 Kio | 3.28 Mio/s, fait.
Résolution des deltas: 100% (14/14), fait.
Please enter your discord bot token:
Enter your token:

```

You will then be asked for administrator users. They will have the ability to shut down the bot (or restart it if using Docker). Provide their id, separated by a comma and a space.

```

- : sudo bash — Konsole

File Edit View Bookmarks Plugins Settings Help

New Tab Split View Copy Paste Find

Do you want to run the bot in a screen session, docker container, or just run the bot normally?
1. Screen Session
2. Docker Container
3. Run the bot normally
Enter your choice: 2
Installing packages...
warning: git-2.40.0-1 is up to date -- reinstalling
warning: docker-1:23.0.3-1 is up to date -- reinstalling
warning: docker-compose-2.17.2-1 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

Packages (3) docker-1:23.0.3-1 docker-compose-2.17.2-1 git-2.40.0-1

Total Installed Size: 192.08 MiB
Net Upgrade Size: 0.00 MiB

:: Proceed with installation? [Y/n]
(3/3) checking keys in keyring [#####] 100%
(3/3) checking package integrity [#####] 100%
(3/3) loading package files [#####] 100%
(3/3) checking for file conflicts [#####] 100%
(3/3) checking available disk space [#####] 100%
:: Processing package changes... [#####] 100%
(1/3) reinstalling git [#####] 100%
(2/3) reinstalling docker [#####] 100%
(3/3) reinstalling docker-compose [#####] 100%
:: Running post-transaction hooks...
(1/4) Creating system user accounts...
(2/4) Reloading system manager configuration...
(3/4) Reloading device manager configuration...
(4/4) Arming ConditionNeedsUpdate...
Packages installed.
Downloading the bot from GitHub...
Clonage dans 'TLDR-Bot'...
remote: Enumerating objects: 51, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 51 (delta 3), reused 0 (delta 0), pack-reused 42
Réception d'objets: 100% (51/51), 85.24 Kio | 3.28 Mio/s, fait.
Résolution des deltas: 100% (14/14), fait.
Please enter your discord bot token:
Enter your token: MTA0KZa1_tudhayA98dz7a_zutd8a7dzda0
Please enter the admin accounts (separated by a comma):
Enter the admin accounts: 10004187775487481, 1574994516547887, 1205487894105498754, 487891105448795420

```

Finally, you will be asked whether you want to run the bot directly after the install or not. If you choose to run it directly, the bot will be started using the method of your choice.

```

demo : zsh — Konsole
File Edit View Bookmarks Plugins Settings Help
New Tab Split View Copy Paste Find

Total Installed Size: 192.00 MiB
Net Upgrade Size: 0.00 MiB

:: Proceed with installation? [Y/n]
(3/3) checking keys in keyring [#####] 100%
(3/3) checking package integrity [#####] 100%
(3/3) loading package files [#####] 100%
(3/3) checking for file conflicts [#####] 100%
(3/3) checking available disk space [#####] 100%
:: Processing package changes...
(1/3) reinstalling git [#####] 100%
(2/3) reinstalling docker [#####] 100%
(3/3) reinstalling docker-compose [#####] 100%
:: Running post-transaction hooks...
(1/4) Creating system user accounts...
(2/4) Reloading system manager configuration...
(3/4) Reloading device manager configuration...
(4/4) Arming ConditionNeedsUpdate...
Packages installed.
Downloading the bot from GitHub...
Clonage dans 'TLDR-Bot'...
remote: Enumerating objects: 51, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 51 (delta 3), reused 0 (delta 0), pack-reused 42
Réception d'objets: 100% (51/51), 85.24 Kio | 3.28 Mio/s, fait.
Résolution des deltas: 100% (14/14), fait.
Please enter your discord bot token:
Enter your token: MTA0KZai_ludhayA98dz7a_zuid9a7dzda0
Please enter the admin accounts (separated by a comma):
Enter the admin accounts: 10004187775487481, 1574994516547887, 1205487894105498754, 487891105448795420
Do you want to run the bot directly after configuration?
1. Yes
2. No
Enter your choice: 2
Removing unnecessary files...
Unnecessary files removed.
Installation finished.
The bot will not run directly after configuration.
Please run the bash script needed to run the bot.
To run the bot in a docker container, run the run-docker.sh bash script.

~/demo took 1m57s
>

```

If you have chosen not to run it directly, the script will stop.

2.6 Running, stopping and restarting the bot

2.6.1 Running the bot

If you want to run the bot, you have to type the following command, depending on your installation :

- With docker :

```
$ sudo bash run-docker.sh
```

or alternatively :

```
$ sudo docker-compose up -d
```

- With screen :

```
$ sudo bash run-screen.sh
```

or alternatively :

```
$ screen -dmS discordBot python3 -m discordBot.py
```

- With python :

```
$ sudo bash run-default.sh
```

or alternatively :

```
$ python3 -m discordBot.py
```

2.6.2 Stopping the bot

- With docker :

```
$ sudo docker-compose down
```

- With screen :

```
$ sudo screen -XS discordBot quit
```

or alternatively you can use the **bye** command if you are administrator.

- With python : press `ctrl` + `C` or alternatively you can use the **bye** command if you are administrator.

2.6.3 Restarting the bot

Restarting the bot is only possible using Docker. Other methods require you to stop it and run it again. You can restart the bot using the following command :

```
$ docker-compose restart tldr-bot
```

Alternatively, if you are administrator, you can use the **bye** command on any of your servers, and the bot will restart.

3 Annex

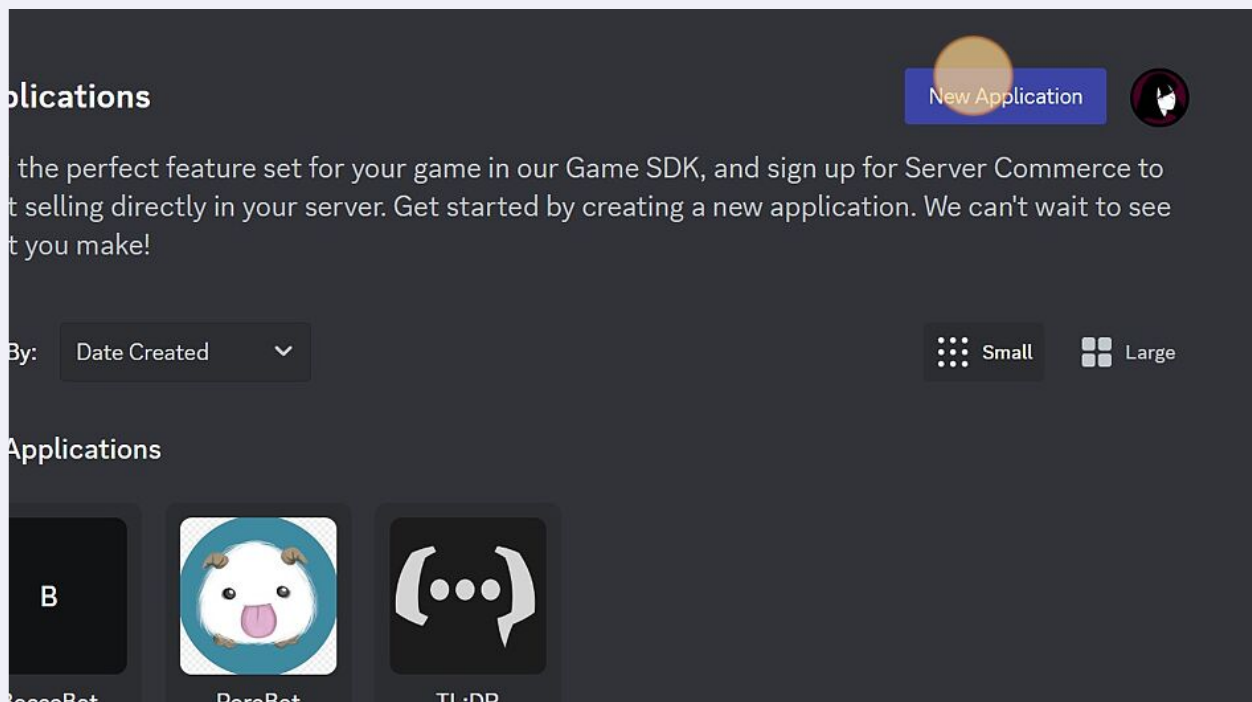
How To Create a Discord Bot

Scribe⁼⁼

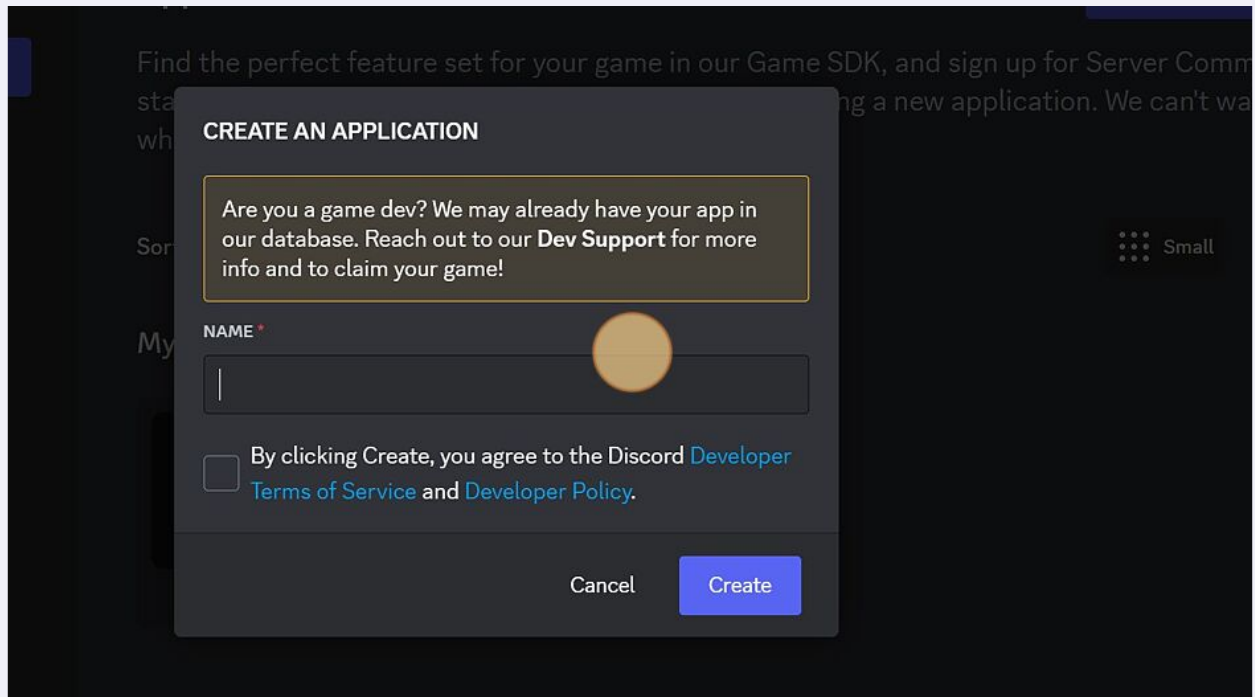
1 Navigate to discord.com/developers/applications

2 Login with your Discord account

3 Click "New Application"



4 Click this text field.



5 Type "TheNameOfYourApp"

6

Click the "By clicking Create, you agree to the Discord Developer Terms of Service and Developer Policy." field.

Teams
Documentation

wh
Sor
My

CREATE AN APPLICATION

Are you a game dev? We may already have your app in our database. Reach out to our **Dev Support** for more info and to claim your game!

NAME *

The

☐ By clicking Create, you agree to the Discord [Developer Terms of Service](#) and [Developer Policy](#).

Cancel Create

7

Click "Create"

wh
Sor
My

CREATE AN APPLICATION

Are you a game dev? We may already have your app in our database. Reach out to our **Dev Support** for more info and to claim your game!

NAME *

TheNameOfYourApp

☒ By clicking Create, you agree to the Discord [Developer Terms of Service](#) and [Developer Policy](#).

Cancel Create

8 Click "Bot"

SELECTED APP

TheNameOfYourApp

SETTINGS

- General Information
- OAuth2
- Bot
- Rich Presence
- App Testers

General Information

What should we call your creation? What amazing thing will it do across Discord? Tell us here!

By clicking Create, you agree to the Discord [Developer Terms of Service](#).

APP ICON

Size: 1024x1024

NAME

TheNameOfYourApp

DESCRIPTION (MAXIMUM 400 CHARACTERS)

Your description will appear in the About section of your bot.

TAGS (MAXIMUM 5)

9 Click "Reset Token"

Build-A-Bot

Bring your app to life by adding a bot user. This action is irreversible (because robots are too cool to destroy).

ICON

USERNAME

TheNameOfYourApp

TOKEN

For security purposes, tokens can only be viewed once, when created. If you forgot or lost access to your token, you can regenerate a new one.

Reset Token

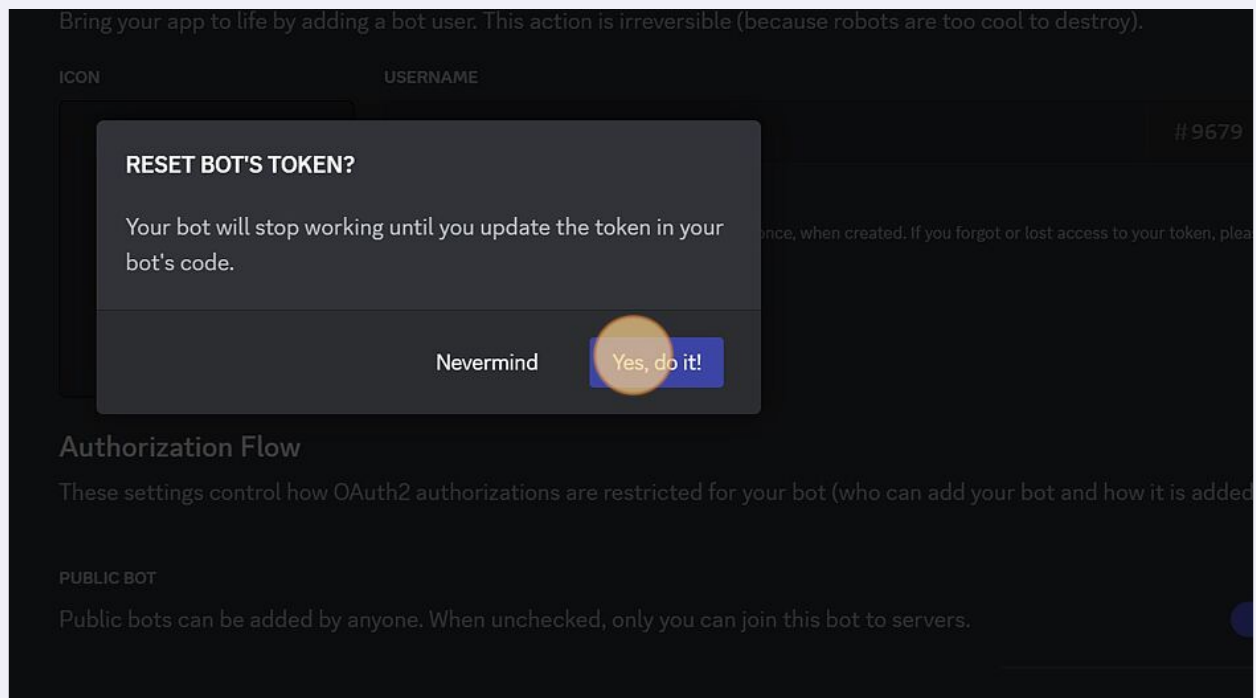
Authorization Flow

These settings control how OAuth2 authorizations are restricted for your bot (who can add your bot and how it interacts with servers).

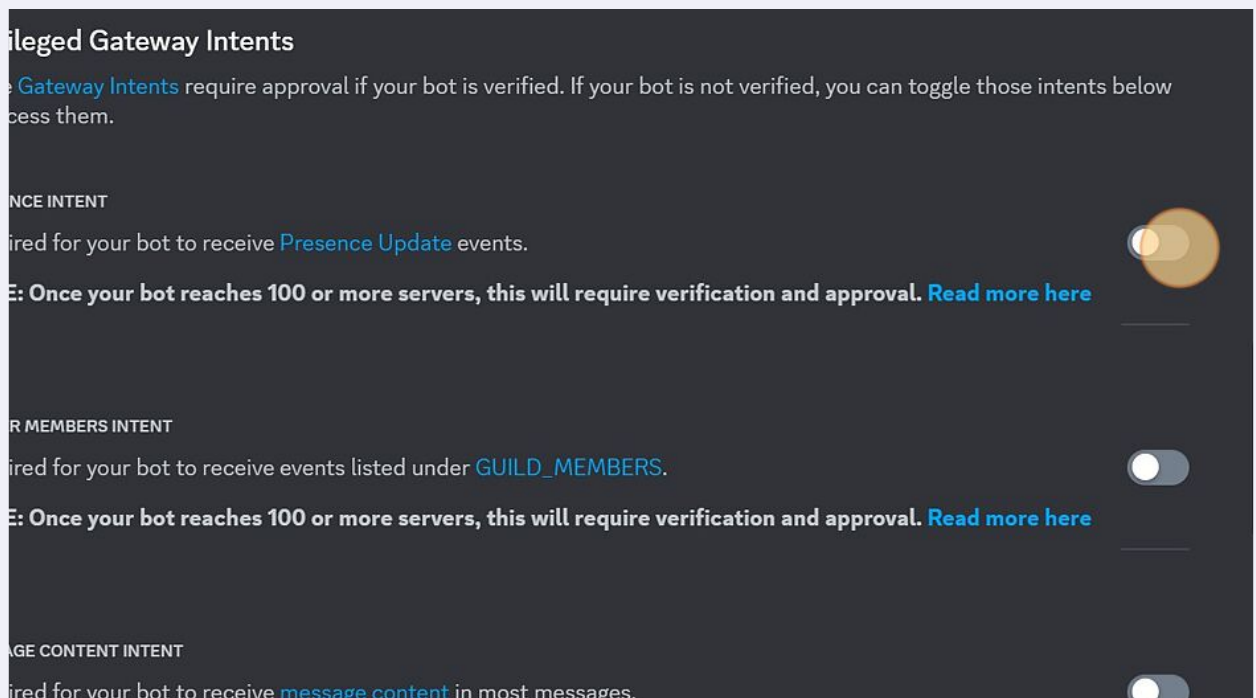
PUBLIC BOT

Public bots can be added by anyone. When unchecked, only you can join this bot to servers.

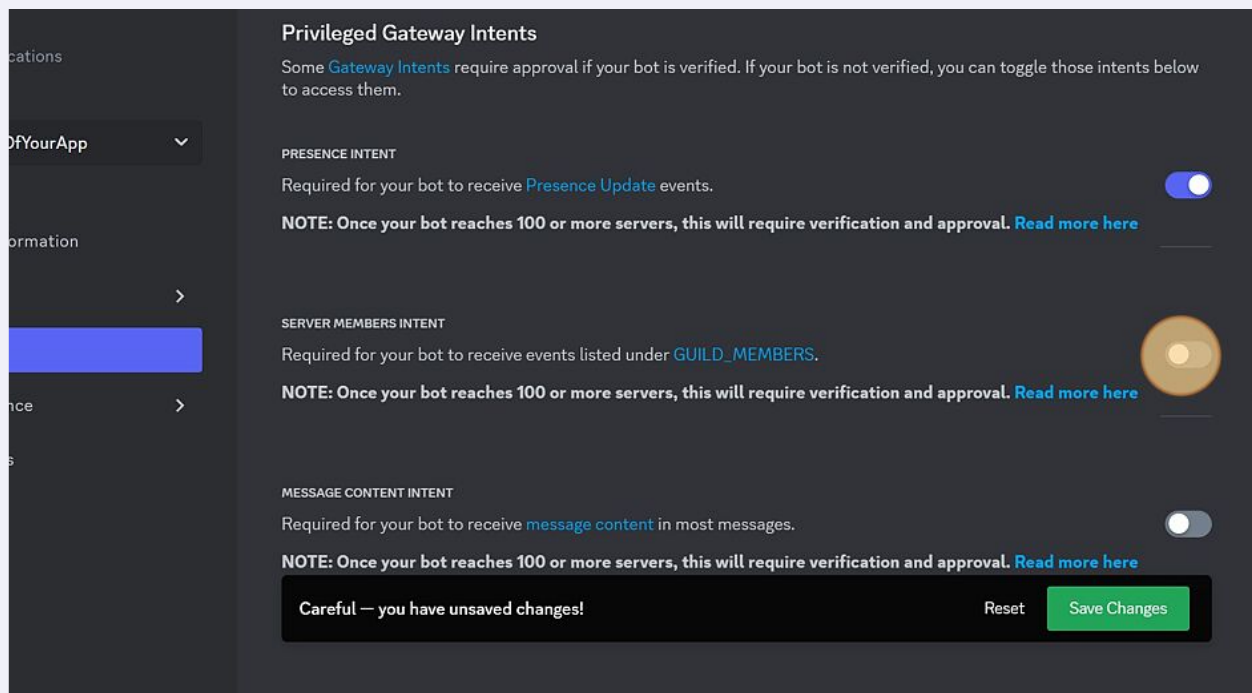
10 Click "Yes, do it!"



11 Click this checkbox.



12 Click this checkbox.



Privileged Gateway Intents

Some [Gateway Intents](#) require approval if your bot is verified. If your bot is not verified, you can toggle those intents below to access them.

PRESENCE INTENT
Required for your bot to receive [Presence Update](#) events. ☒

NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

SERVER MEMBERS INTENT
Required for your bot to receive events listed under [GUILD_MEMBERS](#). ☒

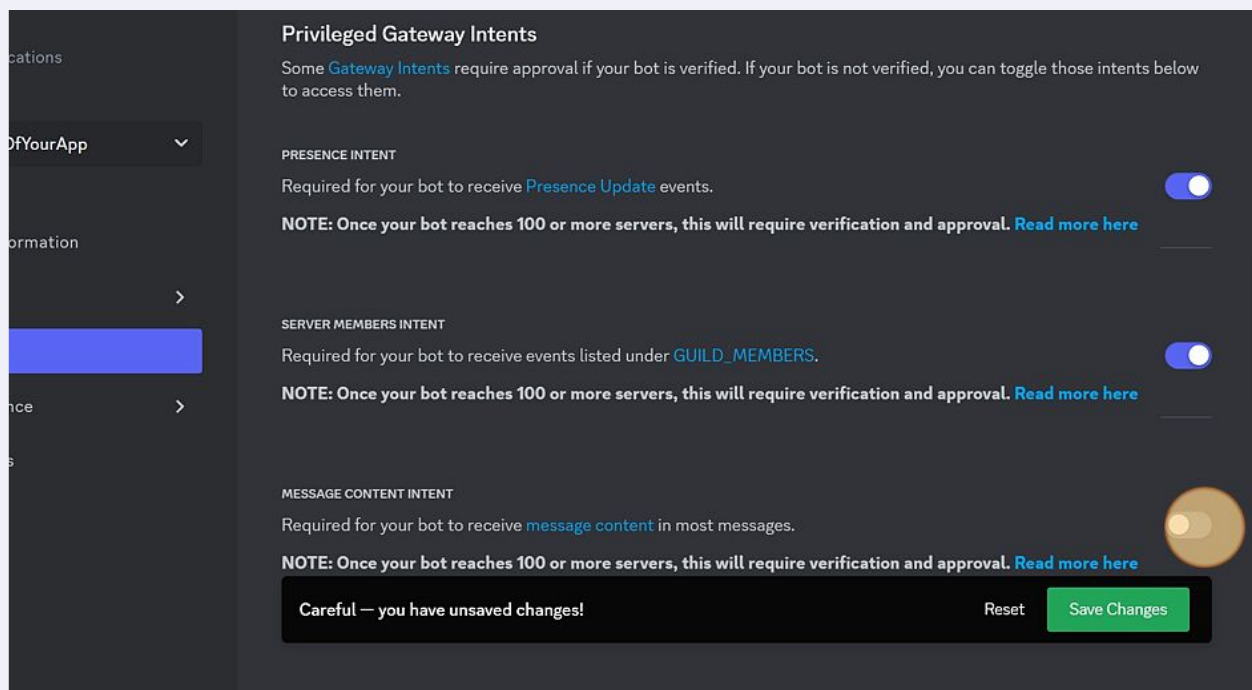
NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

MESSAGE CONTENT INTENT
Required for your bot to receive [message content](#) in most messages. ☐

NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

Careful — you have unsaved changes! [Reset](#) [Save Changes](#)

13 Click this checkbox.



Privileged Gateway Intents

Some [Gateway Intents](#) require approval if your bot is verified. If your bot is not verified, you can toggle those intents below to access them.

PRESENCE INTENT
Required for your bot to receive [Presence Update](#) events. ☒

NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

SERVER MEMBERS INTENT
Required for your bot to receive events listed under [GUILD_MEMBERS](#). ☒

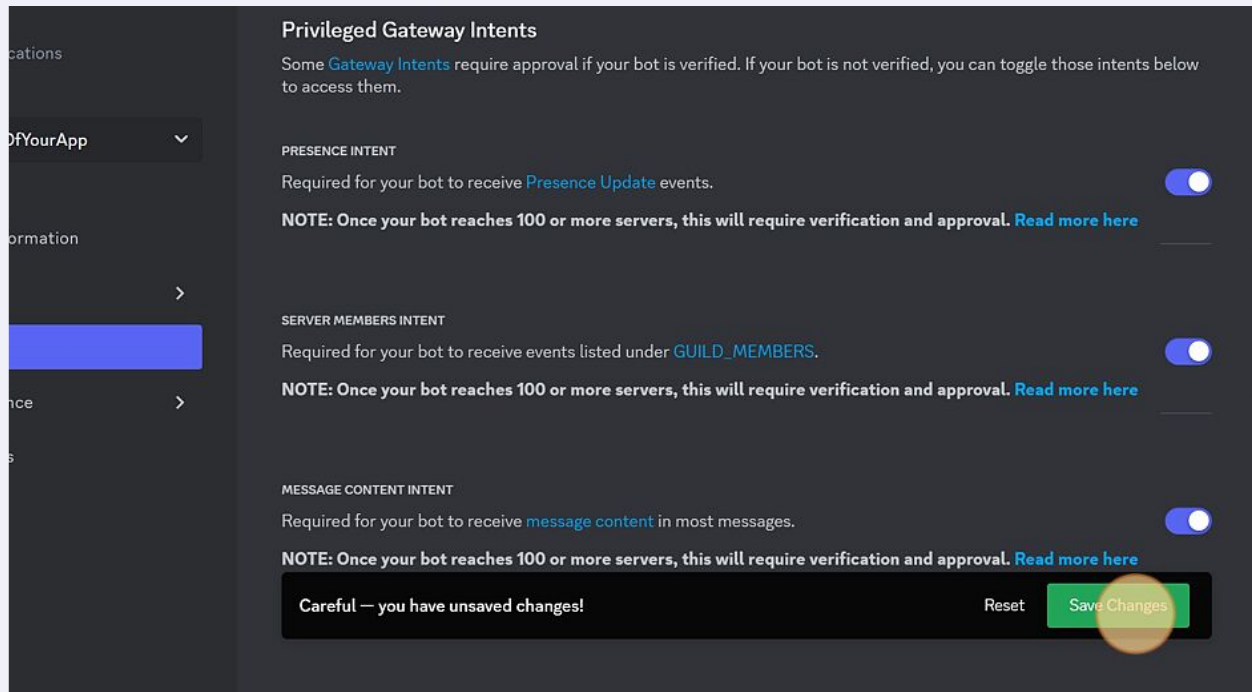
NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

MESSAGE CONTENT INTENT
Required for your bot to receive [message content](#) in most messages. ☐

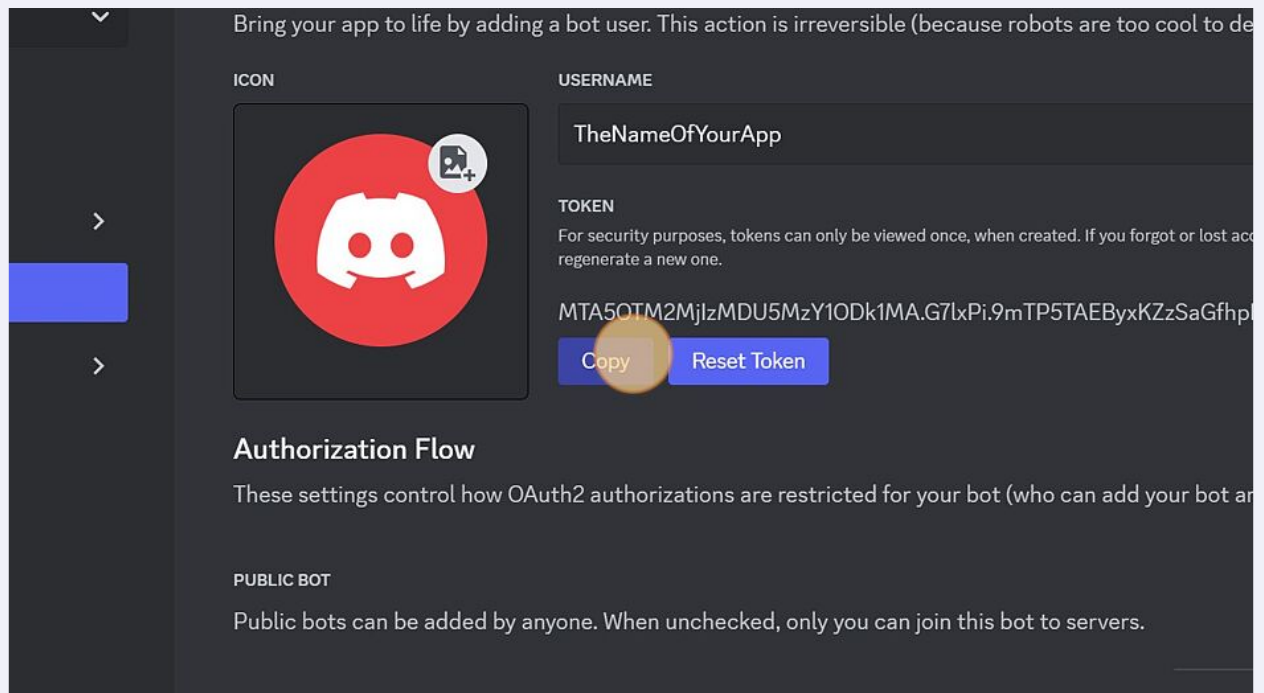
NOTE: Once your bot reaches 100 or more servers, this will require verification and approval. [Read more here](#)

Careful — you have unsaved changes! [Reset](#) [Save Changes](#)

14 Click "Save Changes"

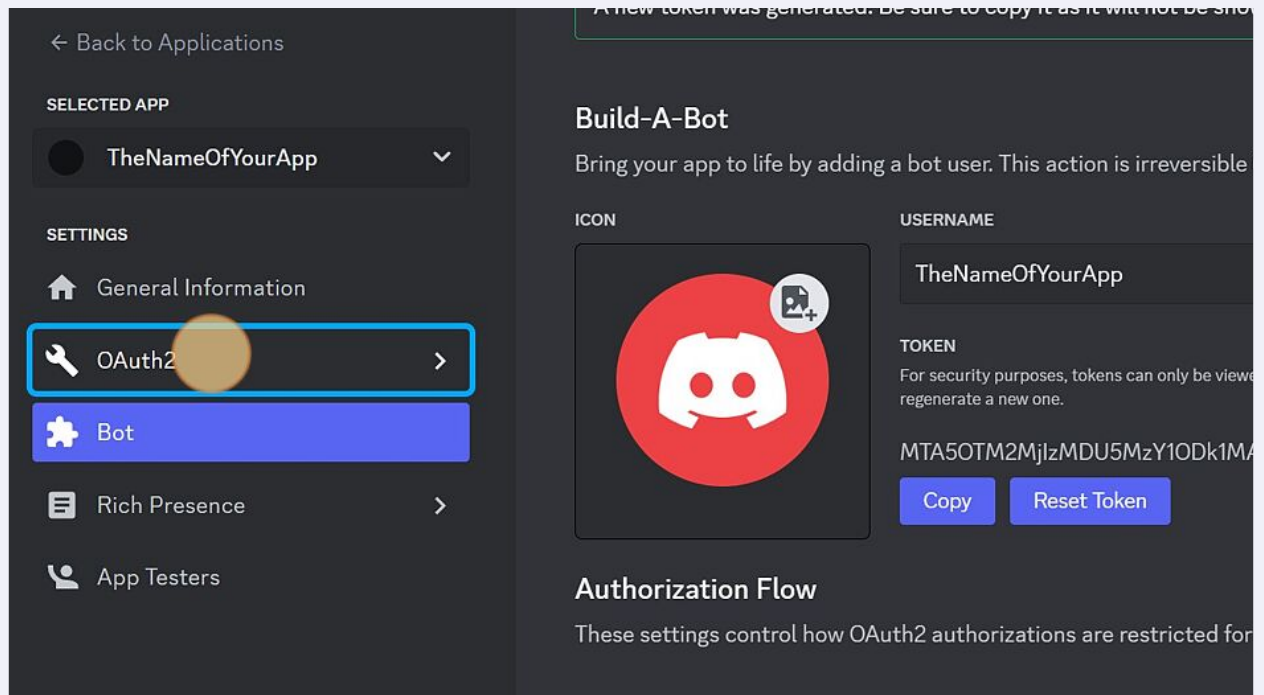


15 Click "Copy"

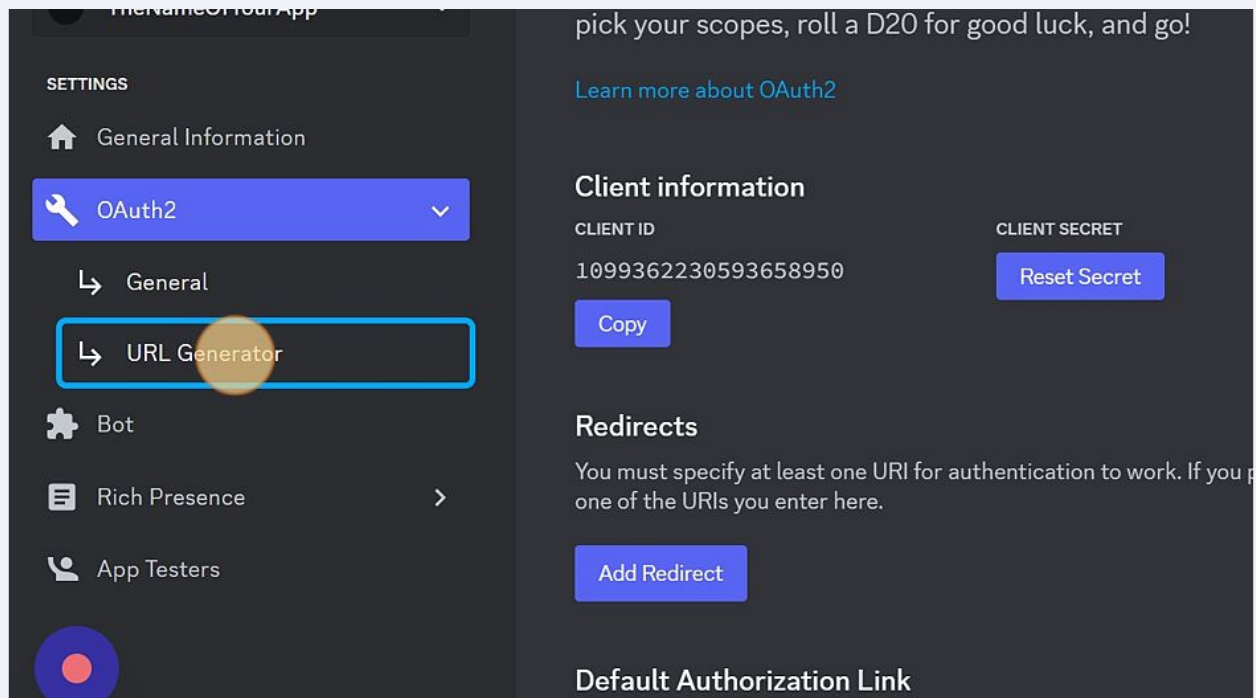


16 Here you have your Bot Token. Don't lose it or disclose it or you will have to reset it!

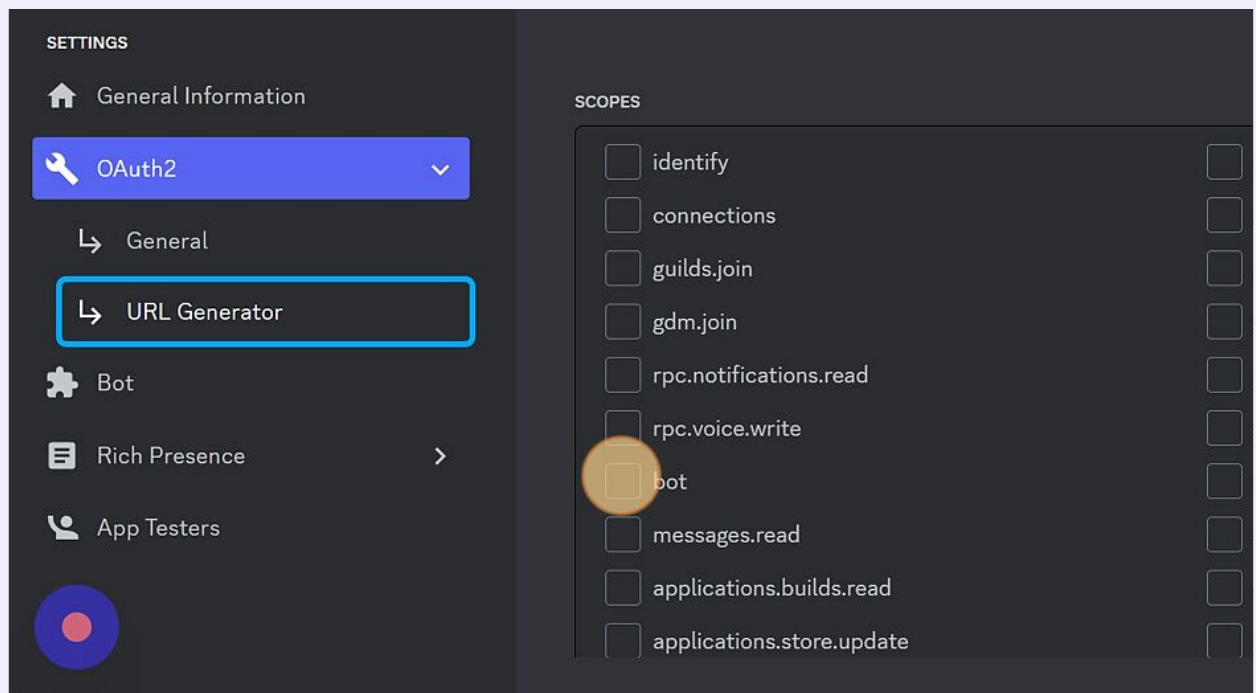
17 Click "OAuth2"



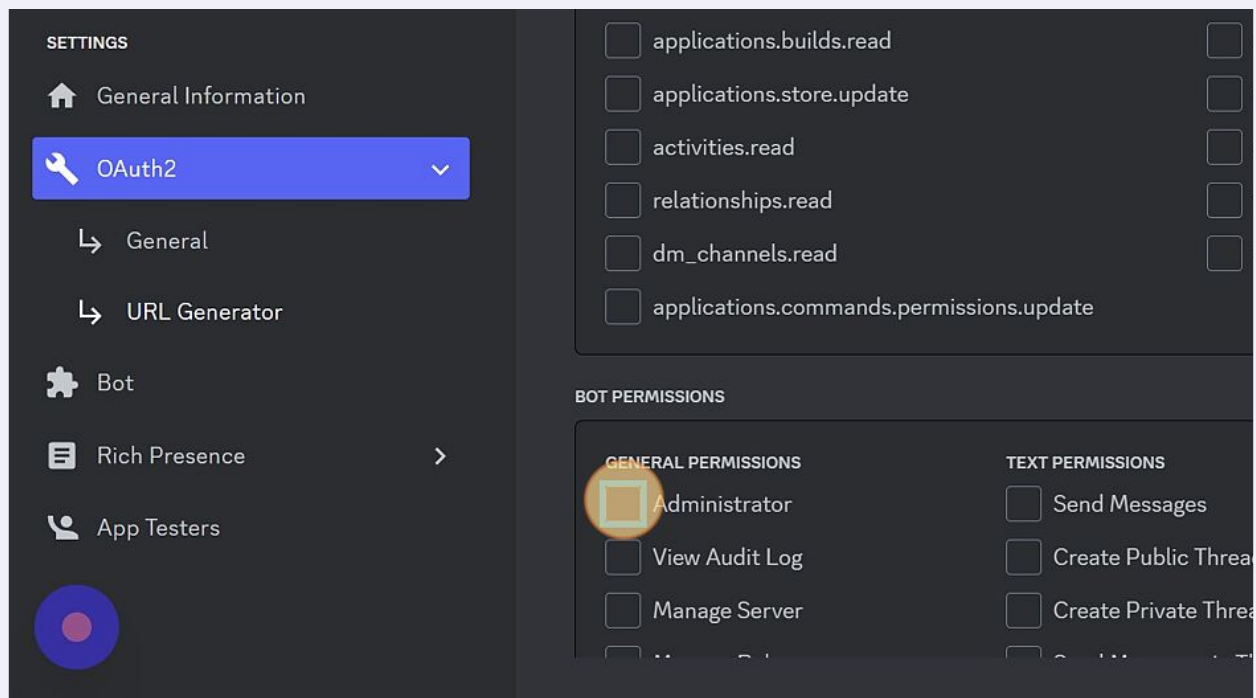
18 Click "URL Generator"



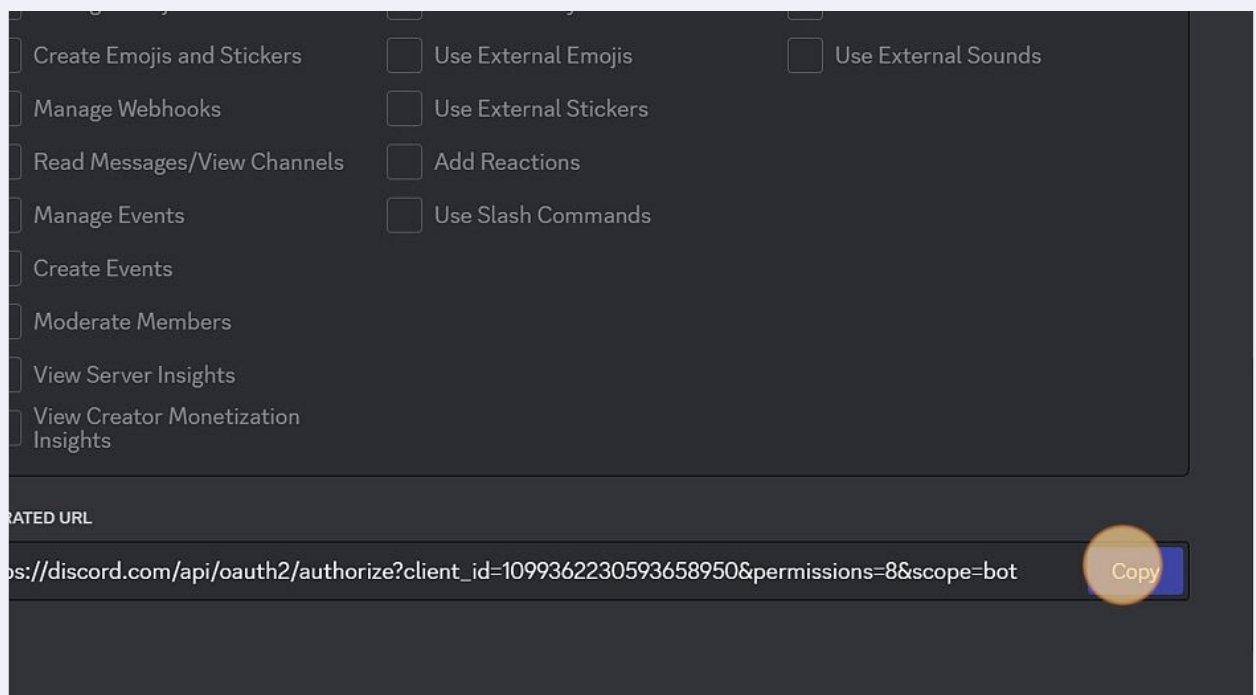
19 Click the "bot" field.



20 Click the "Administrator" field.



21 Click "Copy"



22

And here is the link to invite them to the server of your choice, but you must be authorised to do so.