

OAuth2-enabled email proxy application

O2Popper User's Guide

Windows Version

for Version 2.0.0 (Build: 2021-12-20)

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Introduction

This application was developed for the purpose of enabling continuous use of mail software and systems that do not support OAuth2.

There are also erroneous transmission prevention functions.

I hope you can use it.

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Environment

I have confirmed the operation on Windows10.
It may not work on Windows 7 or earlier.

I have confirmed that it works in combination with the following mail clients.

- Outlook 2016
- Thunderbird
- Sylpheed
- EdMax



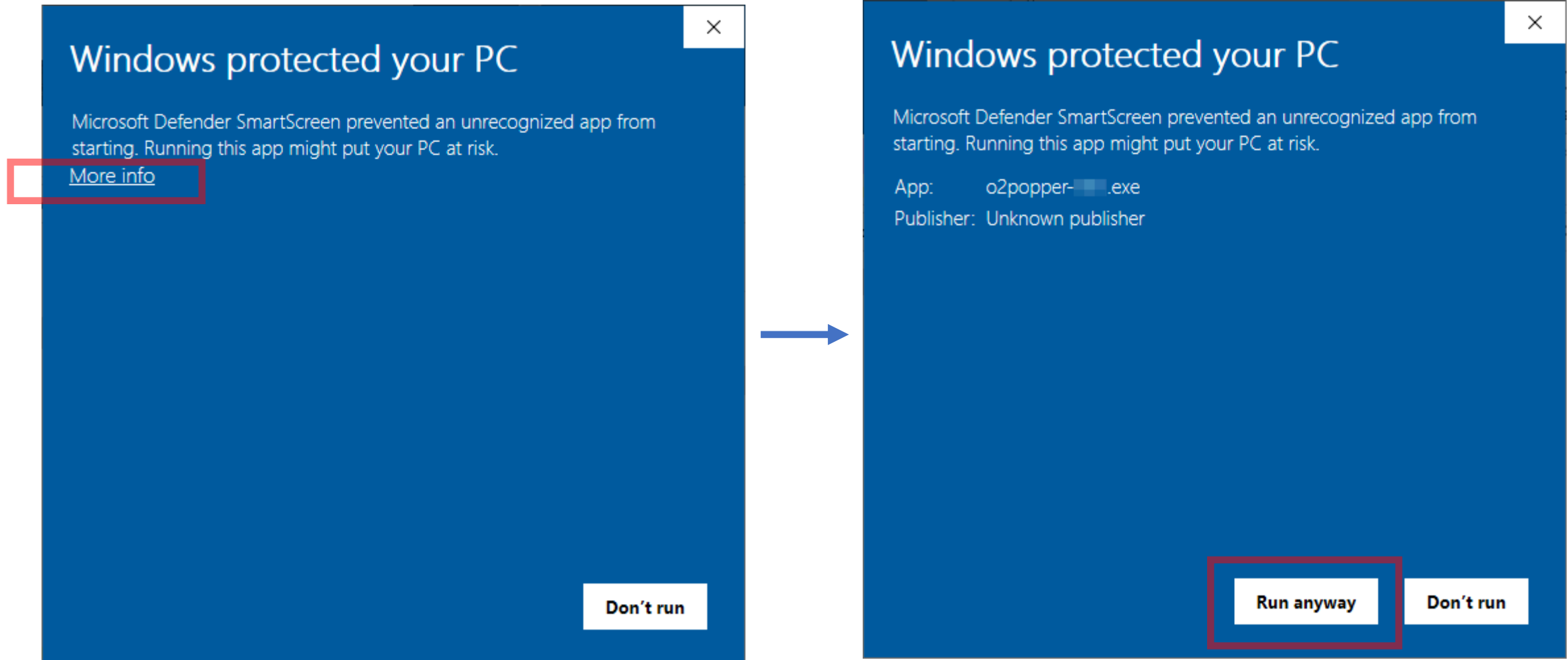
Installation

You can download the installer from the following URL.

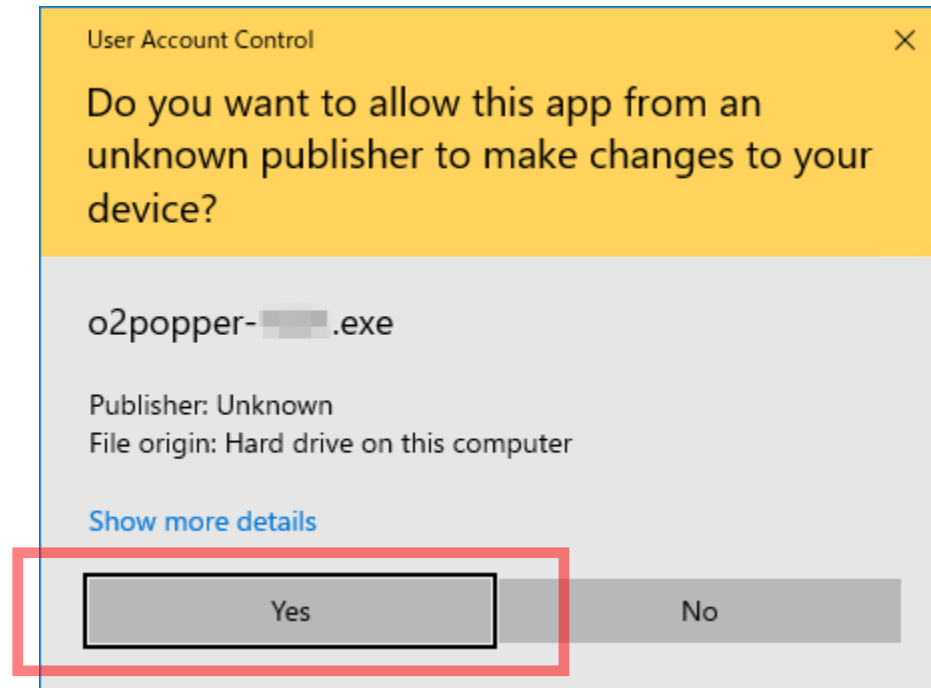
<https://www.nips.ac.jp/~murata/o2popper/downloads/>

Note: If the file is deleted due to false detection by security software, please restore it.

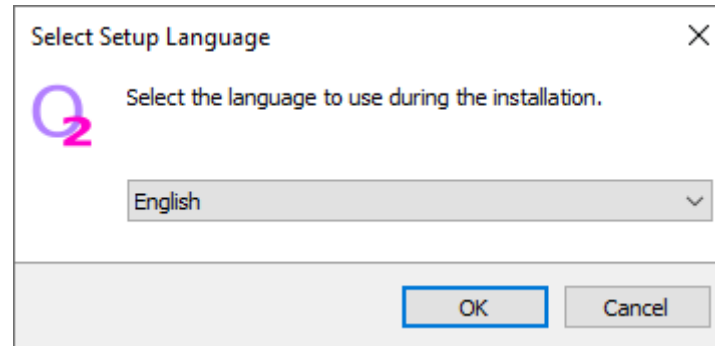
Then double-click the downloaded installer to run it. At this time, if a warning screen like the one on the lower left is displayed, click “More info” and then click the “Run anyway” button.

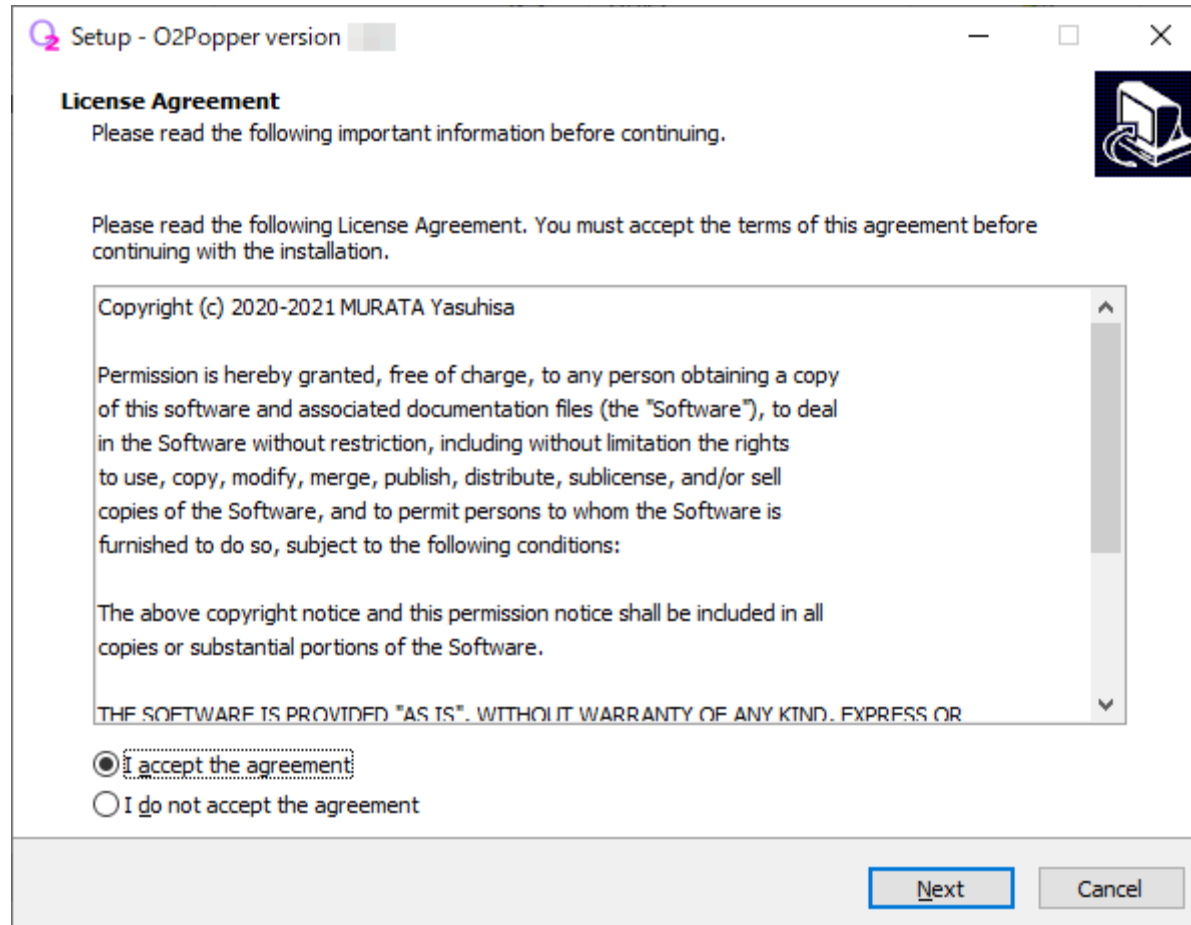


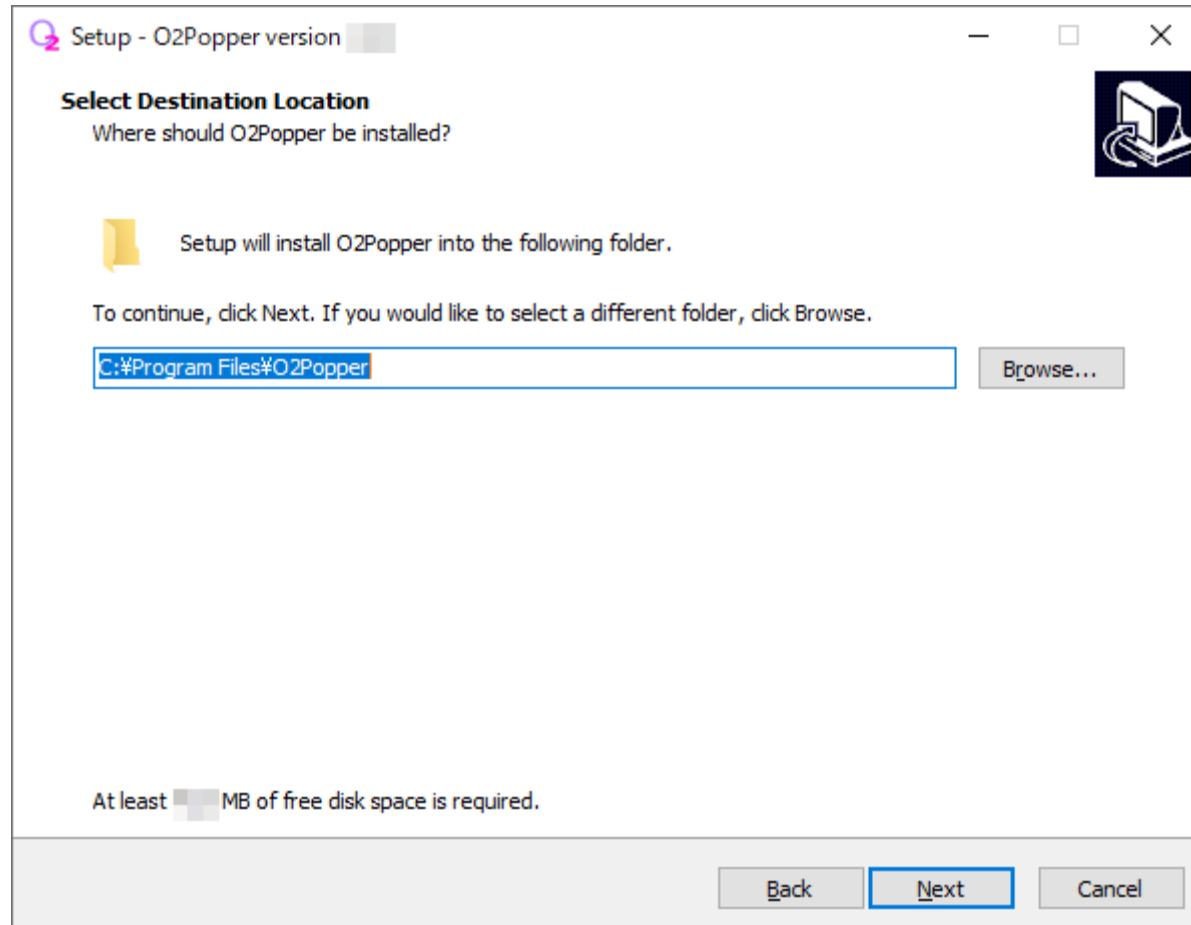
If the following warning screen is displayed, click the “Yes” button.

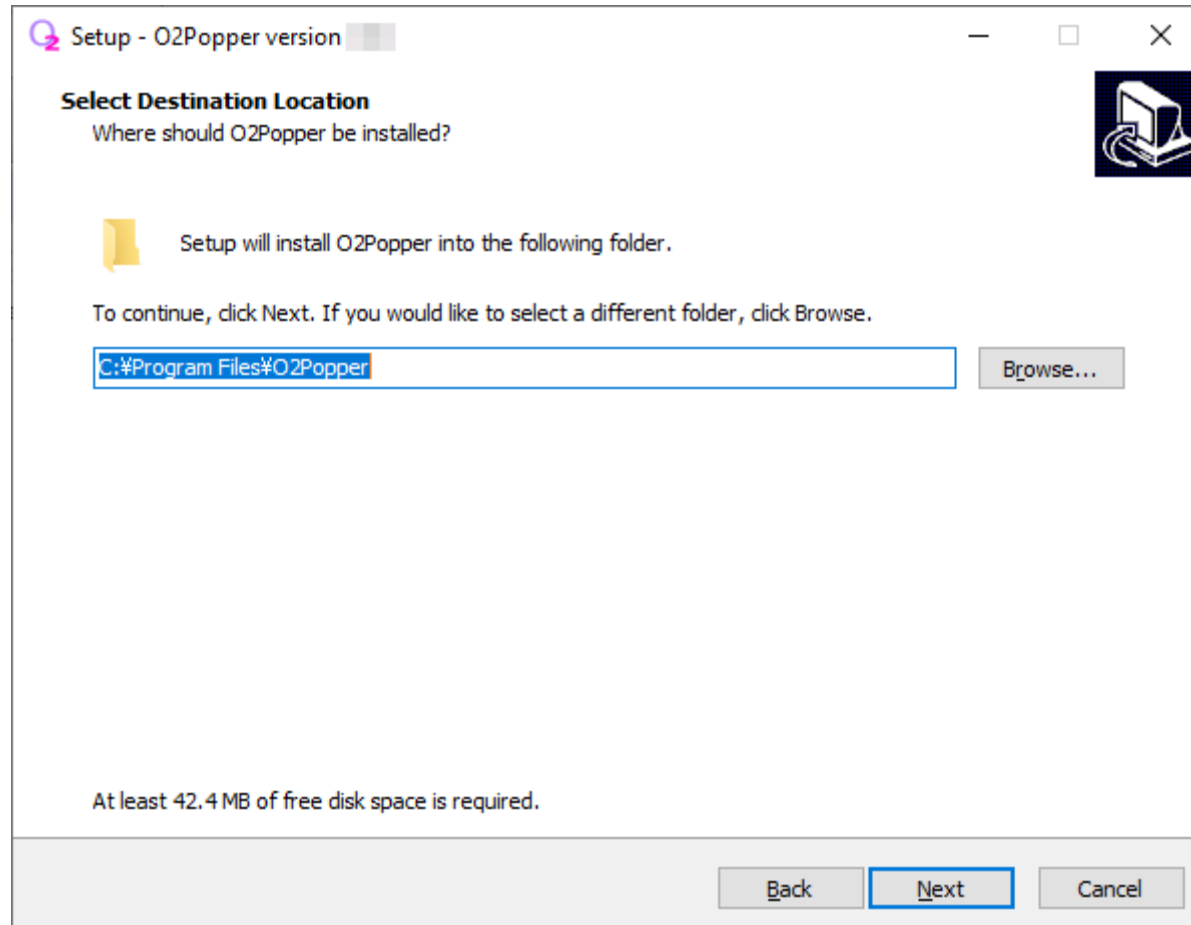


When the installer starts normally, the following screen will be displayed. Follow the instructions on the screen.

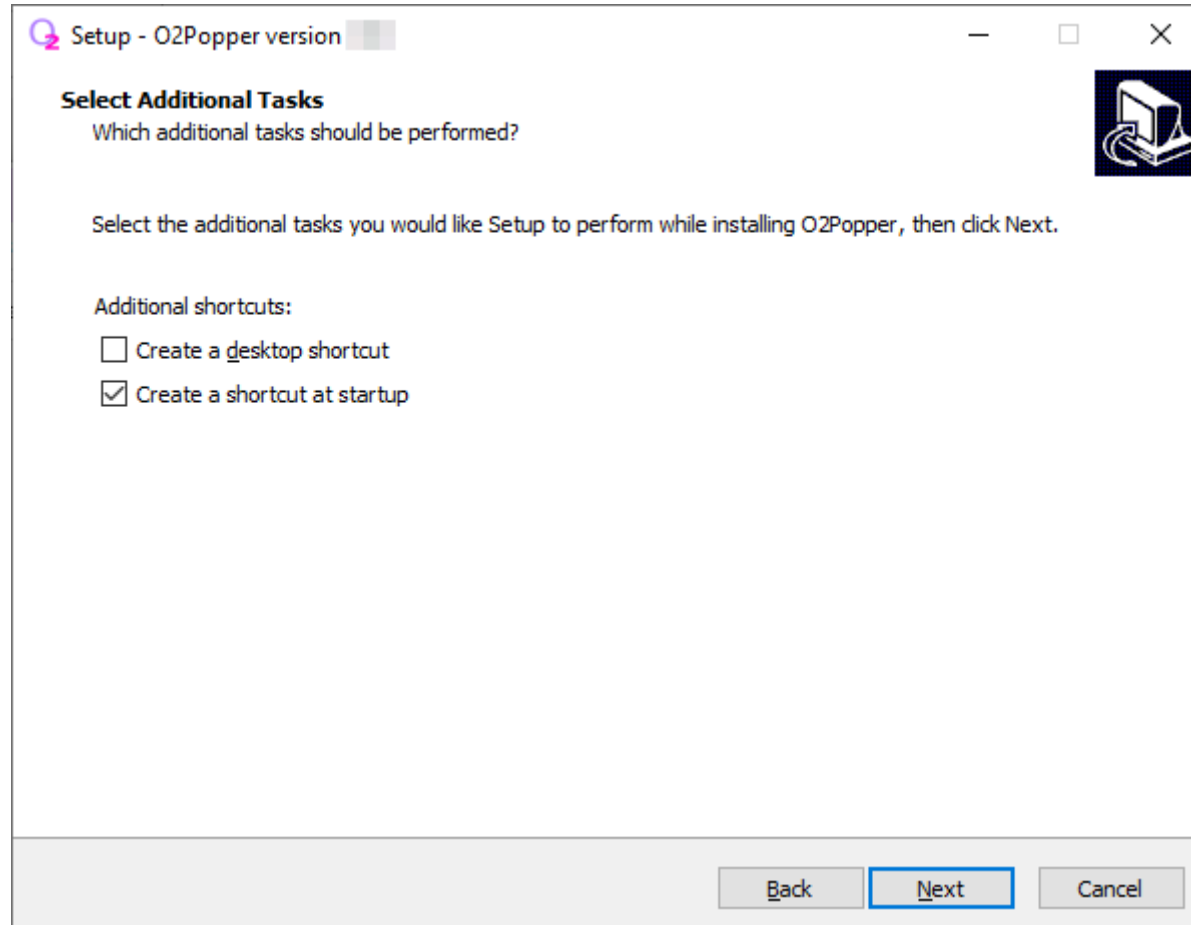


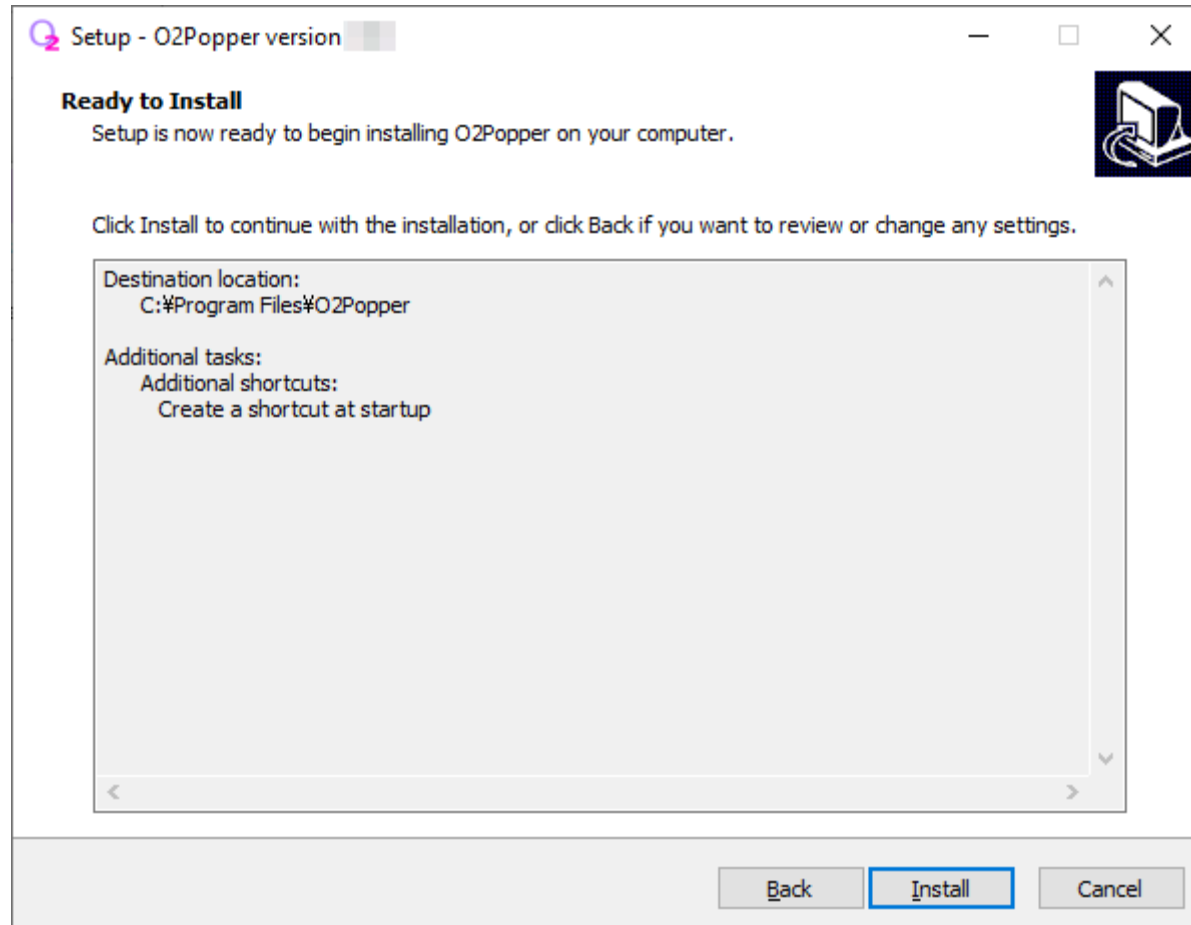


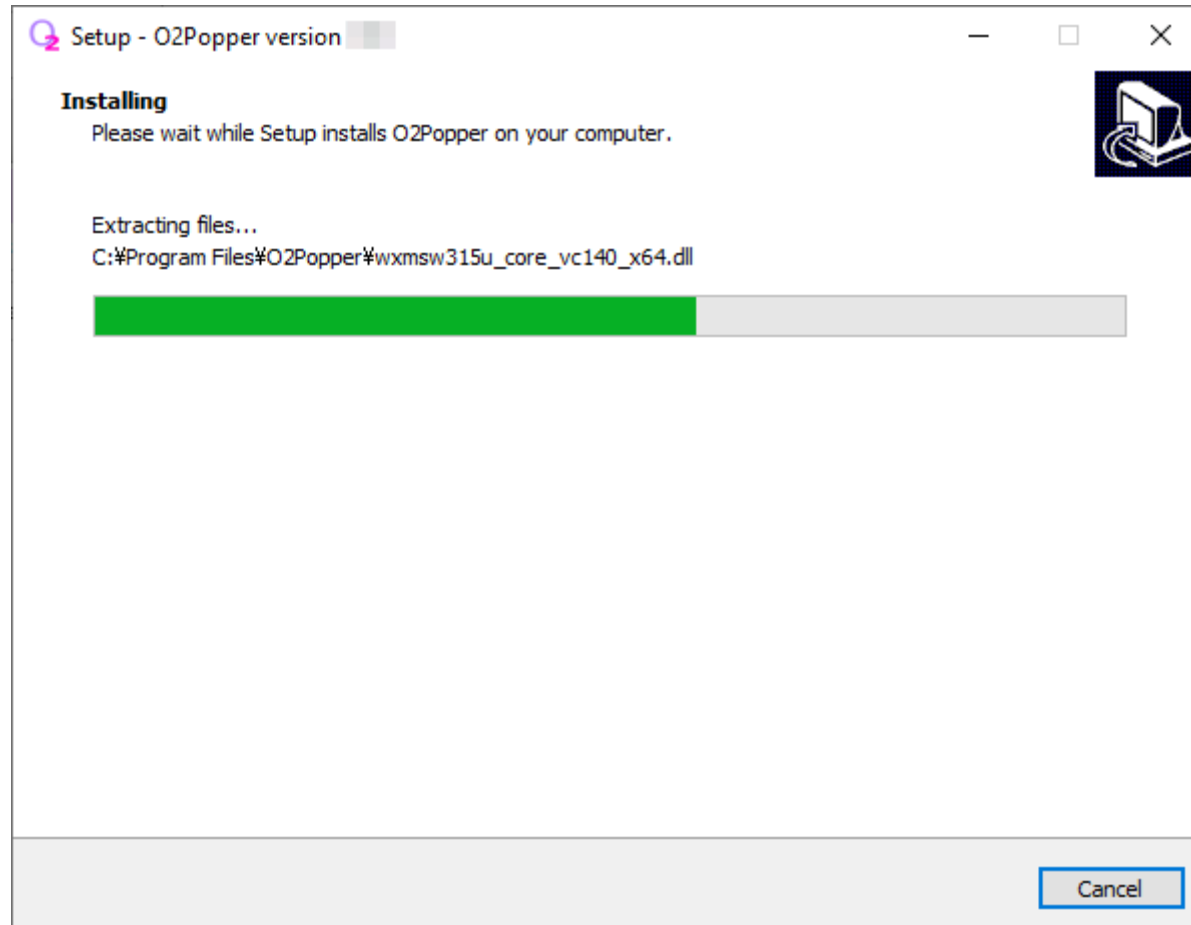


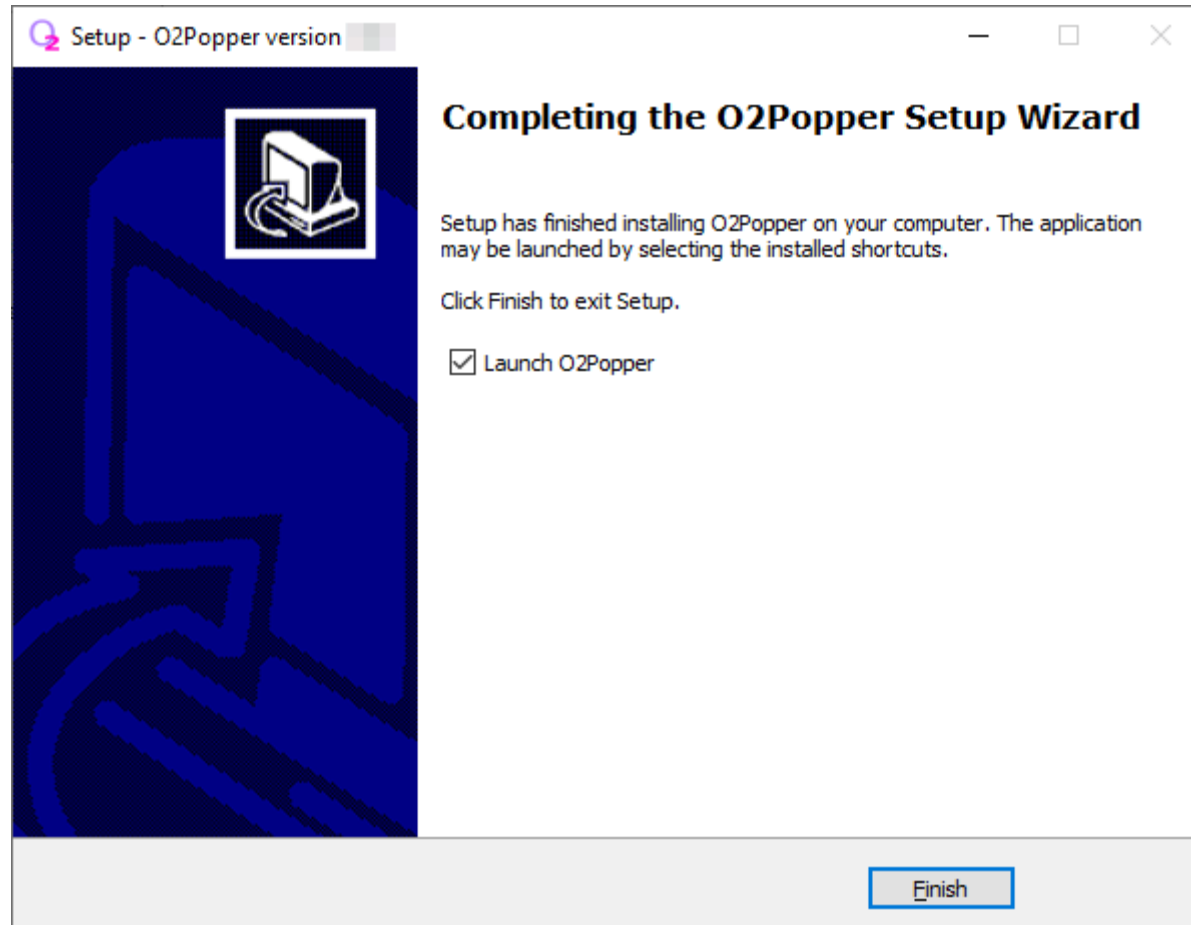


If you check “Create a shortcut at startup”, this application will be started automatically when you sign in to Windows. If you do not want to start automatically, uncheck it.

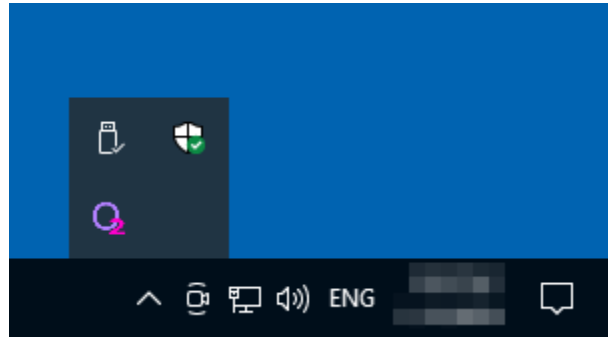




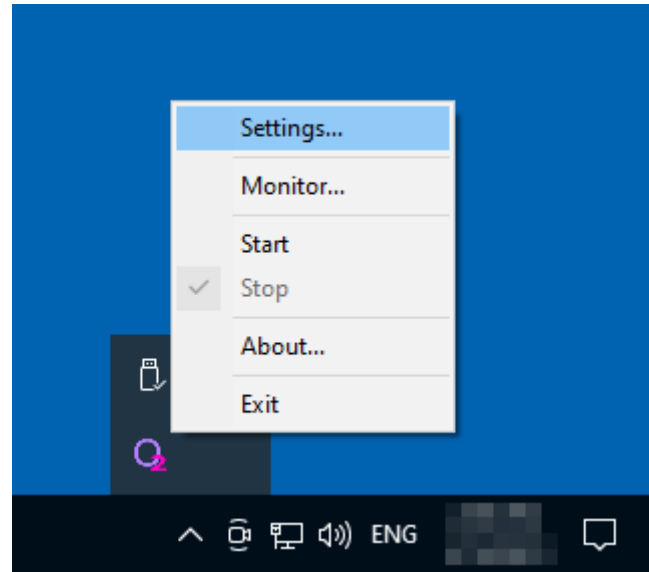




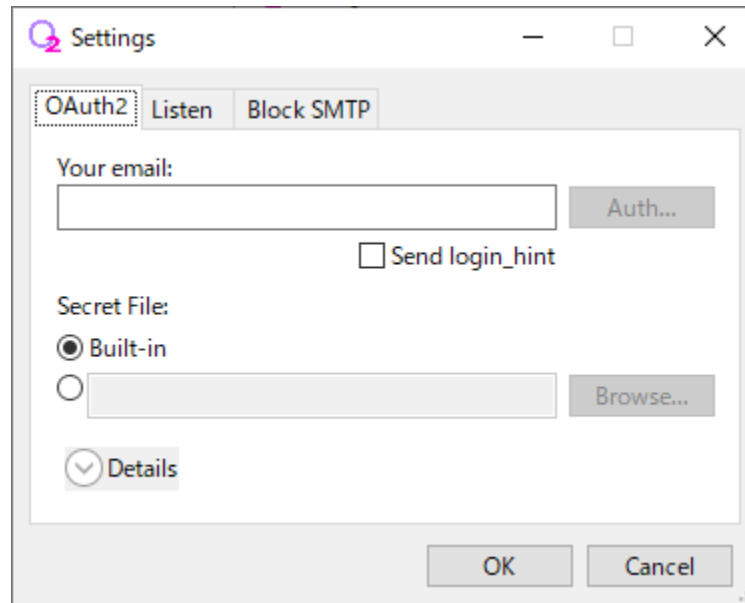
When this application is started normally, the icon of this application will be displayed in the task tray (system tray) at the bottom right of the screen.



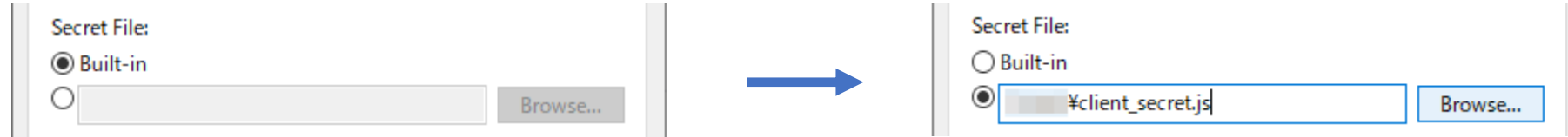
You need to make the initial settings first.
Click the icon of this application to display the menu. Select “Settings...” in this.



The setting screen is as follows.



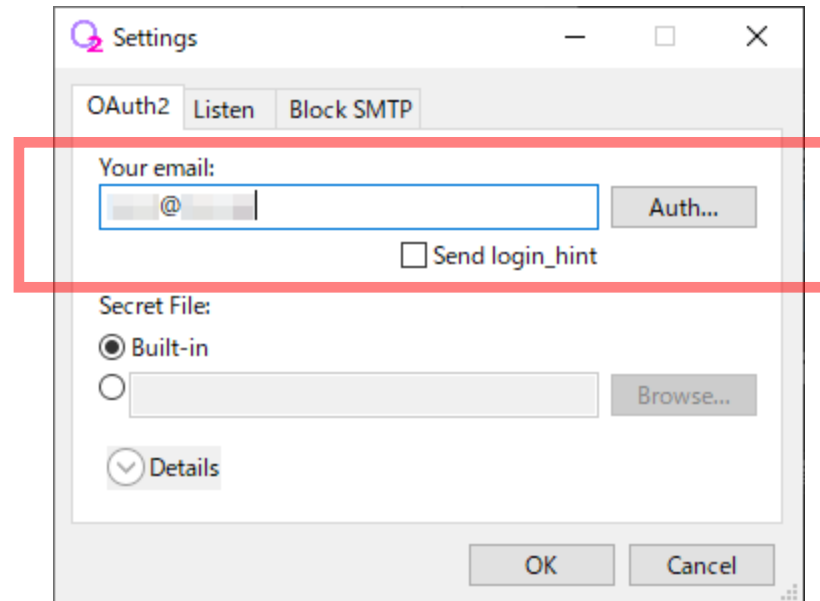
If you prepare a secret file for OAuth2 yourself, specify the file as follows.



If you want to use the secret file prepared by the author, leave it as “Built-in”.

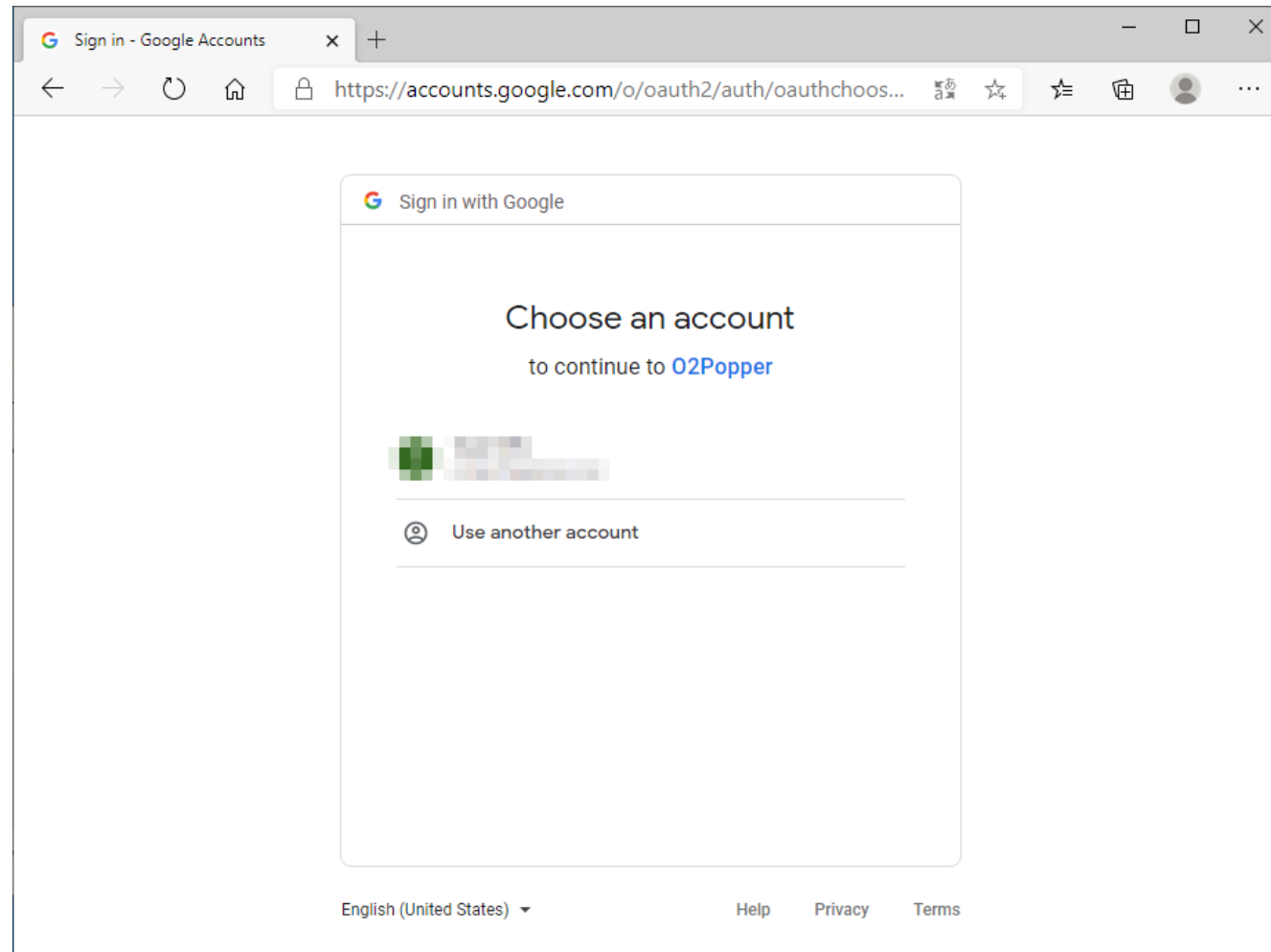
When authorizing OAuth2, if you use the secret file prepared by the author, “Google hasn't verified this app” may be displayed.

Enter your email address and click the “Auth...” button.

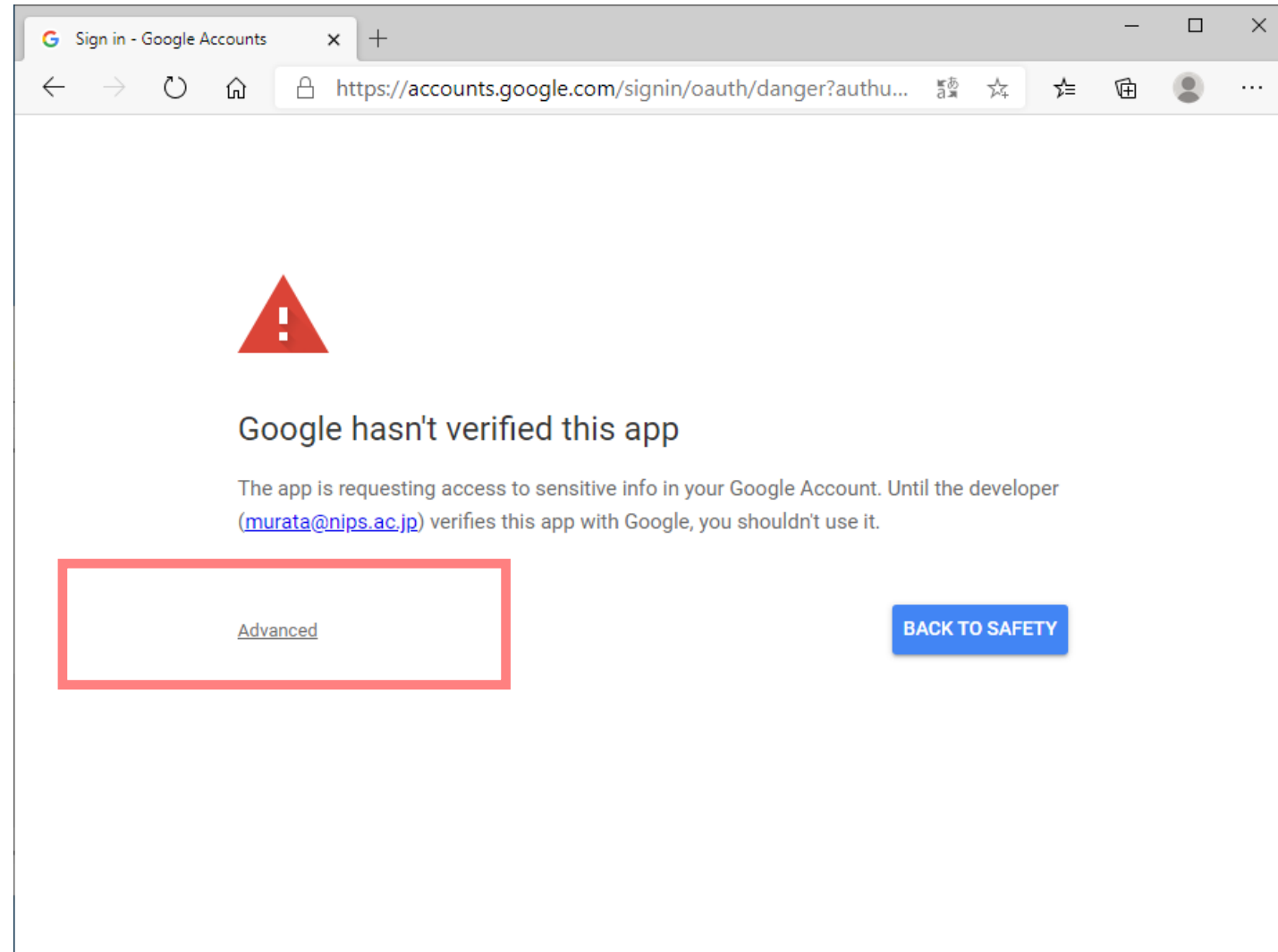


Note: If you check “Send login_hint”, you can skip the "Choose an account" screen that appears after this.

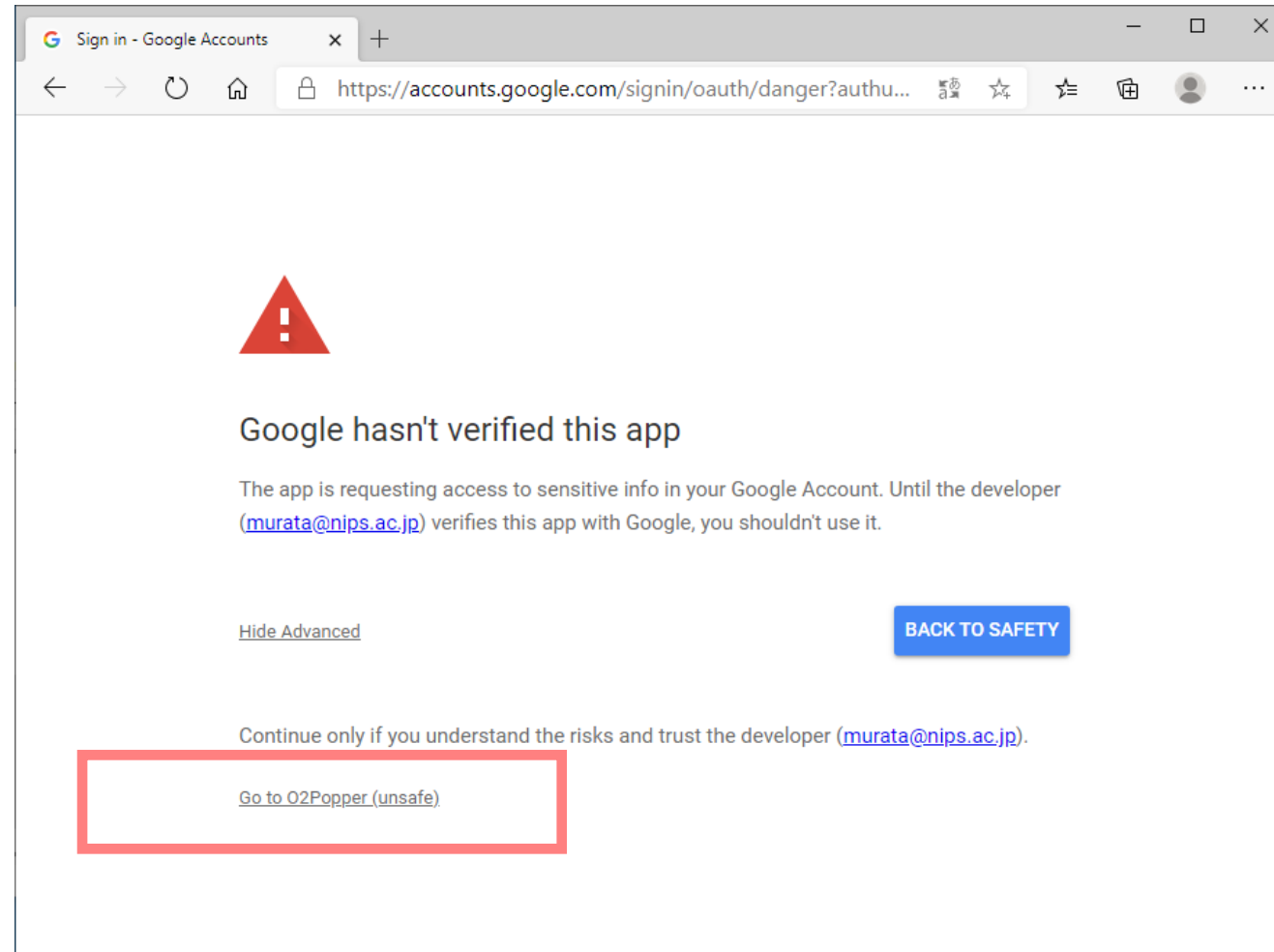
The OS standard web browser starts and the Google account authentication screen is displayed.



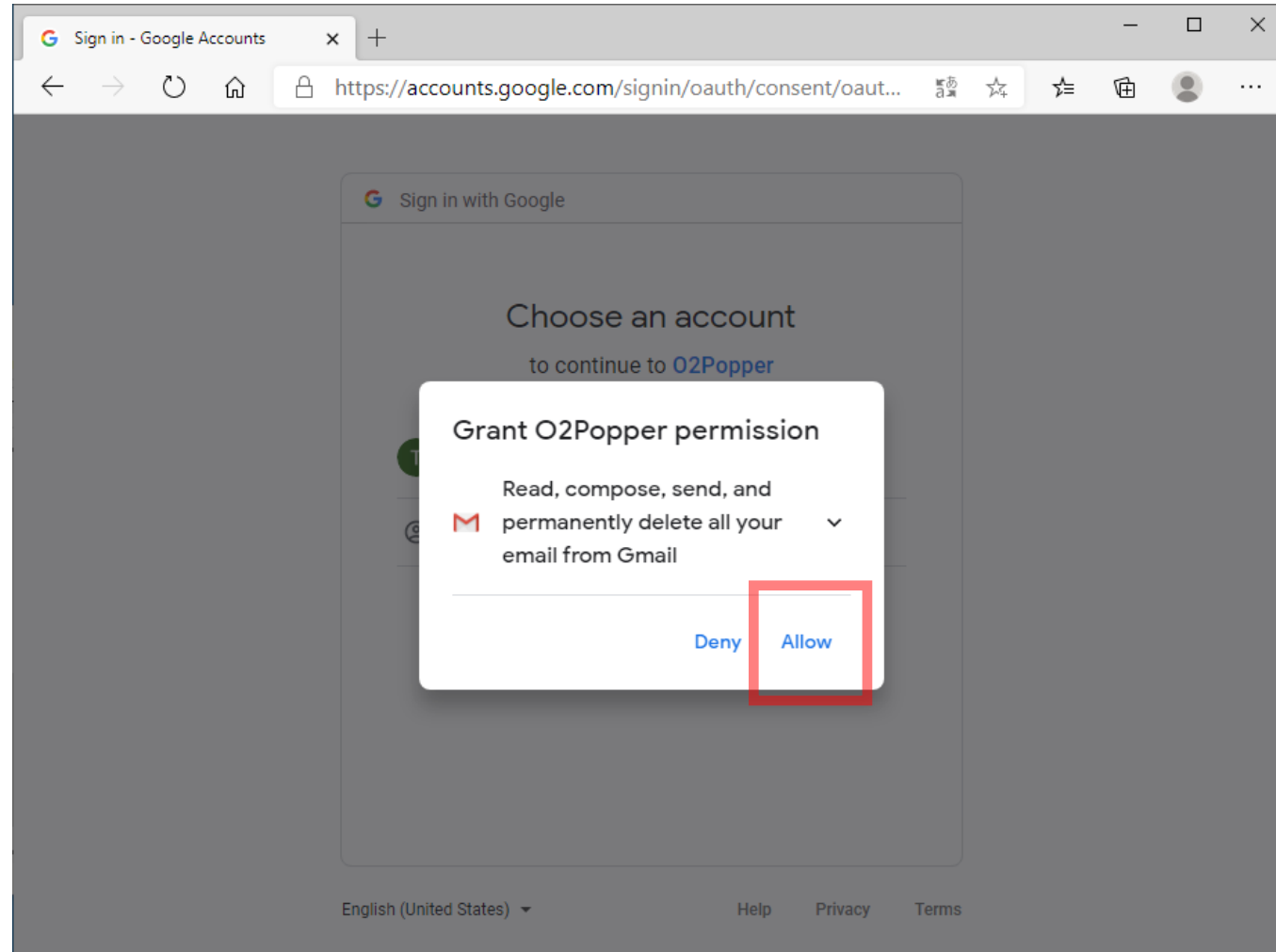
If the following screen is displayed after the Google account has been authenticated, click the “Advanced” link.



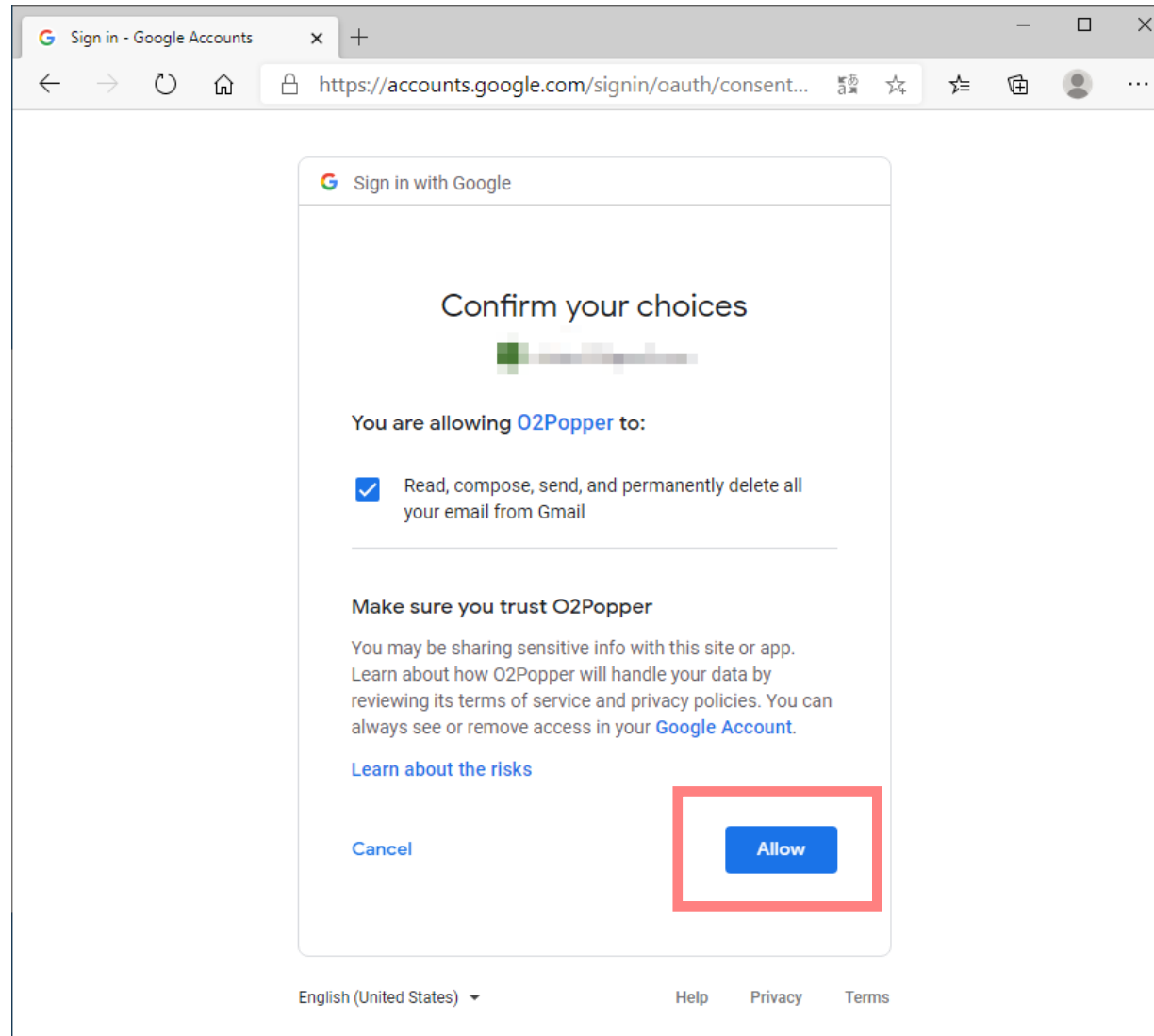
After clicking the “Advanced” link, click the “Go to O2Popper (unsafe)” link at the bottom of the screen.



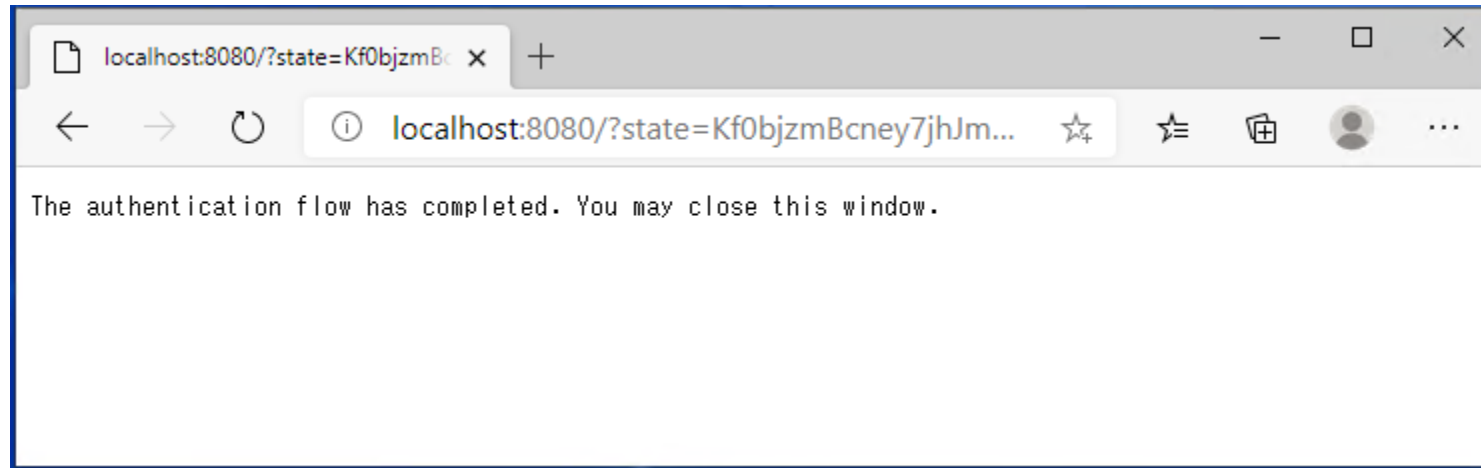
If the following screen is displayed, click the “Allow” button.



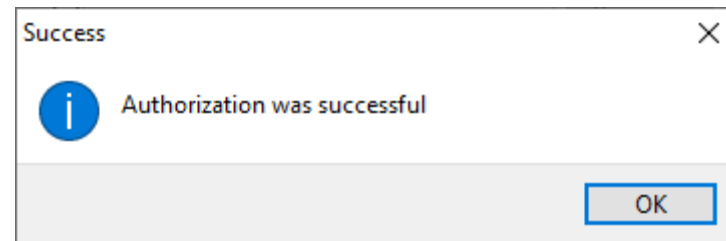
If the following screen is displayed, click the “Allow” button.



If “Authorization” is successful, the web browser will display the following screen.



If “Authorization” is successful, this application will display the following screen.

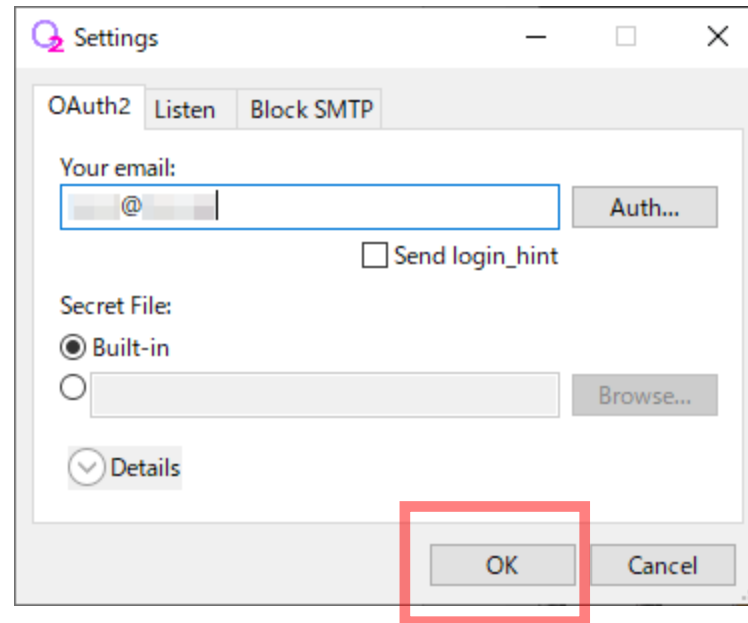


If you close the web browser in the middle of “Authorization”, control will not return to this application. In this case, start the web browser again and access the following URL.

<http://localhost:8080>

An error will occur, but control will return to this application.

When “Authorization” is completed, click the “OK” button to close the setting screen.



Next, set up your email client (Outlook, Thunderbird, etc.) as follows.

Incoming Mail (POP) Server	localhost Requires SSL: No Port: 8110
Outgoing Mail (SMTP) Server	localhost Requires SSL: No Port: 8025
Account Name, User Name, or Email address	Your email address
Password	Appropriate string Note: Not used for authentication.

Note: If the above port number is used by another application, change it to another value on the setting screen of this application, and change the value of the mail client according to this application.

Outlook configuration example:

POP Account Settings

@

Incoming mail ^

User name @

Password *****

☒ Remember password

Server localhost Port 8,110

☐ This server requires an encrypted connection (SSL/TLS)

☐ Require logon using Secure Password Authentication (SPA)

Outgoing mail v

Next

POP Account Settings

@

Incoming mail v

Outgoing mail ^

Server localhost Port 8,025

Encryption method None v

Server timeouts —|—

☐ Require logon using Secure Password Authentication (SPA)

☒ My outgoing (SMTP) server requires authentication

☒ Use same settings as my incoming mail server

☐ Log on using user name and password

☐ Log on to incoming mail server before sending mail

Next

Thunderbird configuration example:

Server Settings

Server Type: POP Mail Server

Server Name: localhost Port: 8110 Default: 110

User Name: [redacted]@ [redacted]

Security Settings

Connection security: None

Authentication method: Password, transmitted insecurely

SMTP Server

Settings

Description: [redacted]

Server Name: localhost

Port: 8025 Default: 587

Security and Authentication

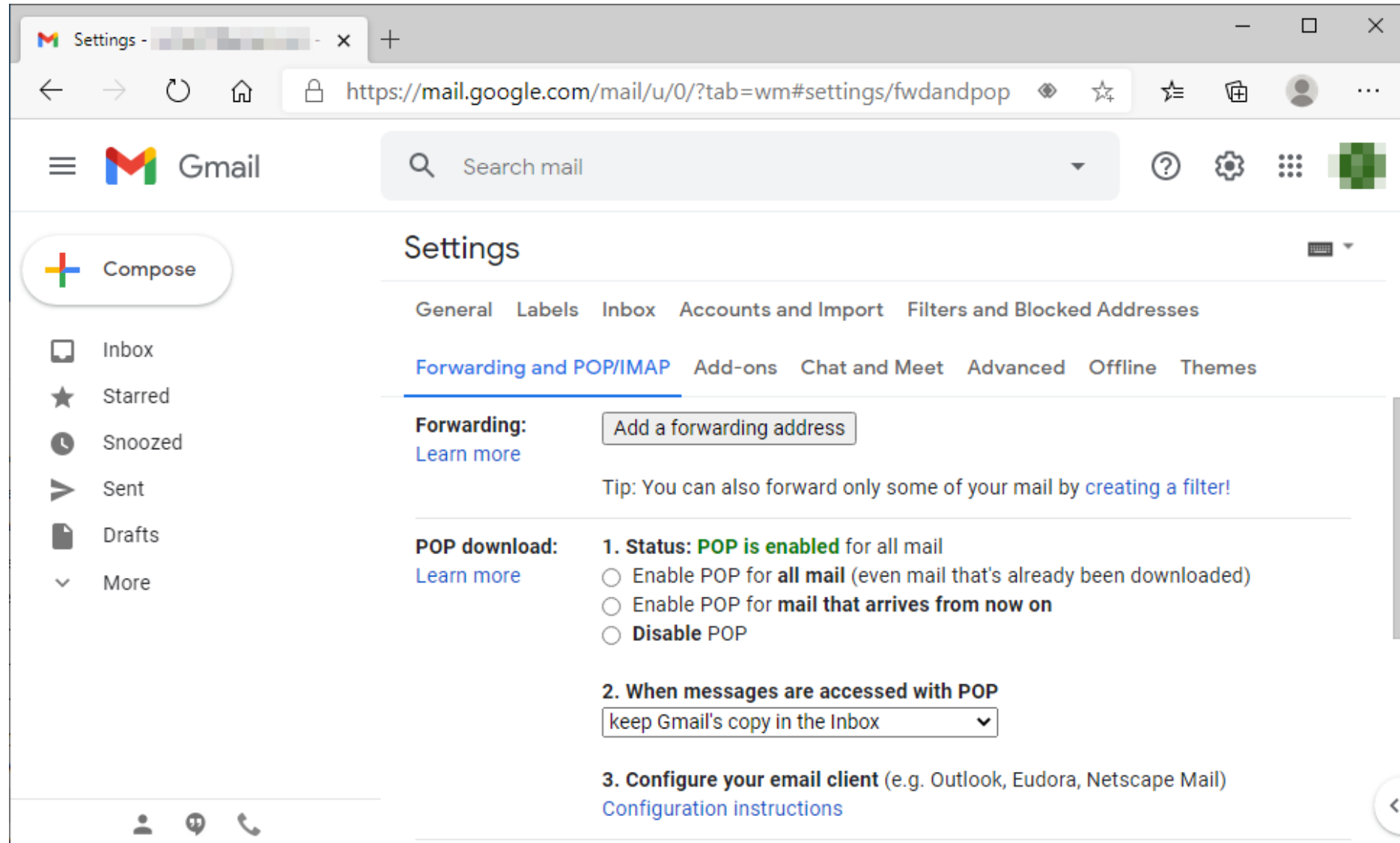
Connection security: None

Authentication method: Password, transmitted insecurely

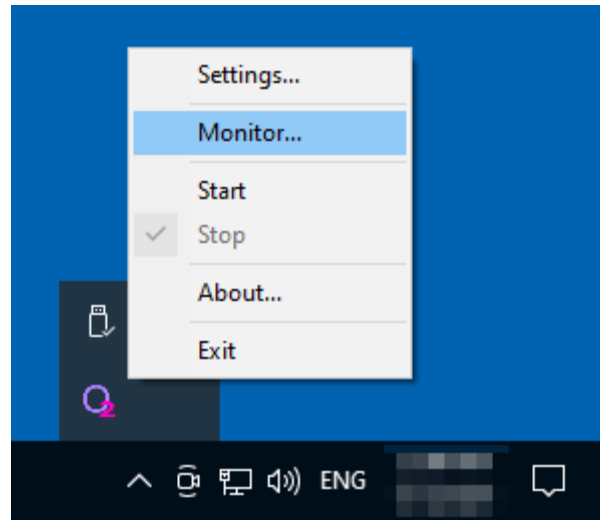
User Name: dmtest@nips.ac.jp

OK Cancel

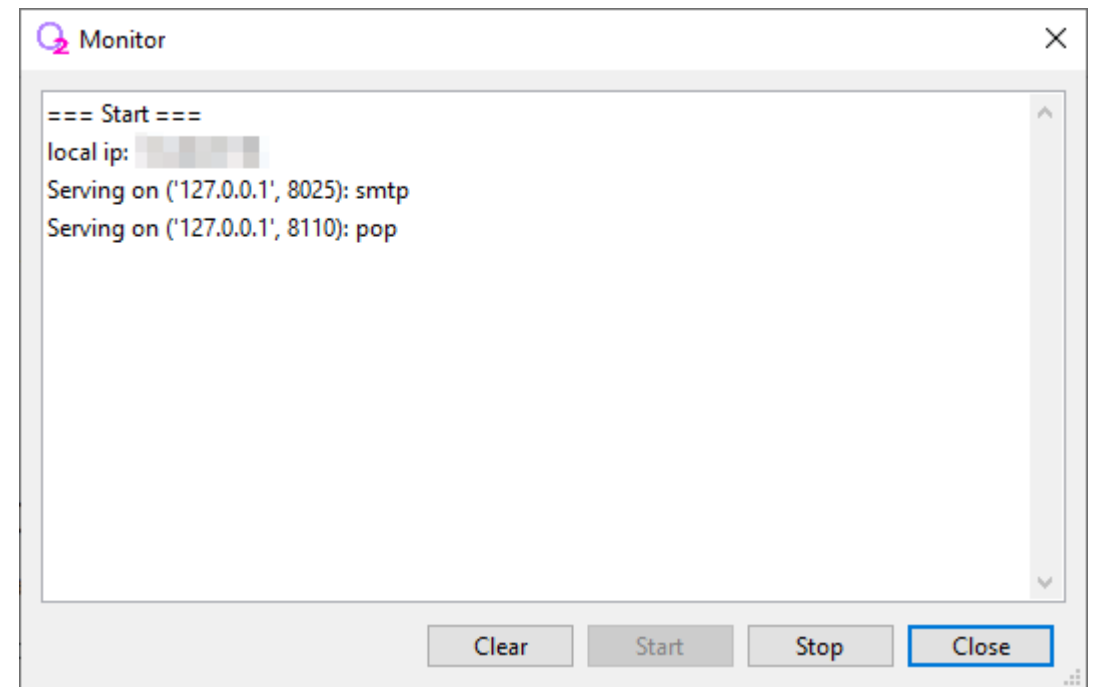
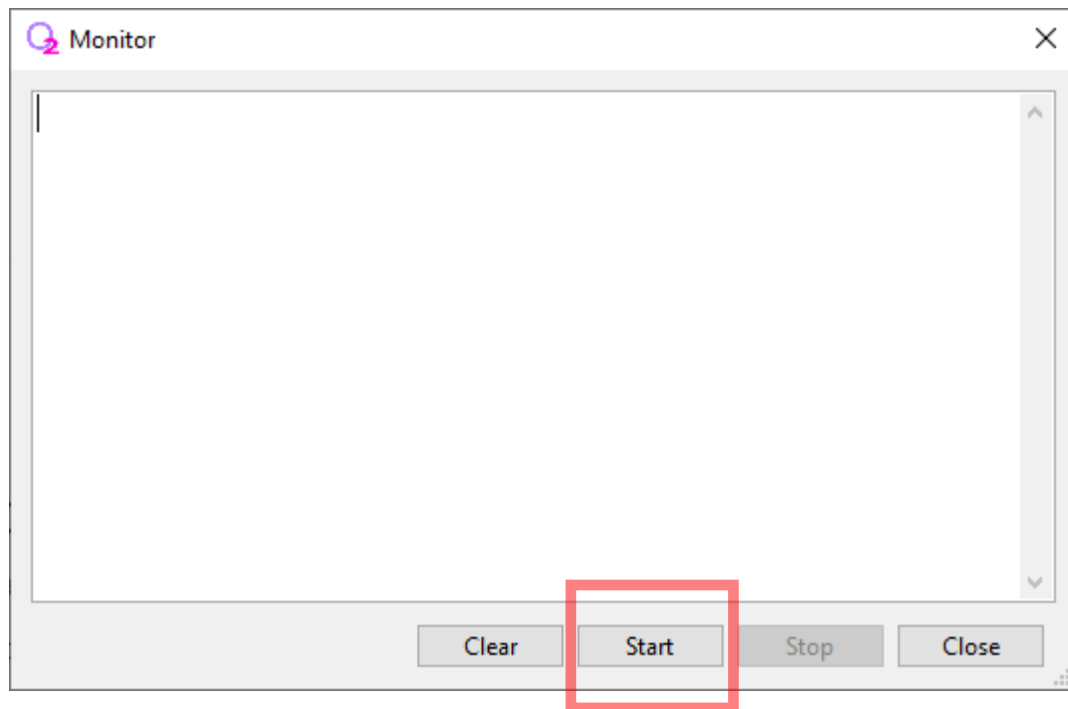
If you want to receive emails by POP, please enable POP on Gmail side.



After completing the settings of the mail client and Gmail, select “Monitor...” from the menu of this application.

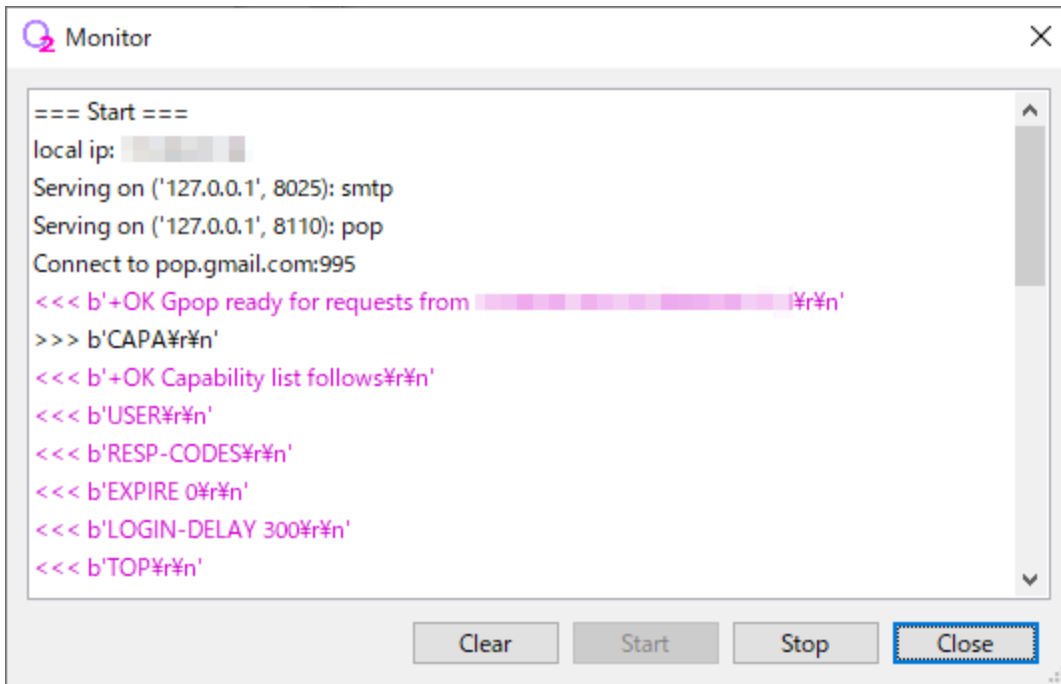


Click the “Start” button on the monitor to start receiving SMTP and POP.



Start sending and receiving email client. If the output is as follows, it is successful.

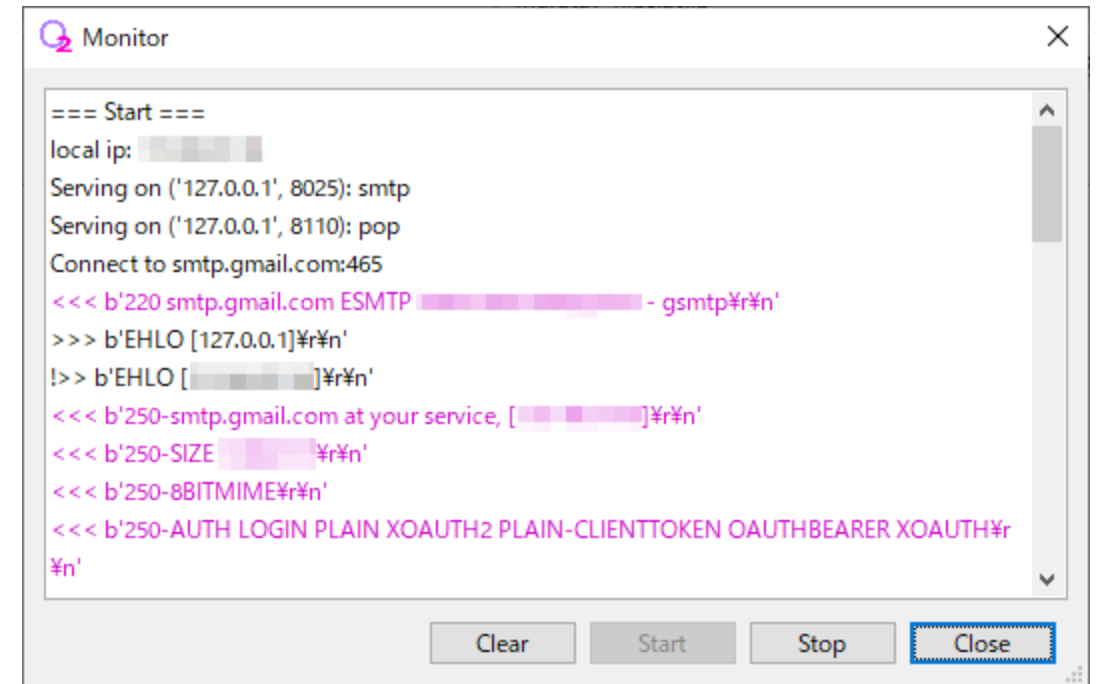
When received by POP:



The screenshot shows a 'Monitor' window with a log of network traffic. The log starts with '=== Start ===' and 'local ip: [redacted]'. It then shows 'Serving on ('127.0.0.1', 8025): smtp' and 'Serving on ('127.0.0.1', 8110): pop'. A connection to 'pop.gmail.com:995' is established. The log then shows a series of responses from the server, each preceded by '<<< b''. The responses are: '+OK Gpop ready for requests from [redacted]', '+OK Capability list follows', '+USER [redacted]', '+RESP-CODES [redacted]', '+EXPIRE 0', '+LOGIN-DELAY 300', and '+TOP'. The window has a 'Close' button highlighted with a blue border.

```
=== Start ===
local ip: [redacted]
Serving on ('127.0.0.1', 8025): smtp
Serving on ('127.0.0.1', 8110): pop
Connect to pop.gmail.com:995
<<< b'+OK Gpop ready for requests from [redacted]'
>>> b'+CAPA'
<<< b'+OK Capability list follows'
<<< b'+USER[redacted]'
<<< b'+RESP-CODES[redacted]'
<<< b'+EXPIRE 0[redacted]'
<<< b'+LOGIN-DELAY 300[redacted]'
<<< b'+TOP[redacted]'
```

When sent by SMTP:



The screenshot shows a 'Monitor' window with a log of network traffic. The log starts with '=== Start ===' and 'local ip: [redacted]'. It then shows 'Serving on ('127.0.0.1', 8025): smtp' and 'Serving on ('127.0.0.1', 8110): pop'. A connection to 'smtp.gmail.com:465' is established. The log then shows a series of responses from the server, each preceded by '<<< b''. The responses are: '220 smtp.gmail.com ESMTP [redacted] - gsmt[redacted]', 'EHLO [127.0.0.1]', '250-smtp.gmail.com at your service, [redacted]', '250-SIZE [redacted]', '250-8BITMIME', and '250-AUTH LOGIN PLAIN XOAUTH2 PLAIN-CLIENTTOKEN OAUTHBEARER XOAUTH[redacted]'. The window has a 'Close' button highlighted with a blue border.

```
=== Start ===
local ip: [redacted]
Serving on ('127.0.0.1', 8025): smtp
Serving on ('127.0.0.1', 8110): pop
Connect to smtp.gmail.com:465
<<< b'220 smtp.gmail.com ESMTP [redacted] - gsmt[redacted]'
>>> b'EHLO [127.0.0.1]'
!>> b'EHLO [redacted]'
<<< b'250-smtp.gmail.com at your service, [redacted]'
<<< b'250-SIZE [redacted]'
<<< b'250-8BITMIME'
<<< b'250-AUTH LOGIN PLAIN XOAUTH2 PLAIN-CLIENTTOKEN OAUTHBEARER XOAUTH[redacted]'
[redacted]
```

Note:

Lines with purple text starting with "<<<" are the responses from Gmail's POP and SMTP servers.

If it does not work, there may be a problem with the settings on the security software side.

The settings for sending and receiving between this application and the Gmail server are as follows.

Incoming Mail (POP) Server	pop.gmail.com Port: 995
Outgoing Mail (SMTP) Server	smtp.gmail.com Port: 465

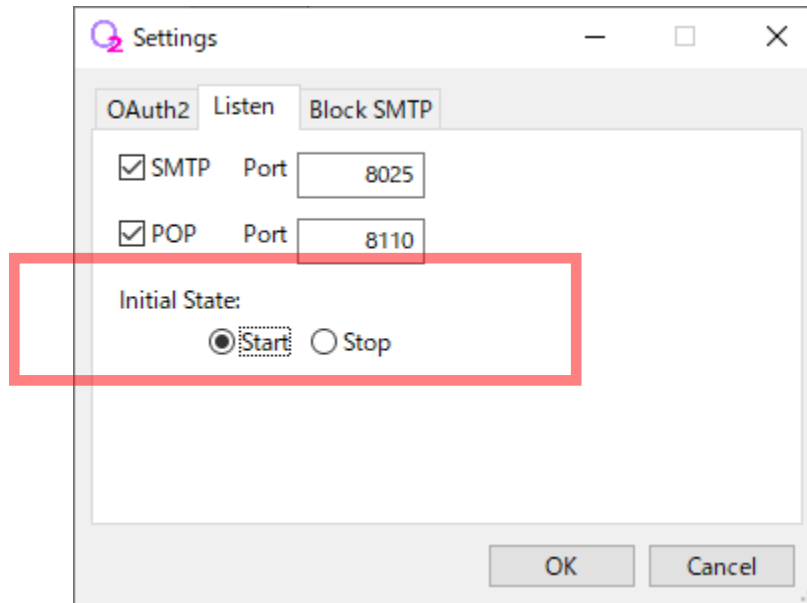
Make sure that the security software has not blocked the communication or modified the communication contents.

If you cannot solve the problem, I recommend that you consult with a detailed person near you.

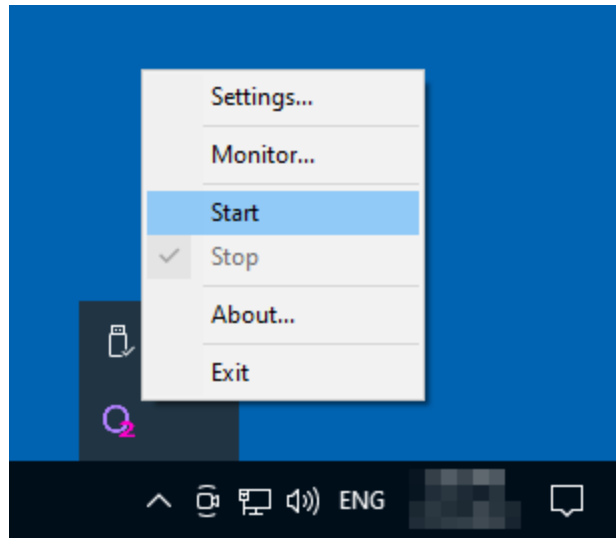
The compatibility between the mail client and this application may be poor.

You cannot use a mail client that outputs protocol commands in an order not expected by this application. I would appreciate it if you could let the author know.

Close the monitor when you have successfully sent and received emails. (Reception is stopped when the monitor screen is closed.) If you want to start receiving automatically when this application starts, change “Initial State” in “Listen” on the setting screen to “Start” and click the “OK” button.



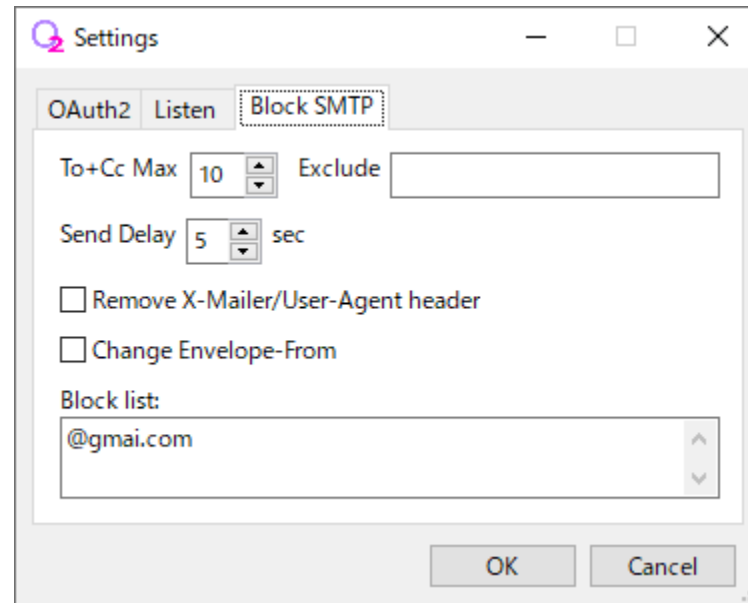
Select “Start” on the menu screen to start receiving.

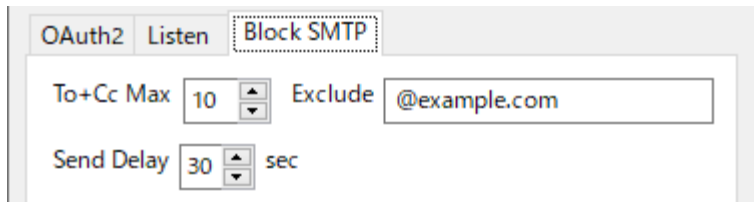




Options

There are erroneous transmission prevention functions. Please adjust on the “Block SMTP” tab of the setting screen.





The image shows a configuration window titled 'Block SMTP'. It has three tabs: 'OAuth2', 'Listen', and 'Block SMTP'. The 'Block SMTP' tab is active. Inside this tab, there are three settings: 'To+Cc Max' is set to 10, 'Exclude' is set to '@example.com', and 'Send Delay' is set to 30 sec.

To+Cc Max:

Specify the maximum total number of addresses that can be specified for To and Cc of the destination. If this value is exceeded, it will not be sent as an error. Set to 0 for unlimited. It was implemented to prevent accidents in which Cc and Bcc are mistakenly transmitted in large quantities. Specify the addresses you do not want to be included in the address count in the "Exclude" field.

Note: Names containing "@" may be counted excessively.

Note: If a substring of the address is specified in the "Exclude" field, it will be judged as a suffix match. It is not case sensitive.

You can specify multiple conditions by separating them with a single-byte space or a single-byte comma (,).

Send Delay:

You can cancel the transmission within the specified number of seconds. You can specify up to 30 seconds, and if you set it to 0, it will be sent without delay.

☐ Remove X-Mailer/User-Agent header

☐ Change Envelope-From

Block list:

@gmail.com

Remove X-Mailer/User-Agent header:

If checked, the X-Mailer header and User-Agent header will be deleted before sending. If you do not want the other party to know the type and version information of the email software you are using, please check it.

Change Envelope-From:

If checked, the Envelope From will be changed to the email address used for OAuth2 authentication and sent. If the sender of the email is a group address, problems such as "cannot post" or "error email does not arrive" may occur. This is a function to avoid such problems.

Block list:

Please specify the address you want to block sending.
If a substring of the address is specified, it is judged by a suffix match.
It is not case sensitive.
You can specify multiple conditions by separating them with single-byte spaces, single-byte commas, and line breaks.