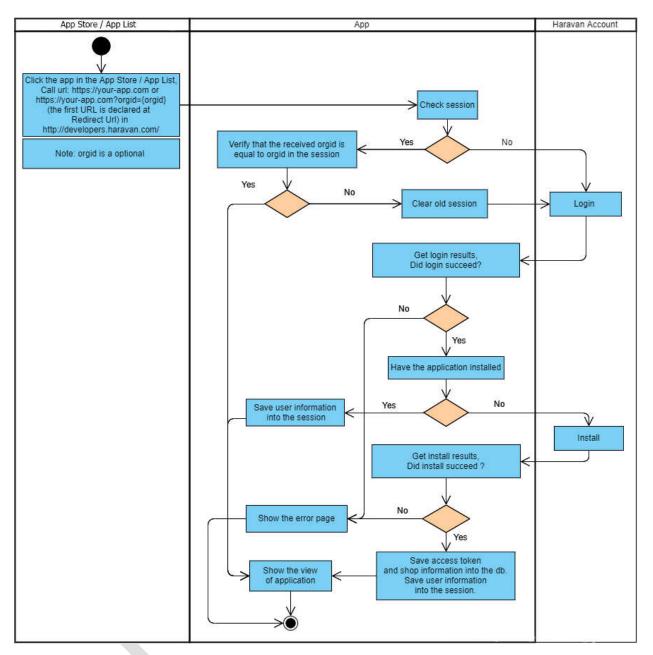
Create App and Connect API

Version	Date	Author	Description
1.0	23-Oct-2019		
1.1	11-Feb-2020		 Modify the scope used to install in step 7 corresponds to the field scope in the configuration for the app in step 4. Add note about scope in step 7.
1.2	27-Feb-2020		Add workflow app.Add orgid to the params of each login and install request.
1.3	09-Mar-2020		Add the required column for the request parameter.move note about scope in step 7 to step 4.

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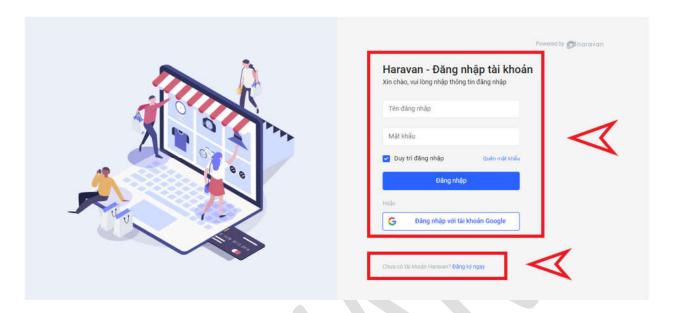
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LOGIN AND INSTALL APPLICATION WORKFLOWS

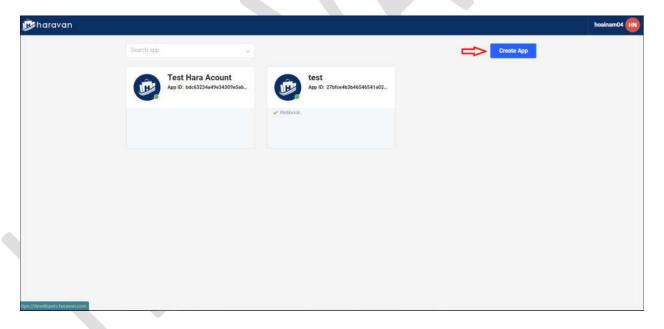


1. Step 1: Create app

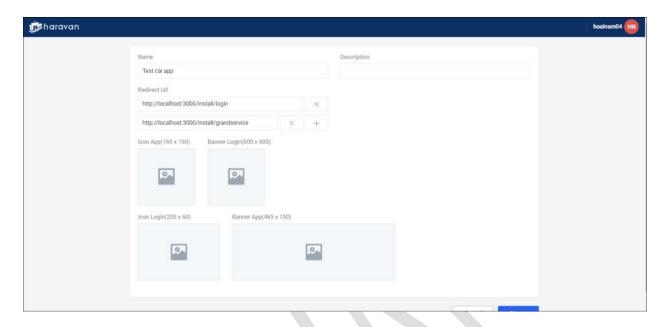
- Follow the link https://developers.haravan.com/apps (If you haven't logged in, the system will redirect to sign in https://accounts.haravan.com, and at this page you can sign in or sign up).



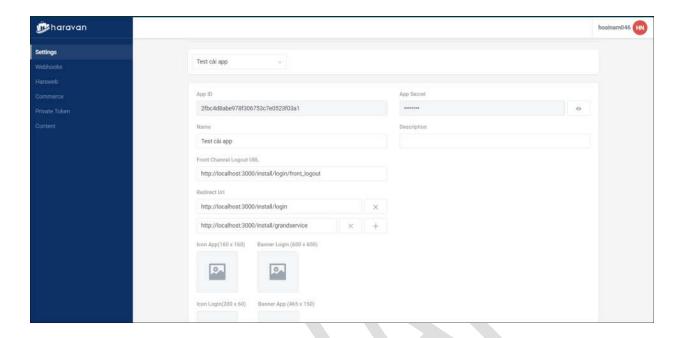
After sign in/sign up successful, the system will show a list of your applications, click "Create App" button to create a new application.



- Screen for create application.



- + Name: application name.
- + Description: application description
- + Redirect Url: application domain, the system will redirect to this url when starting application.
 - You need to declare at least 2 URLs: login and install
 - o Login url with recommended syntax:https://{domain app}/install/login
 - o install url with recommended syntax:
 - https://{domain app}/install/grandservice
 - You need to configure these URLs in your app's configuration file
- Create success.
 - + Some field need to save in configuration file to use: App Id, App Secret, Redirect Url.

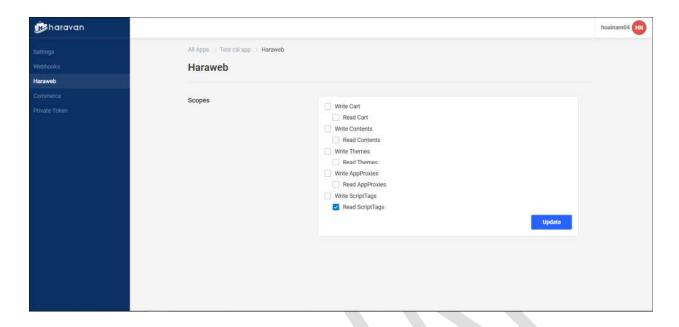


2 Step 2: Select scope for the application

- Select scope to request permission to edit or read data.
- The scope is divided into two categories
- Note :
 - + When choosing a scope, you must save that scope to the application's configuration file to use when installing the application.
 - + When using write permission must include read permission.
 - + When only using read permission, there is no need to write permission.
 - + Ex:
 - com.write_products com.read_products (Use both write and read products for the application)
 - com.read products (Only use read products for the application)
- Reference: https://docs.haravan.com/blogs/omni/apis-va-scope

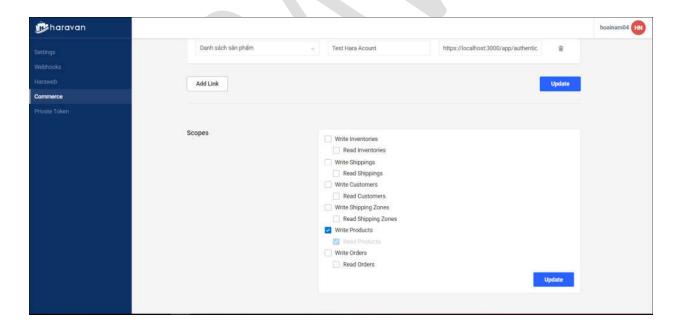
2.1 Haraweb scopes:

- For the API use at the sales page.
- The way to declare haraweb scope: web.{scope_name}.
 Ex: web.read script tags.



2.2 Commerce scopes

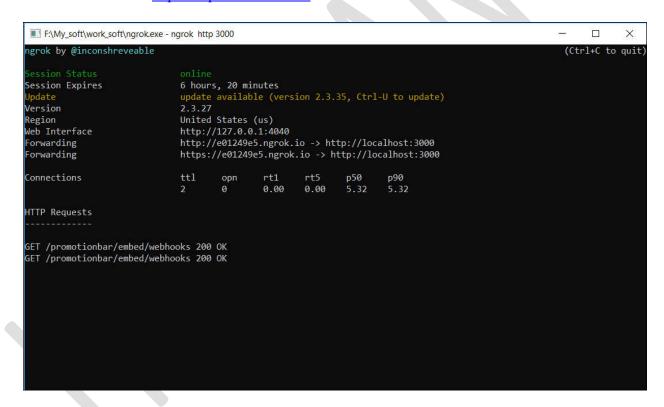
- For the API use at the admin page.
- The way to declare commerce scope: com.{scope_name}.
 Ex: com.write_products.



3 Step 3: Connect webhook

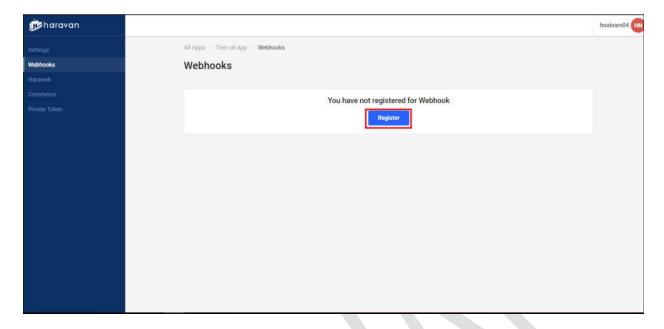
3.1 Use ngrok to test register webhook

- Ngrok (https://ngrok.com/) creates a secure tunnel on your local machine along with a public URL you can use for browsing your local site.
- If you're running your local web server on port 3000, in terminal, you'd type in: ngrok http 3000.
- Note:
 - + A url can be available for 8 hours
 - + Only use https://
 - + Use ngrok's web inspection interface to understand the HTTP request and response traffic over your tunnel: http://localhost:4040
 - + Similar tool : https://requestcatcher.com/

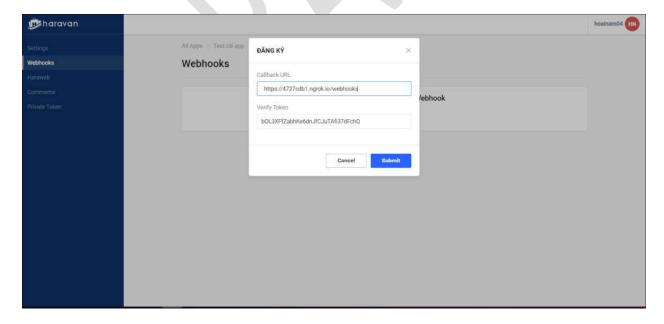


3.2 Register webhook:

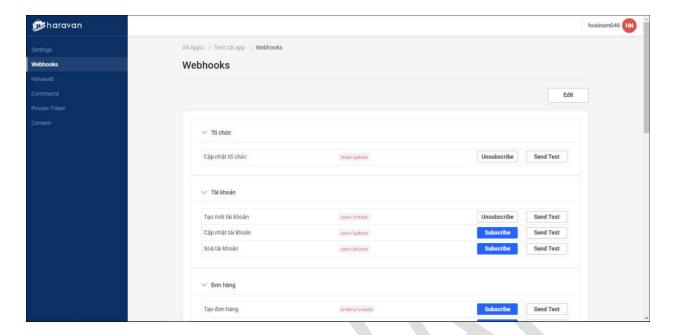
Go to Webhooks, select Register button to register webhooks.



- You need to fill in some information :
 - + Callback URL: Webhooks will POST a message with data to this URL when certain things happen. Make sure the URL is configured on your application to receive webhooks.
 - + Verify Token: is random string and has at least 1 character, because it's used for authenticating with the application, make sure this token matches the string configured on your application.



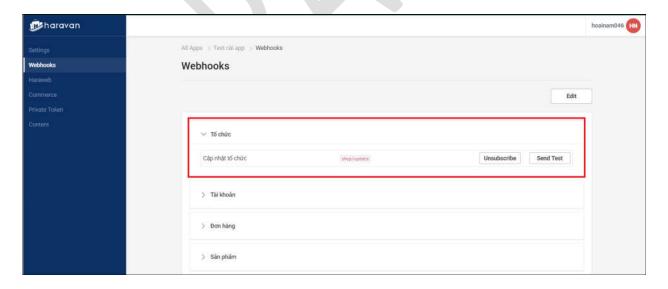
 After registered, you need to reload this page to see the list of events that can subscribe to get notifications.



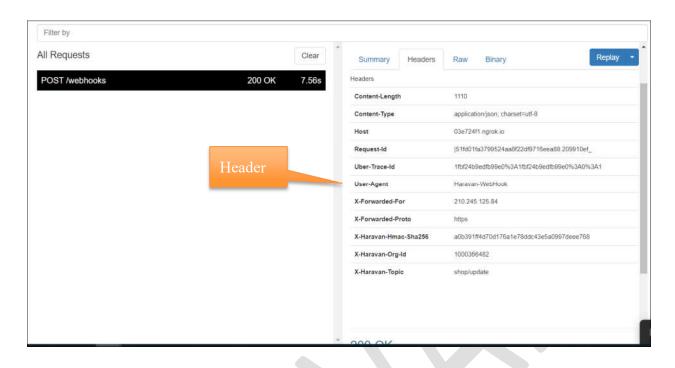
Reference: https://docs.haravan.com/blogs/omni/ket-noi-webhooks

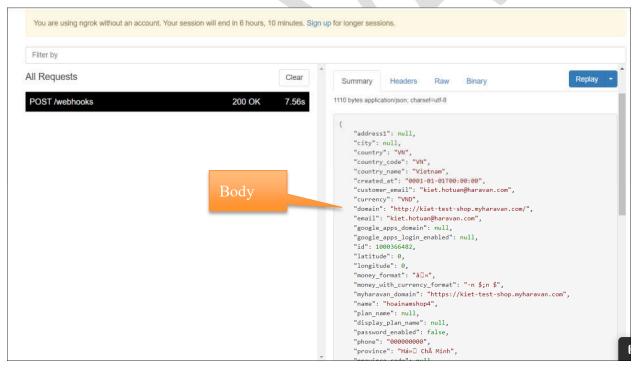
3.3 Topics need to subscribe:

3.3.1 Topic shop/update:



- Subscribe this topic will help the app to receive notifications when shops have something updated.
- Webhook will send a request to the URL you used to register with the POST method.
- The request will include an object containing the latest shop information after updating such as using the ngrok example below.



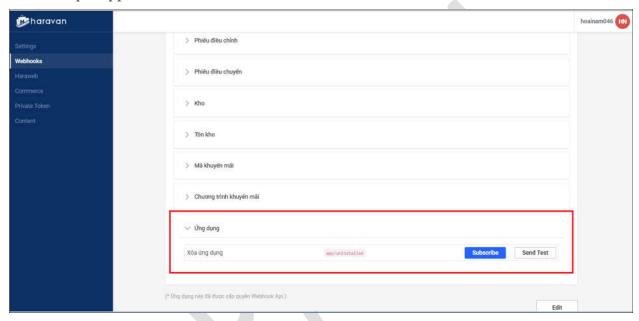


- Some important information of the shop.

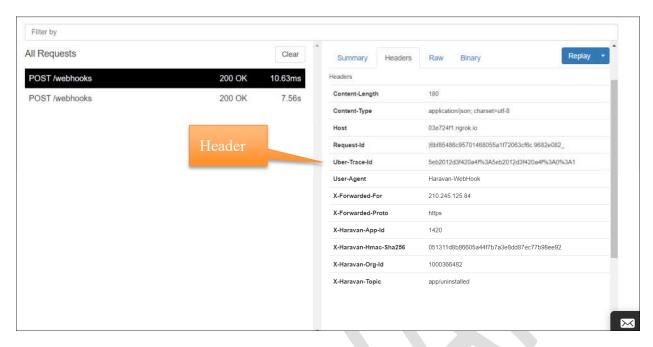
	Property	Description
1	domain	Domain of the sales page

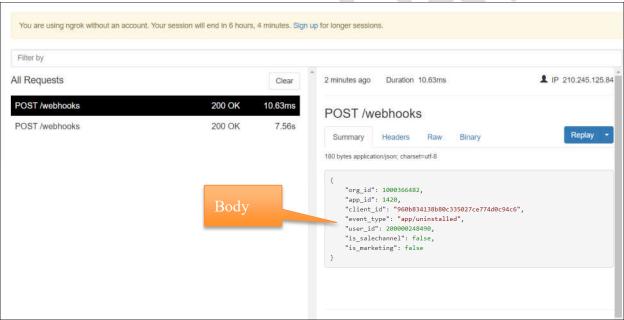
2	myharavan_domain	Domain of the admin page
3	email	Email
4	customer_email	Customer support email
5	shop_owner	Name of shop owner

3.3.1 Topic app/uninstalled:



- Subscribe this topic will help the app to receive notifications when your application is uninstalled.
- Webhook will send a request to the URL you used to register with the POST method.
- The request will include an object containing information of the shop that uninstalled the application such as using the ngrok example below.





	Property	Description
1	org_id	orgid of the shop uninstall app
2	app_id	App ID was obtained after creating the application in $\underline{\text{step}}$ $\underline{1}$
3	client_id	Client ID was obtained after creating the application in step 1
4	event_type	same as topic in Headers

5	user_id	id of the user who uninstalled the app
6	is_salechannel	Show in sales channel menu true: show false: not show
7	is_martketing	Show in marketing menu true : show false: not show

4 Step 4: Configuration for the application

- After basic configuration on https://developers.haravan.com/apps
- You will get information like: App id, App secret, scope, webhook...
- Save that information into your application.
- Ex: Save to an object named config.

	Property	Description
1	response_mode	Form method responses
2	url_authorize	Login url of Haravan system
3	url_connect_token	Url get the token for the application
4	grant_type	Type of code level. Always "authorization_code"
5	nonce	string random at least 1 character
6	response_type	Select the fields you want to receive
7	app_id	App ID was obtained after creating the application in step 1
8	app_secret	App Secret was obtained after creating the application in step 1
9	scope_login	Required scopes when logging into the haravan system They are: openid, profile, email, org, userinfo
10	scope	Scopes include the required and the optional used to install the application + The required: openid, profile, email, org, userinfo, grant_service + Scope using webhook: wh_api (the optional) + Other scopes must correspond to the scopes selected in step 2
		Note:

		 + When using write permission must include read permission. + When only using read permission, there is no need to write permission. + Ex: com.write_products com.read_products (Use both write and read products for the application) com.read_products (Only use read products for the application)
11	login_callback_url	declared at step 1 in Url redirect, used to login to the haravan system
12	install_callback_url	declared at step 1 in Url redirect, used to install the application
13	webhook	
13.1	hrVerifyToken	Authentication code webhook, declared at step 3 Can get a random string at https://randomkeygen.com/ (CodeIgniter Encryption Keys)
13.2	subscribe	url post subscribe webhook

5 Step 5: Login to get authorization code

- First, login to Haravan's system to check shop and user information
- When using login_callback_url:
 - + If have orgid in request params of **login_callback_url**, add **orgid** to request params of **url authorize** and redirect to it with the GET method to login.
 - + If don't have orgid in request params of login_callback_url, redirect to url_authorize with the GET method to login.
- After redirecting to url_authorize if not already logged in to Haravan, the system will require login to get user information, if logged in, the system will skip the login step and get the used login information.
- After successful login, the system will redirect to the redirect_uri link that you have added to the request parameter of url_authorize the POST method, along with the code and id_token.

5.1 Request get code

```
const config = {
 response mode: 'form post',
 url authorize: 'https://accounts.haravan.com/connect/authorize',
 url connect token: 'https://accounts.haravan.com/connect/token',
 grant type: 'authorization code',
 nonce: 'asdfasdgd',
 response type: 'code id token',
 app id: '0e86d3653f580f07358865a0b6cda6de',
 app secret: '24302376155dd82a92f4d9d0b1d573c5a232d30ab5fe4a79069e4435bad7e200',
 scope login: 'openid profile email org userinfo',
 scope: 'openid profile email org userinfo com.write products com.read products web.read script tags
grant service',
 login callback url: 'http://localhost:3000/install/login',
 install callback url: 'http://localhost:3000/install/grandservice',
 webhook: {
  hrVerifyToken: 'bOL3XFfZabhKe6dnJfCJuTAfi37dFchQ',
  subscribe: 'https://webhook.haravan.com/api/subscribe'
},
};
```

Method	URL
GET	https://accounts.haravan.com/connect/authorize

```
Request params:

response_mode

response_type

scope_login

client_id (app_id)

redirect_uri (login_callback_url)

nonce

// All are saved in the configuration file

orgid
```

Parameter passing syntax:

https://accounts.haravan.com/connect/authorize?response_mode={response_mode}&response_type={response_type}&scope={scope_login}&client_id={app_id}&redirect_uri={login_callback_url}&nonce={nonce}&orgid={orgid}

Ex:

https://accounts.haravan.com/connect/authorize?response_mode=form_post&response_type =code_id_token&scope=openid_profile_email_org_userinfo&client_id=0e86d3653f580f07358865a0b6cda6de&redirect_uri=http://locahost:300_0/install/login&nonce=asdfasdgd&orgid=1000198788

	Property	Required	Description
1	response_mode	true	Form method responses
2	response_type	true	Select the fields you want to receive
3	scope	true	scope_login in configuration file
4	client_id	true	App ID was obtained after creating the application in step 1
5	redirect_uri	true	login_callback_url in configuration file
6	nonce	true	string random at least 1 character
7	orgid		may be passed to the request param of login_callback_url or not

5.2 Response get code

Status	Response
200	{
	"code":
	"c309cc6a97e7da821975d2440645892a95f13ce8e06af81ecffe5ed9db8fe7a3",
	"id token":
	"eyJhbGciOiJSUzI1NiIsImtpZCI6ImUyZTFkZDM4ODJkNTE4YTk2OGQ5MWVI"
	TU3NmQxNzdhIiwidHlwIjoiSldUIn0.eyJuYmYiOjE1NzA3Njk4MjAsImV4cCI6M'
	U3MDc3MDEyMCwiaXNzIjoiaHR0cHM6Ly9hY2NvdW50cy5oYXJhLnZuIiwiYX
	VkIjoiOGJkOWExNDc1NTI4NTJINTF1YTU3MTExMDQ3NGZ1NjMiLCJub25jZS
	6ImtjanFoZGx0ZCIsImlhdCI6MTU3MDc2OTgyMCwiY19oYXNoIjoiRm9XSFRL
	U50SWFRVndFSlg5bVBMQSIsInNpZCI6Ijc5NDgyZGExZGE5ZmZlZjJmMjY2Nj
	VjOWE2Yjc4MmIzIiwic3ViIjoiMjAwMDAwMDIwMzMyIiwiYXV0aF90aW1IIjox

NTcwNjgwMDU2LCJpZHAiOiJsb2NhbCIsInJvbGUiOiJhZG1pbiIsIm9yZ2lkIjoiM AwMDExMzc2MyIsIm1pZGRsZV9uYW1IIjoidGVzdCIsIm5hbWUiOiJ0ZXN0Iiwi ZW1haWwiOiI4YmQ5YTE0NzU1Mjg1MmU1MWVhNTcxMTEwNDc0ZmU2My Im9yZ25hbWUiOiJob2FpbmFtMDlfMTExIiwib3JnY2F0IjoiT3RoZXIiLCJhbXIiOl cHdkII19.Q8I9ezKY6r22exDkqBjXbHHirFFg7HRc33DFRHP0ID6E1XyPsry2zgsy pP4EVtOs0jl0fEzaLvpKLabFDlqNAwMnnRbPqECazMJ5OTDKGTJsEO9Xj-v-TwqMDWPEwV Abemi8 deovPCw 3wAxxB3mta1GLqz12iBD7m9jIIWFEzqEvII LhdrQ isMQwjBaxA2r8oQHqQlxVuUAOPKOgPmCCUa8kGGAFPtd3dfl4C7EezgNE2xtdjv1ItE4 SCdvaF6hTMrE5smildtgRp3gGv2 QmgGnU1IV8rPGcT3OyaOtywaaQDBSyGcCkF6OXT30 -Ez1guJvllVYJ9AIqg", "scope": "openid profile email org userinfo", "session state": "cE63E1b725ke5g329GmRQLnEydXpuQanSCG DF8AbKM.15223afbde03d10d25 e85b1be797e41" 401 Unauthorized 422 {"error": "Unprocessable Entity"} 500 Something went wrong. Please try again later.

6 Step 6: Verify information

- After login successfully, the application will receive the **code** and **id token**.
- Use jsonwebtoken library: https://www.npmjs.com/package/jsonwebtoken to decode id_token get user, role and orgid information.
- Check before installing the application :
 - + First, use the user information to query the shop in the database.
 - + If shop has installed the application, grant access_token stored in the database to the user who is currently logged in using the application.
 - + If shop hasn't installed the application, You need to verify the role of the user:
 - Case 1: If the user is logged in as an admin, install the application
 - Case 2: If the user is logged in not an admin, then show the message is not authorized.

7 Step 7: Install to get authorization code

- After verifying the information, we begin to install the application.
- Call to **install_callback_url**, add the **orgid** you obtained when decode id_token from <u>step 6</u> to request params of **url_authorize** and redirect to it with the GET method.

- Adding orgid is to avoid errors when a user logs in to multiple accounts and you will be selected account when log in step 5 so don't need to select again.
- When user agrees to the installation, the system will redirect to the redirect_uri link that you have added to the request parameter of url_authorize the POST method, along with the code and id token.
- Use the **code** received to get access token for the application.
- Then, using the jwt library to decode the received id_token, you will have sid of the account used to install the application.
- Save **sid** along with session to database and use that data to handle when <u>logout</u>.
- Note: Login and install both redirect to url_authorize but will use different redirect_uri and scope.

7.1 Request get code

Method	URL
GET	https://accounts.haravan.com/connect/authorize

```
Request params:

response_mode

response_type

scope

client_id (app_id)

redirect_uri (install_callback_url)

nonce

// All are saved in the configuration file

orgid
```

Parameter passing syntax:

 $\label{lem:lem:https://accounts.haravan.com/connect/authorize?response_mode=\{response_mode\} \& response_type=\{response_type\} \& scope=\{scope\} \& client_id=\{app_id\} \& redirect_uri=\{install_callback_url\} \& nonce=\{nonce\} \& orgid=\{orgid\}$

Ex:

https://accounts.haravan.com/connect/authorize?response_mode=form_post&response_type=code id_token&scope=openid_profile_email_org_userinfo_com.write_products

com.read_products_web.read_script_tags
grant_service&client_id=0e86d3653f580f07358865a0b6cda6de&redirect_uri=http://locahost
:3000/install/login&nonce=asdfasdgd&orgid=1000198788

	Property	Required	Description
1	response_mode	true	Form method responses
2	response_type	true	Select the fields you want to receive
3	scope	true	scope in configuration file
4	client_id	true	App ID was obtained after creating the application in step 1
5	redirect_uri	true	install_callback_url in configuration file
6	nonce	true	string random at least 1 character
7	orgid	true	obtained when decode id token from step 6

7.2 Response get code

Status	Response
200	["code": "code": "code": "codecaprerda821975ecffe5ed9db8fe7a3d2440645892a95f13ce8e06af81", "id_token": "eyJhbGciOiJSUzI1NilsImtpZCI6ImUyZTFkZDM4ODJkNTE4YTk2OGQ5MWVITU3NmQxNzdhIiwidHlwIjoiSldUIn0.eyJuYmYiOjE1NzA3Njk4MjAsImV4cCI6MU3MDc3MDEyMCwiaXNzIjoiaHR0cHM6Ly9hY2NvdW50cy5YXJhLnZuIiwiYXVkIjoiOGJkOWExNDc1NTI4NTJINTFIYTU3MTExMDQ3NGZINjMiLCJub25jZ86ImtjanFoZGx0ZCIsImlhdCI6MTU3MDc2OTgyMCwiY19oYXNoIjoiRm9XSFRLU50SWFRVndFSlg5bVBMQSIsInNpZCI6Ijc5NDgyZGExZGE5ZmZlZjJmMjY2NjVjOWE2Yjc4MmIzIiwic3ViIjoiMjAwMDAwMDIwMzMyIiwiYXV0aF90aW1IIjoxNTcwNjgwMDU2LCJpZHAiOiJsb2NhbCIsInJvbGUiOiJhZG1pbiIsIm9yZ2lkIjoiMAwMDExMzc2MyIsIm1pZGRsZV9uYW1IIjoidGVzdCIsIm5hbWUiOiJ0ZXN0IiwiZW1haWwiOil4YmQ5YTE0NzU1Mjg1MmU1MWVhNTcxMTEwNDc0ZmU2MyIm9yZ25hbWUiOiJob2FpbmFtMDlfMTExIiwib3JnY2F0IjoiT3RoZXIiLCJhbXIiOlcHdkII19.Q819ezKY6r22exDkqBjXbHHirFFg7HRc33DFRHP0ID6E1XyPsry2zgsypP4EVtOs0j10fEzaLvpKLabFDlqNAwMnnRbPqECazMJ5OTDKGTJsEO9Xj-v-TwqMDWPEwV_Abemj8_dcovPCw_3wAxxB3mta1GLqz12iBD7m9jIIWFEzqEvILLhdrQ_isMQwjBaxA2r8oQHqQlxVuUAOPKOgP-mCCUa8kGGAFPtd3df14C7EezgNE2xtdjv1ItE4_SCdvaF6-hTMrE5smildtgRp3gGv2_QmgGnU1IV8rPGcT3OyaOtywaaQDBSyGcCkF6OXT30-Ez1guJvllVYJ9Alqg",

	"scope":" openid profile email org userinfo com.write_products com.read_products web.read_script_tags grant_service",	
	"session_state": "cE63E1b725ke5g329GmRQLnEydXpuQanSCG_DF8AbKM.15223afbde03d10d25 e85b1be797e41"	
	}	
401	Unauthorized	
422	{"error": "Unprocessable Entity"}	
500	Something went wrong. Please try again later.	

7.3 Decode id_token get sid

```
"nbf": 1570769820,
"exp": 1570770120,
"iss": "https://accounts.hara.vn",
"aud": "8bd9a147552852e51ea571110474fe63",
"nonce": "kcjqhdltd",
"iat": 1570769820,
"c_hash": "FoWHTKQNtIaQVwEJX9mPLA",
"sid": "79482da1da9ffef2f26665c9a6b782b3"
"sub": "200000020332",
"auth_time": 1570680056,
"idp": "local",
"role": "admin",
"orgid": "1000113763",
"middle_name": "test",
"name": "test",
"email": "8bd9a147552852e51ea571110474fe63",
"orgname": "hoainam09_111",
"orgcat": "Other",
"amr": [
  "pwd"
```

8 Step 8: Get Access_token

- Use the oauth library https://www.npmjs.com/package/oauth to get access token.
- After installing the application successfully, you will receive a token, save the token for long term use.

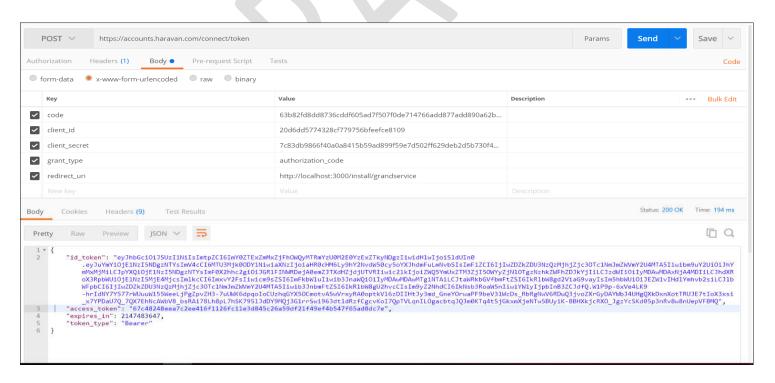
8.1 Demo code to get access_token:

Nodeis.

```
var OAuth2 = require('oauth').OAuth2;
```

```
let grant_type = 'authorization_code';
let callback_url = 'http://localhost:3000/install/grandservice';
let client id = '9f83ffc930129e2f4d11af0fc60bd251';
let client secret = '618e198b891317f02c545e9fe078f8a72e8f57424ee471ac409a8c0d05bfe8f4';
let url authorize = 'https://accounts.haravan.com/connect/authorize';
let url connect token = 'https://accounts.haravan.com/connect/token';
let code = '6a83f22d3363d270b7c18042e6c2db6571df0b8236b708f5d08778d303a85884';
let params = \{\};
params.grant type = grant type;
params.redirect_uri = callback url;
let oauth2 = new OAuth2(
 client id,
 client secret,
 url authorize,
 url connect token,
);
oauth2.getOAuthAccessToken(code, params, (err, accessToken, refreshToken, params) => {
  if (err) {
   let parseErrData = JSON.parse(err.data);
   console.log('error', parseErrData);
   console.log('accessToken', accessToken);
 });
```

Postman.



	Property	Required	Description
1	OAuth2	true	Declare OAuth library of nodejs
2	grant_type	true	grant_type in configuration file
3	callback_url	true	install_callback_url in configuration file
4	client_id	true	app_id in configuration file
5	client_secret	true	app_secret in configuration file
6	code	true	Code received in <u>step 7</u> .

8.2 Response get Access_token

Status	Response
200	params: { "id_token": "eyJhbGciOiJSUzI1NiIsImtpZCI6ImUyZTFkZDM4ODJkNTE4YTk2OGQ5MVVIYTU3NmQxNzdhIiwidHlwIjoiSldUIn0.eyJuYmYiOjE1NTk4MDUyNTUsInV4cCI6MTU1OTgwNTU1NSwiaXNzIjoiaHR0cHM6Ly9hY2NvdW50cy5oYX
	hLnZuIiwiYXVkIjoiOWY4M2ZmYzkzMDEyOWUyZjRkMTFhZjBmYzYwY3QyNTEiLCJub25jZSI6ImtjanFoZGx0ZCIsImlhdCI6MTU1OTgwNTI1NSwiYYRfaGFzaCI6InlVcHBoaE15bnZUSUpWV0tzSkMtS3ciLCJzaWQi0iJhMzhkN2M5YWM0ODZiZjBhOTM2OWI4ZjRiZjk2NDcxZCIsInN1YiI6IjEwMDAxM7Q5OTAiLCJhdXRoX3RpbWUi0jE1NTk4MDUwODAsImlkcCI6ImxvY2FsIivcm9sZSI6WyJjb21fYXBpLmFkbWluIiwiYWRtaW4iXSwib3JnaWQi0iIxMDAwMTEzNzYzIiwibWlkZGxlX25hbWUi0iJCw7lpIMSQaW5oIEhvw6BpIE5hbSIsImVtYWlsIjoiYnVpZGltGhvYWluYW1AZ21haWwuY29tIiwib3JnbmFtZSI6ImhvYWluYW0wOSIsImyZ2NhdCI6Ik90aGVyIiwiYW1yIjpbInB3ZCJdfQ.P7xXf0ftuiADd5I8v7uQfJk6m839z4RFt_Q9RfpMg_MsqIFgnmpJ4lgB2Zcsjw_SwSasEpszXQ2Dwy8-kt0C5YYvAjKPdTk8DNNZidav9FqtM-53rR-DMbyyoDes8-pWed2J_cTFHEhlayf1jYowAsUo6n3snJAwlHdpnRaHVGyF0i56N6Y8eSA84NrKRPlBpjfhKY8Pk0pmY_0XOfO7aInPt0RPK42sf0gRVWJR2hSksJaOBL5Pagentary
	pSDq5A_uT2o-YsE8nZ0OASKzE4aQ0Qeqo-Rx9LaJIzwuJKnyVmFSgl2gJHJUVgTZ0slD5fMmtRuZOSFlDibp8J6wtTnb_MQ", "access_token": "86f6ab839b301903cc6223dbe236aaa874fa5aa882b8d3d121ba91f8ce660f35",
	"expires_in": 86400, "token_type": "Bearer" }
401	Unauthorized

422	{"error": "Unprocessable Entity"}
500	Something went wrong. Please try again later.

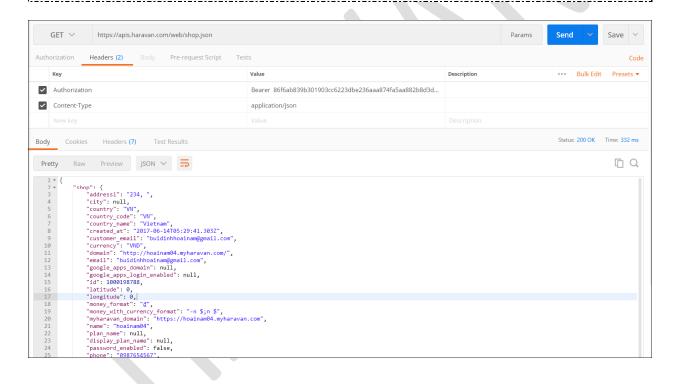
8.3 Use access token:

- After retrieving access token, you can use that token to query data from the api
- Ex: use access token to get the shop information by postman.

Headers:

Content-Type: application/json

Authorization: Bearer + access token



9 Step 9: Use the application after installation

- Once installed, the application will appear above the application list.
- When the user starts the application, you need to run step 5 again to get that user's id_token.
- Using the jwt library to decode id_token, you get sid and some other user information like the example below.

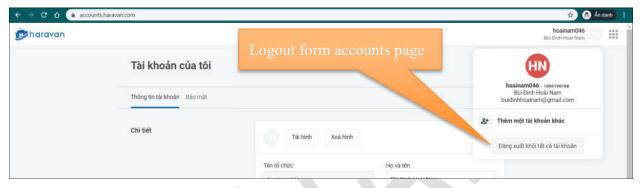
```
"nbf": 1570769820,
"exp": 1570770120,
"iss": "https://accounts.hara.vn",
"aud": "8bd9a147552852e51ea571110474fe63",
"nonce": "kcjqhdltd",
"iat": 1570769820,
"c_hash": "FoWHTKQNtIaQVwEJX9mPLA",
"sid": "79482da1da9ffef2f26665c9a6b782b3"
"sub": "200000020332",
"auth_time": 1570680056,
"idp": "local",
"role": "admin",
"orgid": "1000113763",
"middle_name": "test",
"name": "test",
"email": "8bd9a147552852e51ea571110474fe63",
"orgname": "hoainam09_111",
"orgcat": "Other",
"amr": [
  "pwd"
```

- You can verify the user based on these information if the application need it.
- Save **sid** along with session to database and use that data to handle when <u>logout</u>.
- Finally, show the view app.

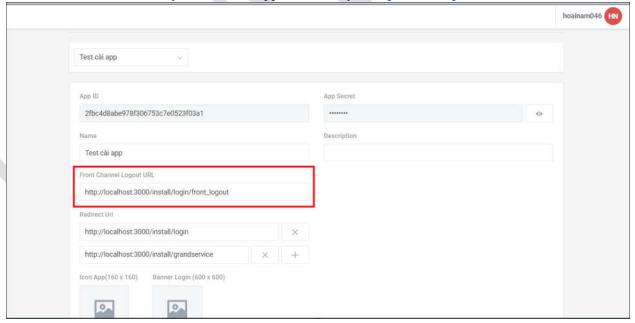
10 Step 10: Handle when the user logout

When the user logout of the system, it may be from the seller or https://accounts.haravan.com/,
 the system will send a request to your application.

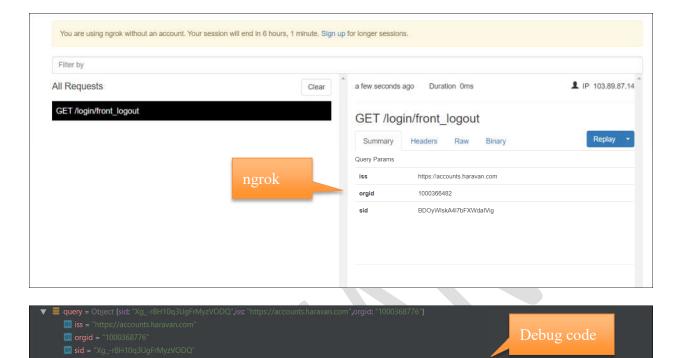




- The request will be sent to the URL in **Front Channel Logout** URL with the **GET** method.
- This URL is obtained when you create the app successfully at https://developers.haravan.com.



- This request will include the **sid** of the logged out account in the query.



- Once you have sid of the logout account, use it to query the corresponding session in database and delete that session.
- This helps the application to check which user has been logged in and logged out via the session and **sid**.