DYNAVISION

Documentation:
Isabel Connect Setup

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1 Isabel Environment Setup

Setting up the Isabel Environment exists out of several important steps.
These steps are required in order to get **8 necessary parameters** for Isabel Connect.
These necessary parameters are marked in **bold** in the documentation.

1.1 Start the procedure

For the base setup, Isabel needs to setup some parts on their end. This can be initiated by mailing to: partners@isabel.eu or customercare@isabel.eu.
They will assign an account manager, start the procedure and deliver an Order Form.
This form needs to be filled in and sent back to Isabel. This Order Form will need to be signed digitally (using the www.signhere.be platform).
An example of an order form:

ORDER FORM FOR ISABEL CONNECT SERVICE

Isabel Connect is an Isabel Product provided and operated by or on behalf of Isabel NV/SA, a company registered in the RPR/RPM Brussels with VAT No. BE 0455.530.509 and having its registered office at Keizerinlaan 13-15 Boulevard de l'Impératrice, 1000 Brussels, Belgium ("Isabel").

1. COMPANY DATA

Partner ☐ **Customer** ☐

Contact details:	
First name:	
Last name:	
Contact email:	
Phone number:	Fix: Mobile:

Company details:	
Company name:	
Company VAT number:	
Legal entity type:	
Postal address:	
Postal code:	
City:	
Country:	
Contact email:	

1.2 Setup Ibanity

Ibanity is the API endpoint that Isabel uses to communicate with 3th parties.
In Ibanity, a certificate needs to be set up, which will be used by the requests, sent from Business Central to Isabel.

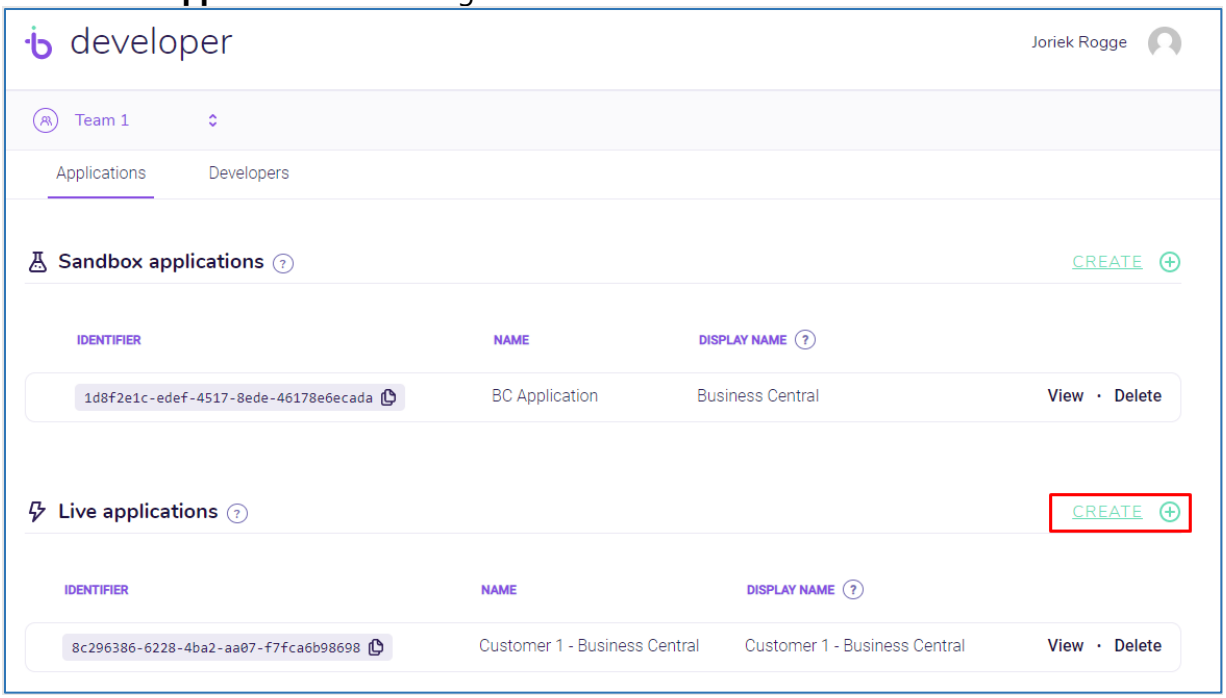
The procedures to use the Ibanity platform needs to be settled for each Business Central implementation partner.
A separate manual, describing how to work with the Ibanity platform, is available, called Dynavision Advanced Finance Set up Ibanity Manual (*create a team, add users, …*).
The Dynavision Advanced Finance module only works with Isabel Connect V2. Make sure that the correct version is used in the Ibanity Product page.

After setting up the Ibanity platform, following steps need to be run through in order to get the necessary information to set up the Isabel Connection to Business Central.

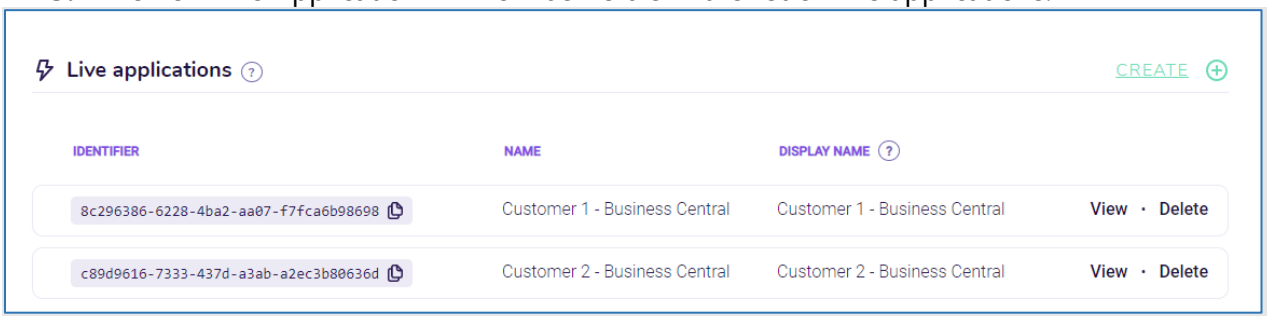
1.2.1 Part 1: Generate a new application

1.2.1.1 Create a Live application

1. Choose the action **Create** on the Developer page, in tab Applications, next to the tab **Live Applications**. This will generate a new set of credentials.

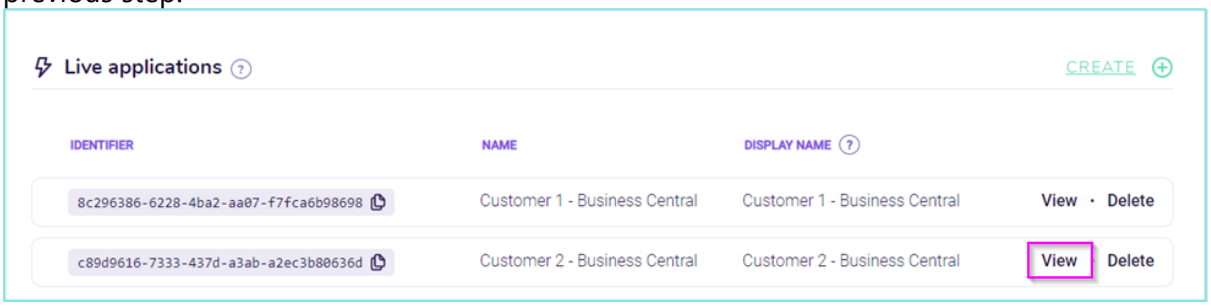


2. Choose a **Name** and **Display Name**. *Optionally*, a logo can be selected.
   Make sure to use the full customer's name (*e.g. "Dynavision Deployment Team" and not "DDT"*), both in the Name as in the Display Name field. This is to make sure that Isabel can match the correct customer with the correct application.
3. The new Live Application will now be visible in the list of Live applications.

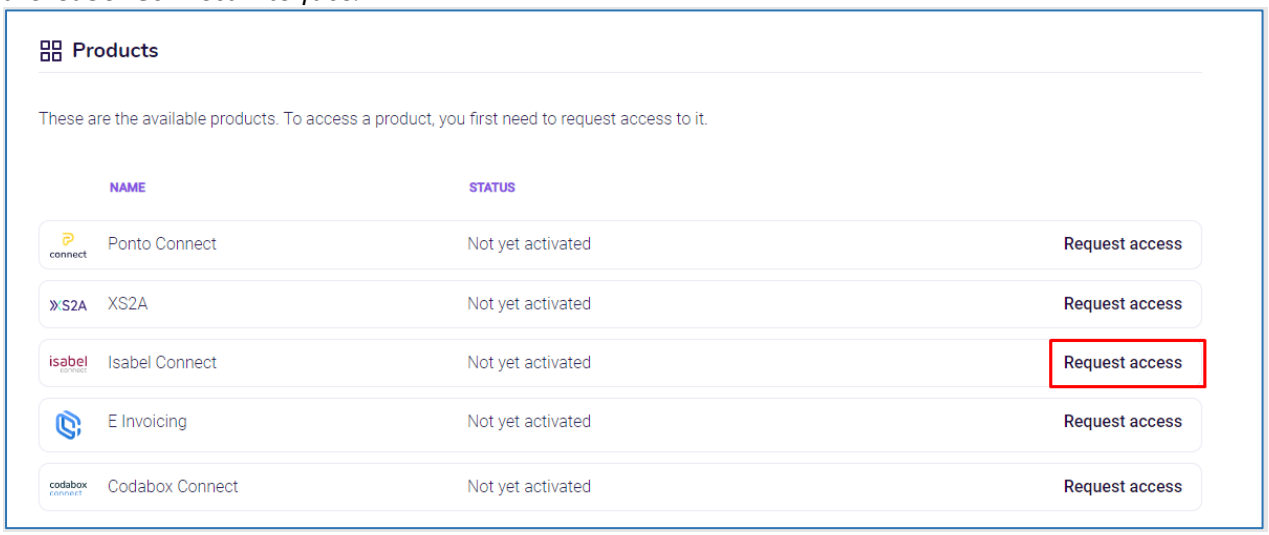


1.2.1.2 Activate Isabel Connect.

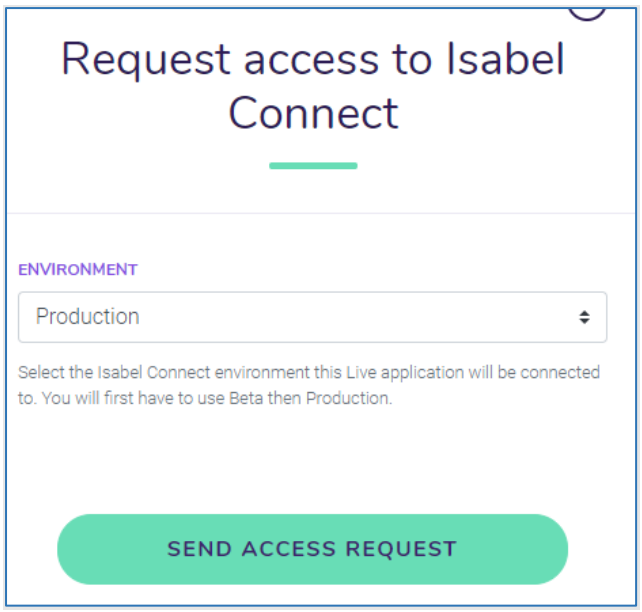
1. Choose the action **View** for the Live Application line that has been added in the previous step.



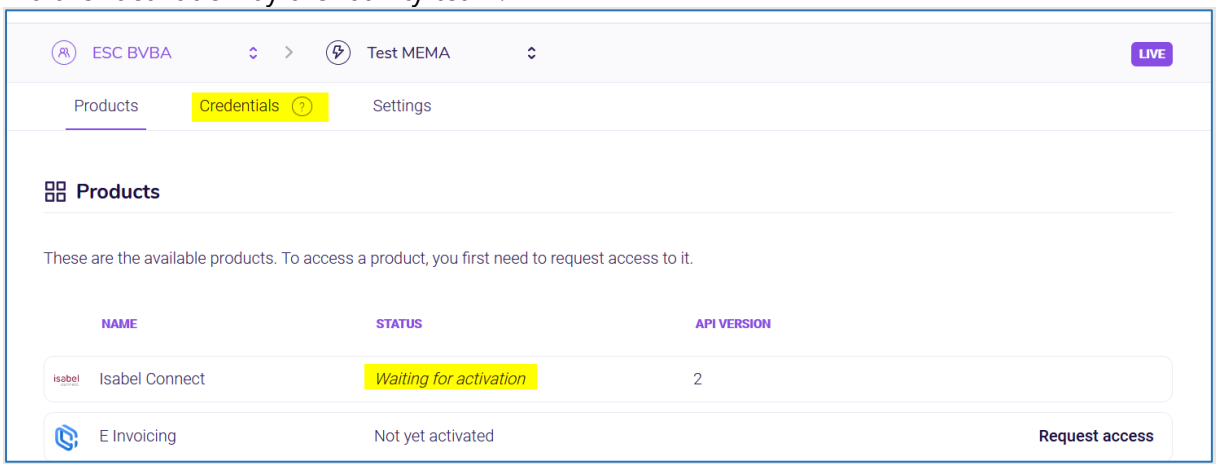
2. From the View page, it is possible to request access to Isabel Connect.
   Choose **Request access** on the Isabel Connect line. *The other features are not part of the Isabel Connect interface.*



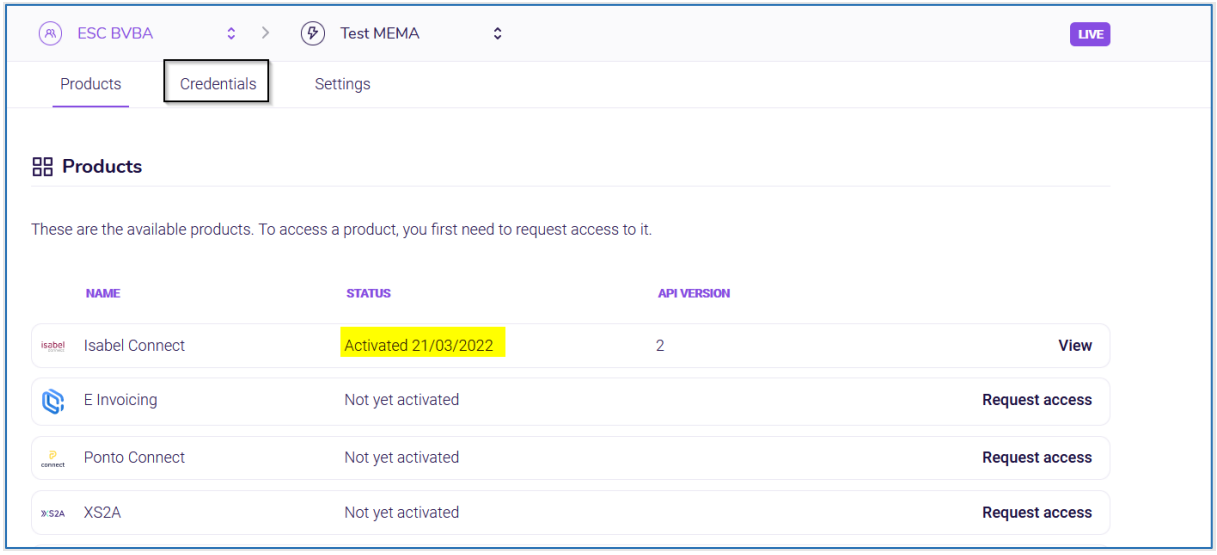
3. In the screen to Request access to Isabel Connect, select the **Production** as the Environment.



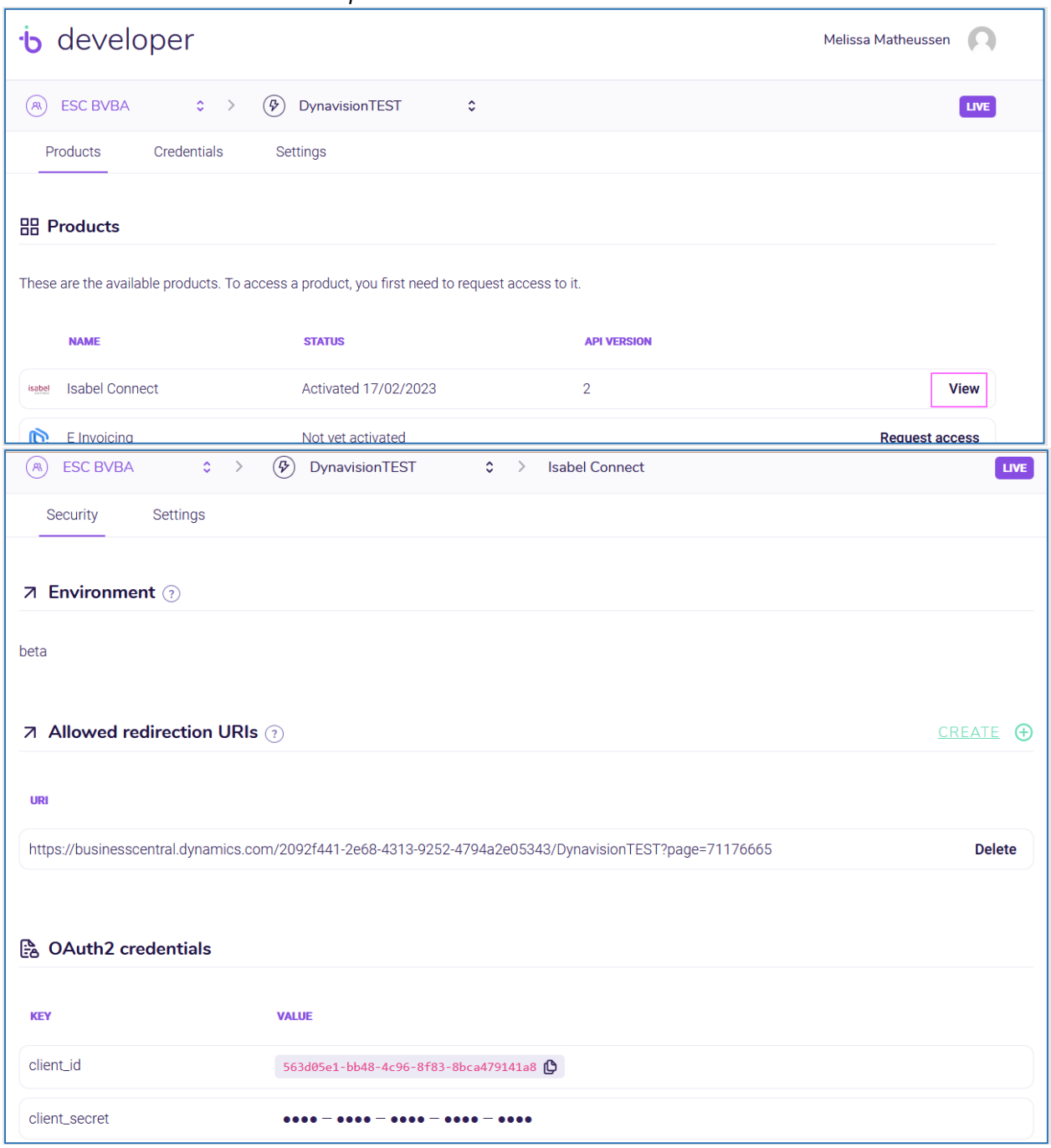
4. Wait for activation by the Ibanity team.



5. Once Ibanity has approved the request (this will take approximately 1 day), the **Credentials** tab will be available.
Make sure Isabel connect version 2 is used.



6. Open the product page by choosing **View** in the Isabel Connect line in the Products overview. The **client_id** and **client_secret** can be found. *These will be used later in Business Central in order to set up the connection with Isabel.*



1.2.2 Prepare download/backup folders and start certificate generation

In orde to set up the connection in Business Central, 2 credentials need to be generated.

1. Start by creating 2 folders on the computer (e.g. in documents), one for the **Certificate Credential** and another for the **Signature Credential**.
    a. *The certificates can be saved in these folders. These folders can be used as download folders, but make sure to also take a backup of these folders at the end of the procedure to make sure that the certificates remain available.*

1.2.3 Part 2: Generate certificate using Script

The generation of the Certificate, necessary for the connection of Business Central and Isabel Connect, can be done using a script.
The script can be found by choosing this link. Place the script in both folders, *Certificate Credential for generating the certificate, and Signature Credential for generating the Signature Certificate*.

All steps to generate a certificate are included. The script will guide trough the process and will ask for confirmation in every step.
The script needs to be copied in each of the created folders, so once in the folder **Certificate Credential** and **Signature Credential**.

Remark: seeing as the same script is used for both certificate and signature, when the script asks input "Certificate.pem", when the signature is set up, enter "Signature_certificate.pem".

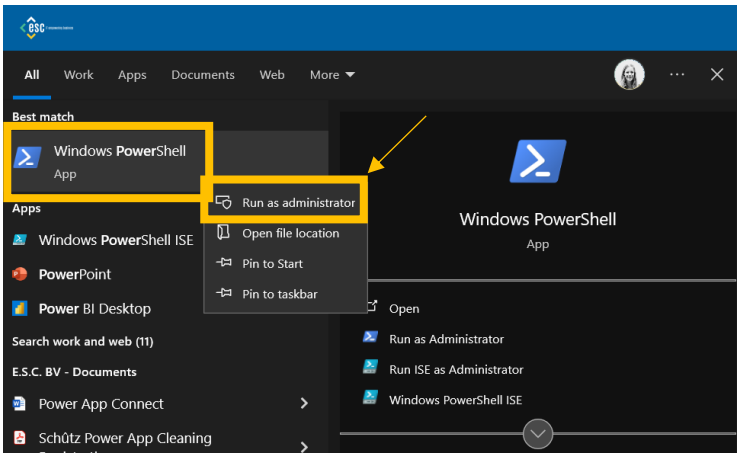
The script will perform the following steps:

1. Downloads and installs OpenSSL in case this is not yet installed on the device.
2. Guiding the user trough the process of generating an RSA key pair.
3. Generates a Certificate Signing Request (CSR) based on user input.
4. Guides the user trough additional steps on the Ibanity portal.
5. Generates a PFX Certificate File.

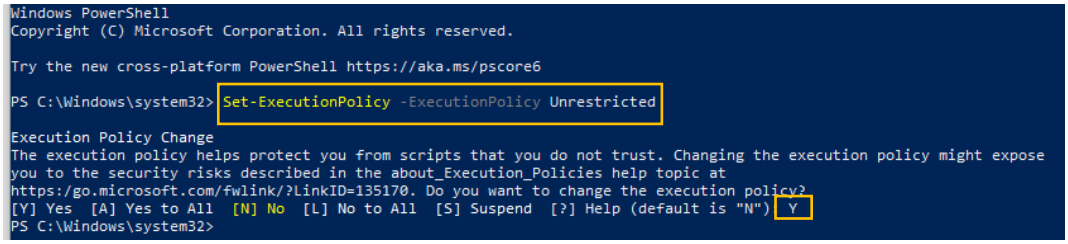
***Note:** It is also possible to **manually** run through the steps that are described for the script. This information can be found in chapter Generate certificates and credentials manually.*

Before the script can be executed, following command needs to be executed in **Windows PowerShell as Administrator**

1. Enter PowerShell in the windows search field, right click on the result and choose Run as Administrator.



2. Enter following command in the Command Prompt: Get-ExecutionPolicy and confirm by pressing ENTER.
3. If this value is **Restricted**, enter following in the Command Prompt: Set-ExecutionPolicy -ExecutionPolicy Unrestricted and press ENTER. Enter Y and ENTER.

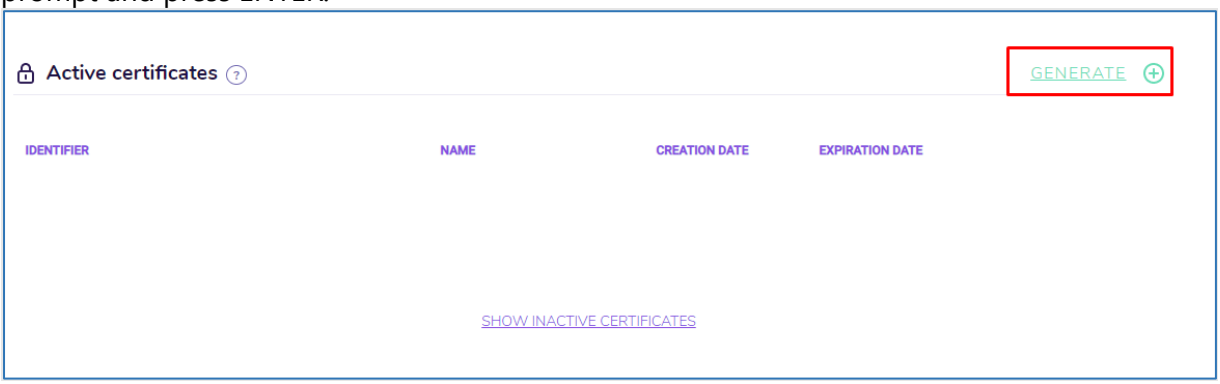


1.2.3.1 Running the Script

1. Execute the script by **right clicking on the script** and choosing the action **Run with PowerShell**.
   This will have to be run once from the folder **Certificate Credential** and once from the folder **Signature Credential**.
   a. ***Remark**: execution as Admin is not required, since it is included in the code.*
   b. *The script can also be executed using command prompt in the location of the script by entering .\GenerateIsabelCertificate and pressing ENTER.*
2. When the script is executed, when the **Security warning** that is shown, enter R and press enter.
3. The script will perform the check if OpenSSL is installed on the device. If this is not the case, the program will be downloaded and installed. The steps will be printed on the screen, have patience while the program is being installed.
4. When the installation is completed, or the program was already installed, the script will ask to navigate to Ibanity to activate certificates.
   a. After navigating to Ibanity to active Certificates enter Y and press ENTER.

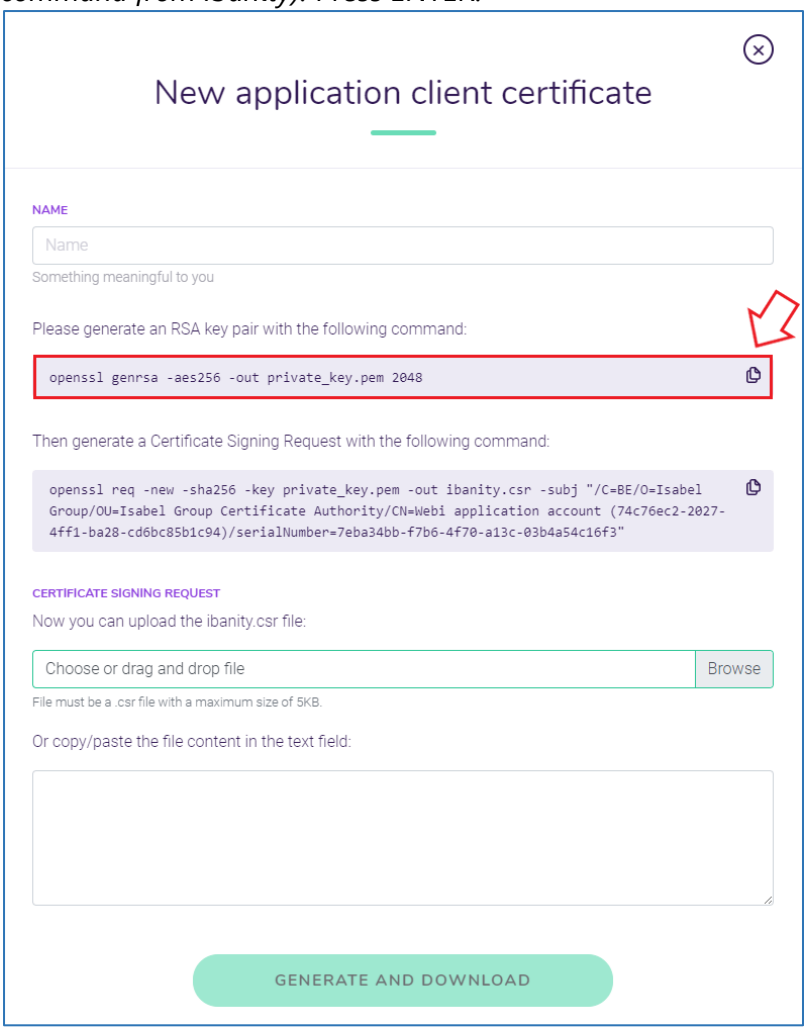
b. *Choose the **Credentials** tab in the application menu in Ibanity to find the Active certificates.*

5. Following step is for the generation of the new certificate. Choose the action **Generate** next to the Active Certificates tab in Ibanity, and enter Y in the command prompt and press ENTER.



6. **Enter a Password**. This will be needed during the Business Central installation. **Hit enter when finished**.
   A new line is added where confirmation of the password is asked (type in the same password and hit enter again).
7. Enter the **RSA Key Pairing Command** *(the first command)* that can be found in Ibanity *(either by pasting, or by right clicking in the command prompt after copying the*

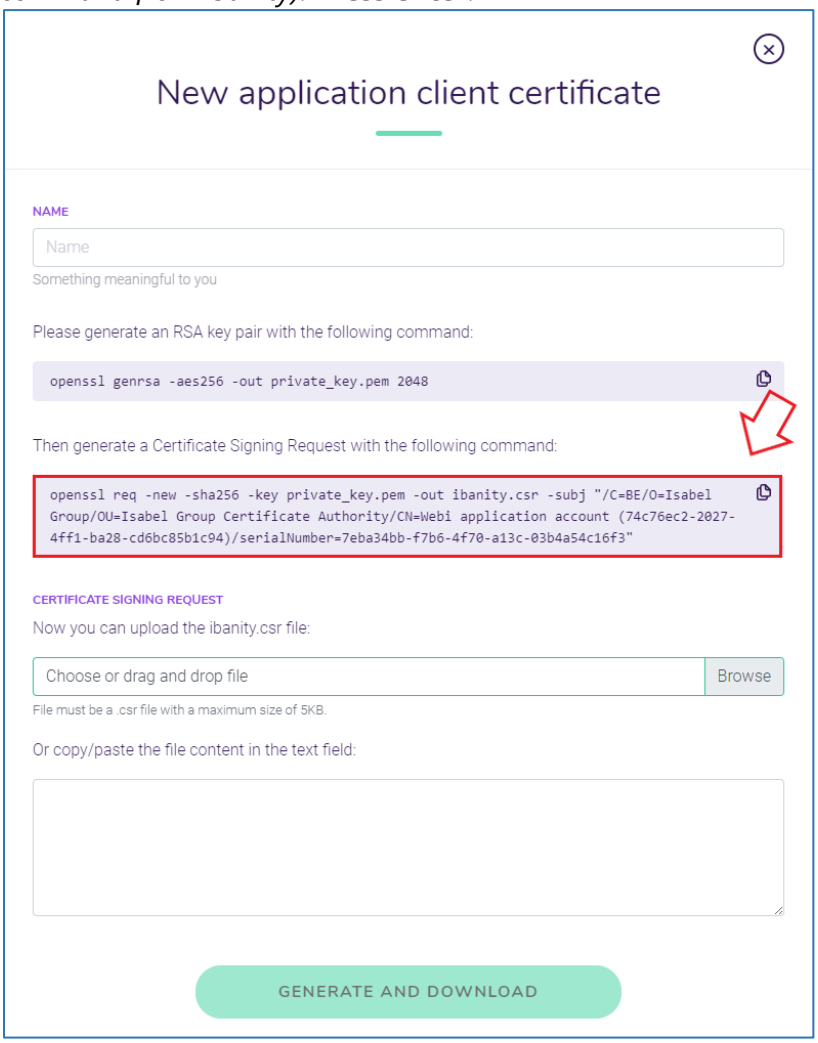
command from Ibanity). Press ENTER.



   a. If an error is shown "genrsa: can't open "private_key.pem" for writing … then it is possible that the access to the folders for the script is restricted by Windows Security.
   choose the **Search** function in the taskbar, type **Windows Security** and open the page. Choose **Protection History**. There will be a message on the date that the script failed, with the message **Protected folder access blocked**. Click on the message, choose **Yes** to let it make changes and choose **Actions** on the right. Choose **Allow on device**.
   b. Restart the script, now the error should not be given.

8. A .pem file will be generated in the in the folder in which the script is executed.

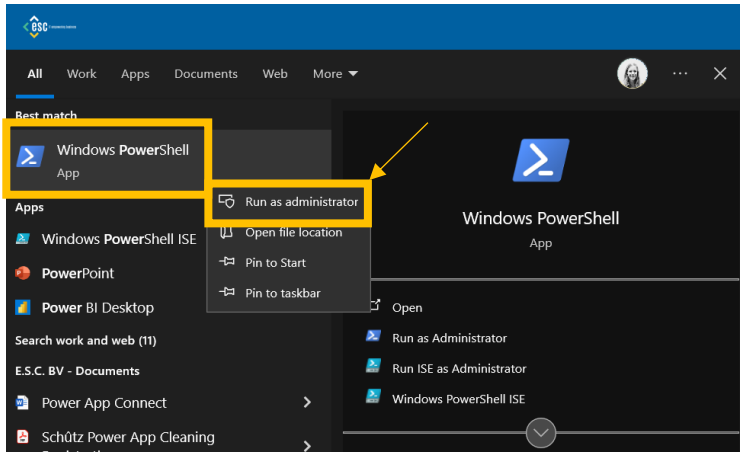
9. **Copy the second command from the ibanity window** and paste it in the command prompt *(either by pasting, or by right clicking in the command prompt after copying the command from Ibanity)*. **Press enter**.



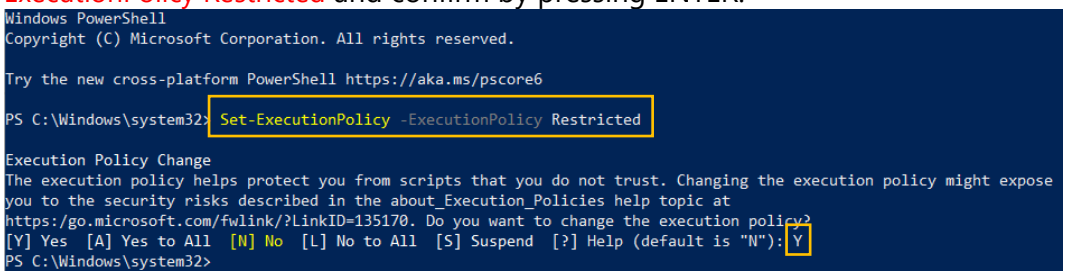
10. The Certificate signing request will be automatically copied to the clipboard after a successful generation. Paste the value in the **Certificate Signing Request** box in the Ibanity portal. When this is done, enter Y in the command prompt and press ENTER.
11. *A .csr file will be generated in the folder in which the script is executed.*
12. Lastly, choose the action **Generate and Download** in the Ibanity portal to generate and download the Certificate. Before the download can be executed, it is possible that a password needs to be entered. **Enter the password of the user, not the password of the certificate.**
    When this is done, enter Y in the command prompt and press ENTER.
13. Extract the downloaded zip file to the location of the script file. Make sure the files themselves are in the same folder and not in another folder.
14. Copy the file name of the Certificate.pem file, in order to avoid typing errors. Otherwise the script will exit and the process needs to be continued manually. Paste this name in the command prompt and press ENTER.
15. The certificate file is created and can be found in the folder of the script file.
16. The command prompt can be closed. Navigate to the other folder to set up the Signature Certificate and run trough the same steps using the script.
17. The command prompt can be closed.

18. After executing the script for the Certificates, make sure to reset the Execution Policy to the value it was before.

a. Enter PowerShell in the windows search field, right click on the result and choose Run as Administrator.



b. If this was **Restricted**, enter following command: Set-ExecutionPolicy -ExecutionPolicy Restricted and confirm by pressing ENTER.

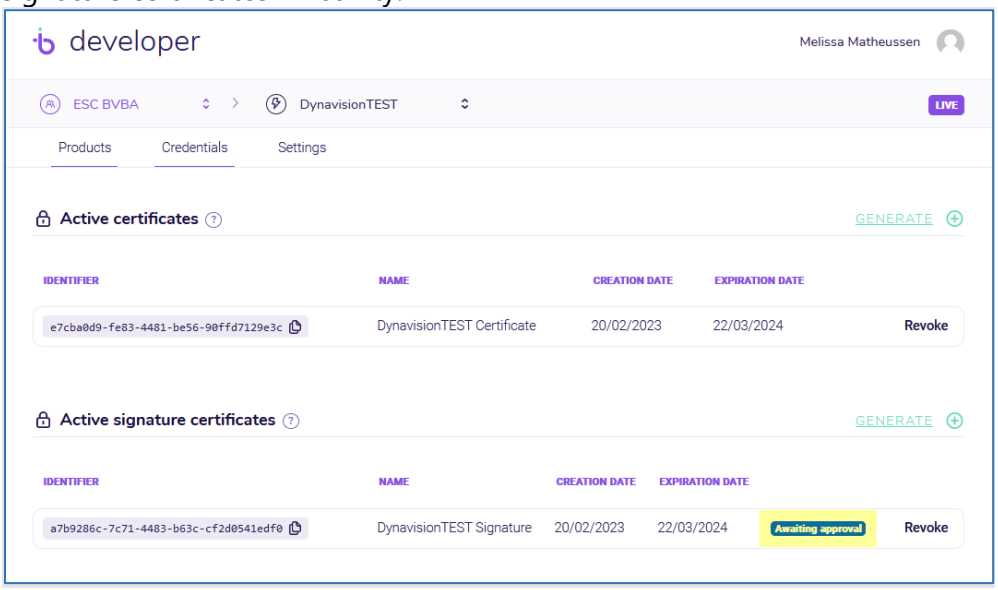


1.3 Result of Ibanity Setup

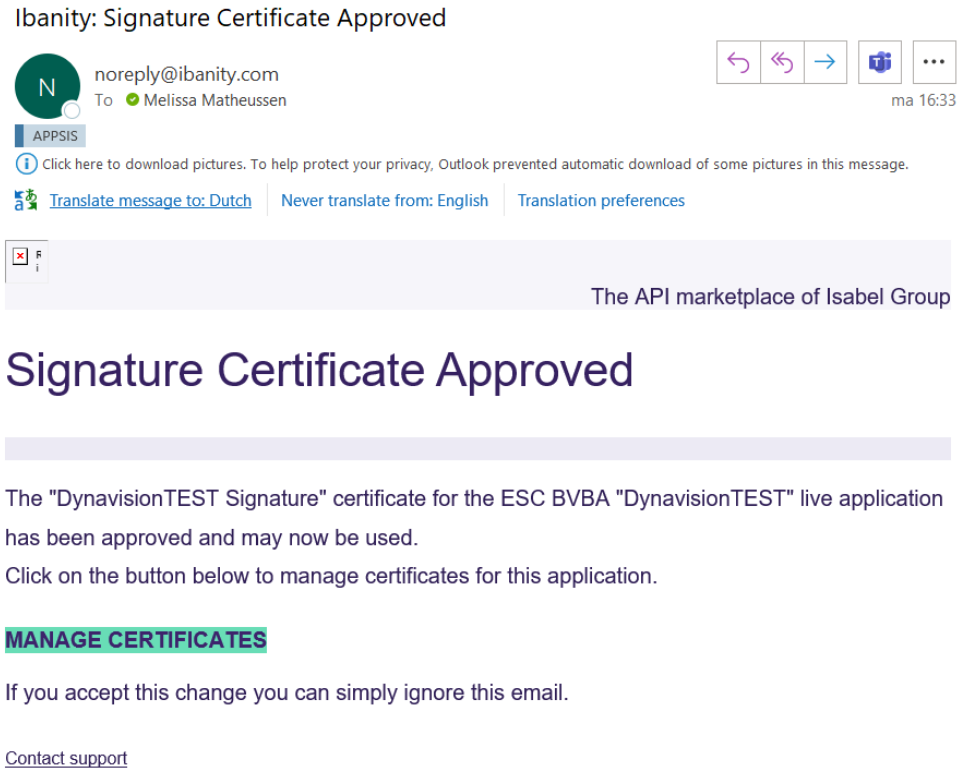
Once all steps (*mentioned above)* are completed, there should be 8 parameters. These should be saved, they are needed for the setup of the Isabel Connection in Business Central.

1. **Client ID**
2. **Client secret**
3. **Certificate ID**
4. **Certificate Password**
5. **Certificate file (pfx file)**
6. **Signature Certificate ID**
7. **Signature Certificate Password**
8. **Signature Certificate file (pfx file)**

Before continue the setup in Business Central, make sure the Signature Certificate is approved. The status of the approval can be followed up in the listview of the active signature certificates in Ibanity.



Once the Signature Certificate is approved (*this will take approximately 2 days*), following mail will be received:



Ibanity: Signature Certificate Approved

noreply@ibanity.com
To Melissa Matheussen
ma 16:33

APPSIS

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Translate message to: Dutch | Never translate from: English | Translation preferences

The API marketplace of Isabel Group

Signature Certificate Approved

The "DynavisionTEST Signature" certificate for the ESC BVBA "DynavisionTEST" live application has been approved and may now be used.
Click on the button below to manage certificates for this application.

MANAGE CERTIFICATES

If you accept this change you can simply ignore this email.

Contact support

2 Setup Business Central Connection

After setting up Isabel Connect, information will be needed from this setup in following steps. There is also need for an Isabel Environment with card reader and card. The Card reader from the person for which Isabel Connect is activated will be needed.
***Remark**: The linking process has to be run through by using the Isabel Card with the most complete and highest set of authorizations. It is also essential to confirm if this card can already receive CODA files, otherwise this needs to be activated.*

1. Open Ibanity and navigate to the application for the current customer.
2. Navigate to the Products tab and open the Isabel Connect Products page by choosing the action **View** in the line.
3. Copy the **Redirect URL** from the **Isabel Connect Setup Page** in the Business Central environment of the customer.
    a. This field will be automatically filled in when the setup page is opened for the first time, or when the value in the **Isabel API Version** field is changed to **V2**. If the URL is empty, choose the action **Set default redirect url** which can be found by choosing **Actions** in the actions bar in the header.
4. Choose the action **Create** to create an **Allowed redirection URI**.
5. Paste the copied **Redirection URL** in the field **Redirection URI**. Choose **Create**.
6. Keep the page open with the **Client ID** and **Client Secret** in the Ibanity Portal.
7. Navigate to the **Business Central** environment of the customer, and to the **Isabel Connect Setup Page**.
8. Choose the action **Open installation wizard** to start setting up the connection to Isabel Connect.
9. Follow the steps mentioned in the wizard. This wizard will gather the necessary information in order to set up the connection. The 8 values that are mentioned in section Results will be needed in this phase.
    a. **Step 1**: Enter the **Ibanity API Information**. The values of the Client ID and Client Secret need to be entered in the fields that are shown on the page (*from the Ibanity portal)*. **Beta Mode** should be set to false.
        i. On the Ibanity page, choose **Generate New Secret**. Copy the value and paste in the field in the Business Central wizard.
    b. **Step 2**: Fill in the information regarding the **Ibanity API Certificate**. The values for these fields can be copied from the Ibanity portal. *(The passwords can be found in the Credentials tab on the portal.)*
        i. Make sure the Signature is approved by Ibanity before going further in this process.
    c. **Step 3**: Upload the **Ibanity Files**. Use the three dots to upload the Certificate .PFX file and the Signature Certificate .PFX file, created on the Ibanity Platform.
        i. A check is performed on the chosen files, if the credentials entered on the previous step match the uploaded file. If not, an error will be thrown and it will not be possible to finish the wizard.
        If the credentials are correct, it is possible to move to the next step in the wizard.
    d. **Step 4**: Set up the **Isabel Connect in the Isabel Environment**. Choose the three dots shown on the screen to navigate to the Isabel environment.

   i. A new tab is opened, in which the user for authentication needs to be confirmed.
   ii. Enter the PIN Code of the user.
   iii. The browser will redirect the user a few times and in the end, it is possible to allow Dynavision to "control" the Isabel Environment.
   iv. Choose **Confirm** in the Isabel Connect Page.
   v. After this confirmation, the system will redirect back to Business Central. This Tab can be closed and also the remaining pages that were opened by Isabel; make sure to not close the page with the assisted setup.
   vi. Choose the action **Next** in the **Installation Wizard** in Business Central in order to move on to the last stap of the wizard.
   e. **Step 6**: Fill in the last fields that are asked on the wizard to complete the setup and choose the action **Finish**.

   If needed, the setup can be changed later in the page Isabel Connect Setup.
10. After choosing the action **Finish**, it can take up to 30 minutes for the credentials to be validated.
11. Optionally choose the action **Synchronize Bank Accounts** to use the Isabel Connect Interface to synchronize the banks in Isabel to the Business Central environment.
    a. Please wait 15 minutes before opening the bank account mapping screen, because it takes some time for Isabel to assign the correct permissions after the user linking process.
    b. How this can be done is described in the Advanced Finance manual, in section 4.5.2.3 Synchronize Bank Accounts

The Connection van be checked by using the action **Update Refresh Token**. The Access Token and Access Token Validity Period fields should have received a new value.

3 Uninstall Business Central Connection

It is always possible to stop using the Isabel Connect interface in the Dynavision Advanced Finance BE Module.

1. Navigate to the page **Isabel Connect Setup** and choose the action **Uninstall Isabel Connect**.
2. On the Wizard page that opens, choose the three dots displayed on the page to open the Isabel Environment.
3. Log in to the environment and navigate to **Manage Isabel Connect**.
4. Use the **Disconnect** action to disconnect the Business Central Environment of the customer.
5. Close the extra tab.

After running the uninstall wizard, the fields on the **Isabel Connect Setup** page will be cleared.

4 Isabel Connect Certificate Renewal

In order to renew the certificates from Isabel Connect in Business Central, run trough the renewal process on Ibanity and upload the renewed certificates on Business Central in the page **Isabel Connect Setup**.

5 Additional remarks

The customer must disable the module **Export of Account information** from the moment that Isabel Connect is operational. The CODA files will still be received automatically, because Isabel Connect contains the coupling for this information. This is to make sure that the customer will not be billed separately for this module by Isabel (10.30 euro/month per user). Remark: Communicate this to the customer, in order to make the correct decisions and to keep the customer informed.

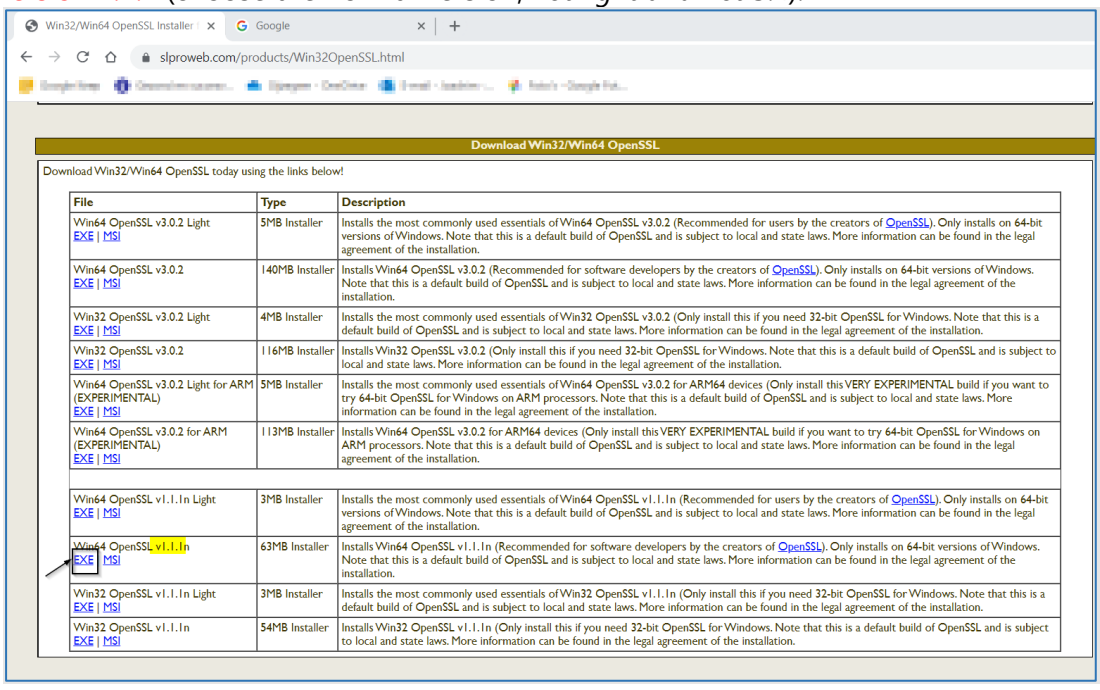
6 Generate certificates and credentials manually

Remark: *this section guides the user trough the steps to set up the certificates manually. This can be executed when the generation with the script is not used.*

6.1 Installation of OpenSSL

In order to set up the Isabel Environment, and obtaining all necessary information for setting up Isabel Connect, a working version of OpenSSL has to be installed on the local computer. It is necessary to set up Administrator rights on the local computer in order to use OpenSSL.

OpenSSL can be installed using following steps below:

1. Make sure OpenSSL isn't already installed on the pc.
    - Open the Command Prompt.
    - Type "openssl" + enter.
        - Following needs to be displayed on the Command Prompt: "'openssl' is not recognized as an internal or external command, operable program or batch file.
2. Download and install OpenSSL.
    - Go to https://slproweb.com/products/Win32OpenSSL.html and download the EXE of version 1.1.1 (choose the normal version, *not light and not 3.x*).
        - 

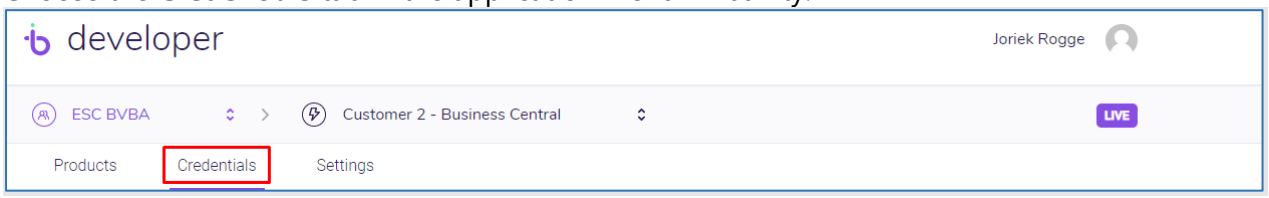
    - Open the downloaded file and walk through the installation wizard.
3. Add environment variables on the computer.
    - Navigate to the File Explorer on the local computer.
    - Right click on This PC and choose Properties.
    - Choose Advanced System Settings.
    - Choose Environment Variables….
    - Select the System Variable Path and choose the action Edit.

- Choose action New and enter following: C:\Program Files\OpenSSL-Win64\bin.

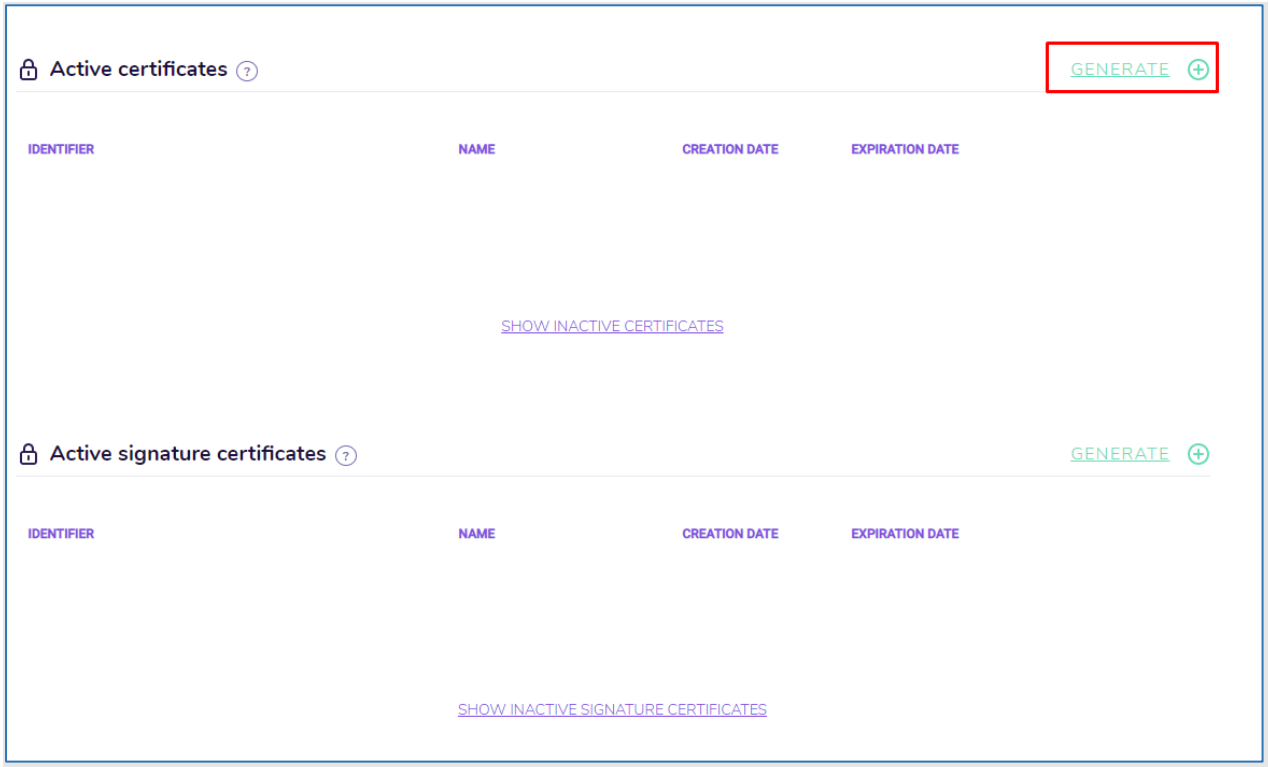
4. Check if the installation is successful.
   - Open the Command Prompt.
   - Type "openssl version" (+ enter).
     - If everything is successful, following will be printed in the Command Prompt: "OpenSSL 1.1.1n date of installation".

6.2 Certificate credential

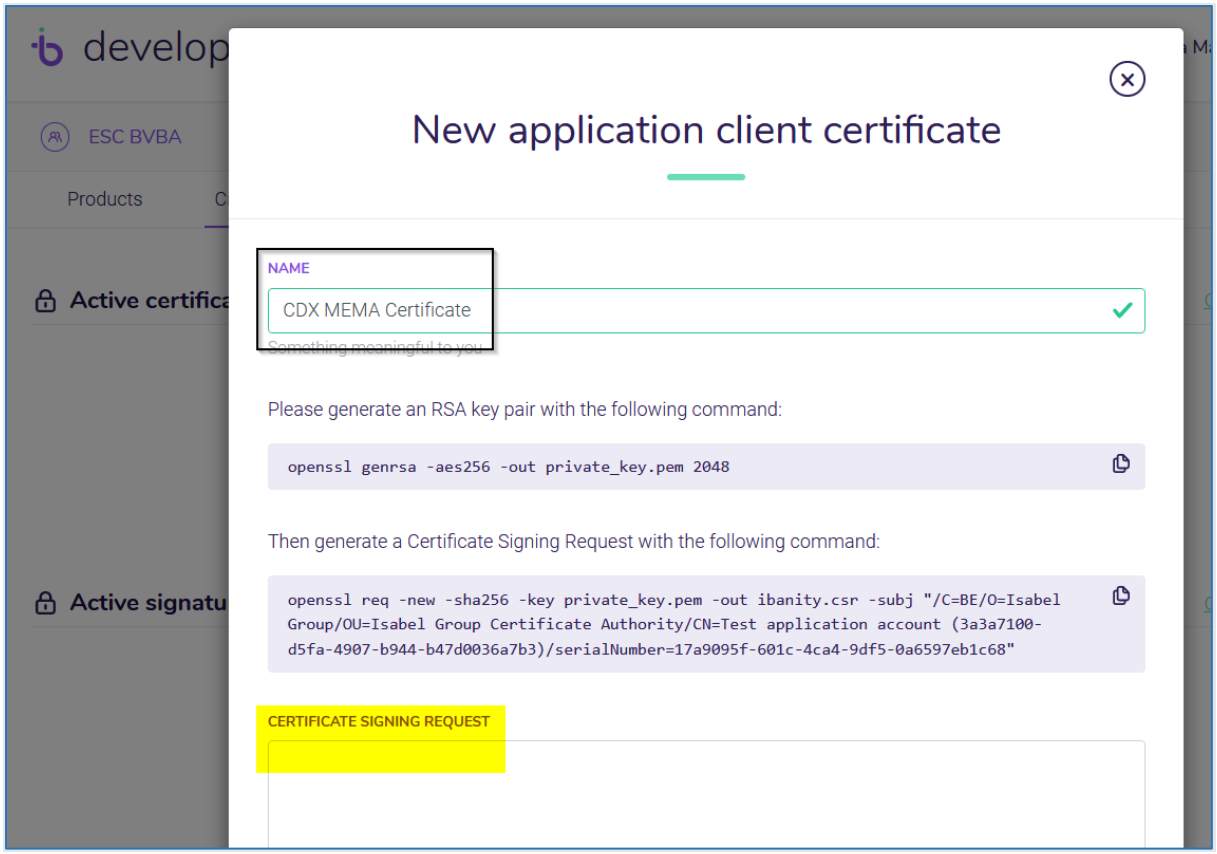
1. To complete the **Certificate signing request part**, 3 commands need to be executed on the local machine.
   The result should be pasted in the text area of the screen.
   Press Enter after each typed in command in the cmd prompt screen.
2. Choose the **Credentials** tab in the application menu in Ibanity.



3. Choose the action **Generate** in the **Active certificates** tab in order to generate a new Certificate.



4. This will open a new window where the name of the certificate can be configured.
   Name the certificate after the customer's environment.



a. Open a Command Prompt as administrator on the computer (*to open command prompt, use the Windows search function. Make sure to open it as an administrator*).

b. On the Command Prompt, change the directory using the pad of the certificate as a command. *Example given cd C:\Users\UserName\Documents\Certificate. This location is the location of the created folder in section Prepare download/backup folders.*
Press enter.

c. Enter the first command that is shown in the Ibanity page.
Copy the command from the ibanity window and paste it right after the last character in the command prompt, ***finish by pressing enter.***
A new line will be created which asks for a password.

d. Enter a **Password**. This will be needed during the Business Central installation.
*When typing in a password, nothing will appear on the screen****, just hit enter when finished.***
A new line is added where confirmation of the password is asked (type in the same password and **hit enter again**).

e. A .pem file will be generated in the in the folder to which was navigated in the Command Prompt (*step c*).

f. Execute following command: `set OPENSSL_CONF=C:\Program Files\OpenSSL-Win64\bin\cnf\openssl.cnf` (*Change the directory if needed*)
Press enter.

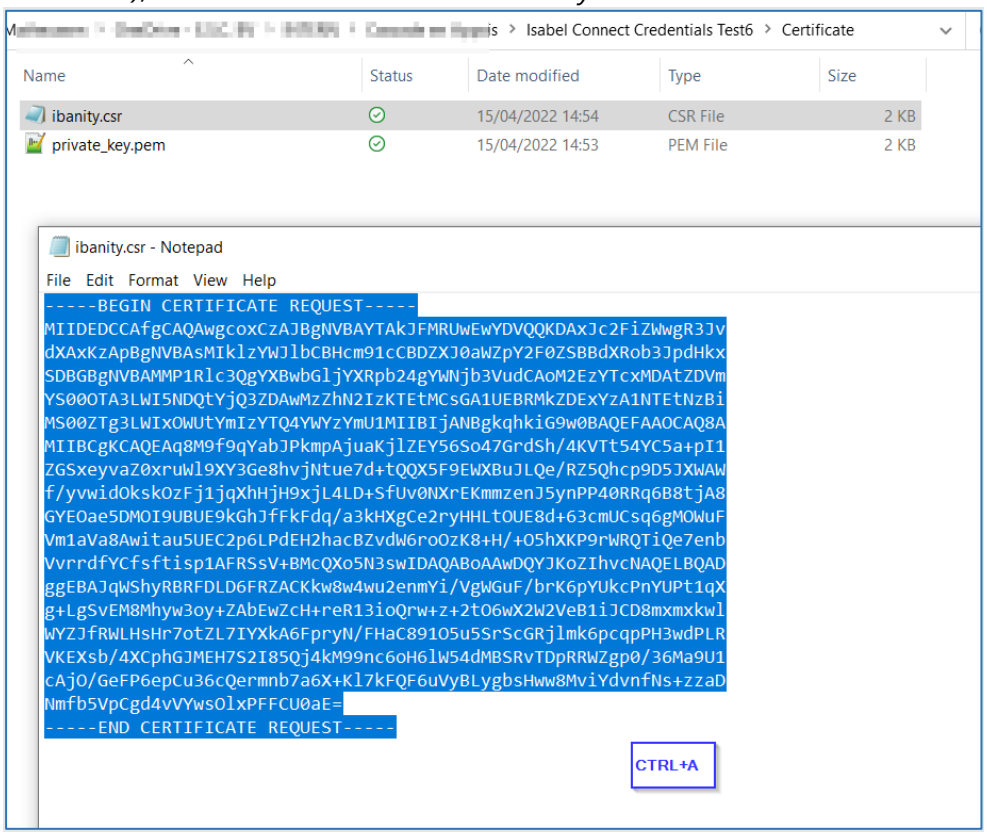
g. Copy the second command from the ibanity window and paste it in the command prompt. **Press enter**.

h. Enter the same password as entered for the previous Ibanity command. **Press Enter.**

i. A .csr file will be generated in the folder.

j. Open this file (*in NotePad*) and copy the content into the text area of the Ibanity Webpage.

- *Use the CTRL+A button to select all info in Notepad (even the hidden characters), then use CTRL+C and CTRL+V key board combinations.*



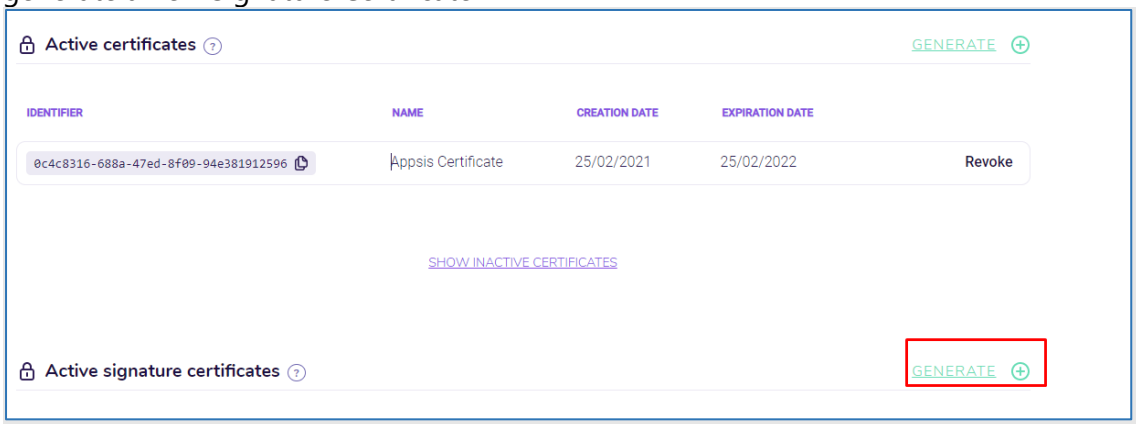
k. Choose the action **Generate and Download** in order to generate and download the certificate.
Enter the password of the Ibanity account.

1. A ZIP file will be downloaded on the computer (*e.g. in the downloads folder*). Extract this ZIP file and copy the downloaded files in the Certificate folder.
2. Lastly, enter following command in the command prompt :
`openssl pkcs12 -export -out certificate.pfx -inkey private_key.pem -in certificate.pem` -des3 -macalg SHA1
Press Enter.
3. Enter the Certificate password created earlier and **press Enter**. After that, enter an export password and confirm that password.
4. **Press enter.** This will generate a .pfx file that later will have to be uploaded in the Business Central environment.

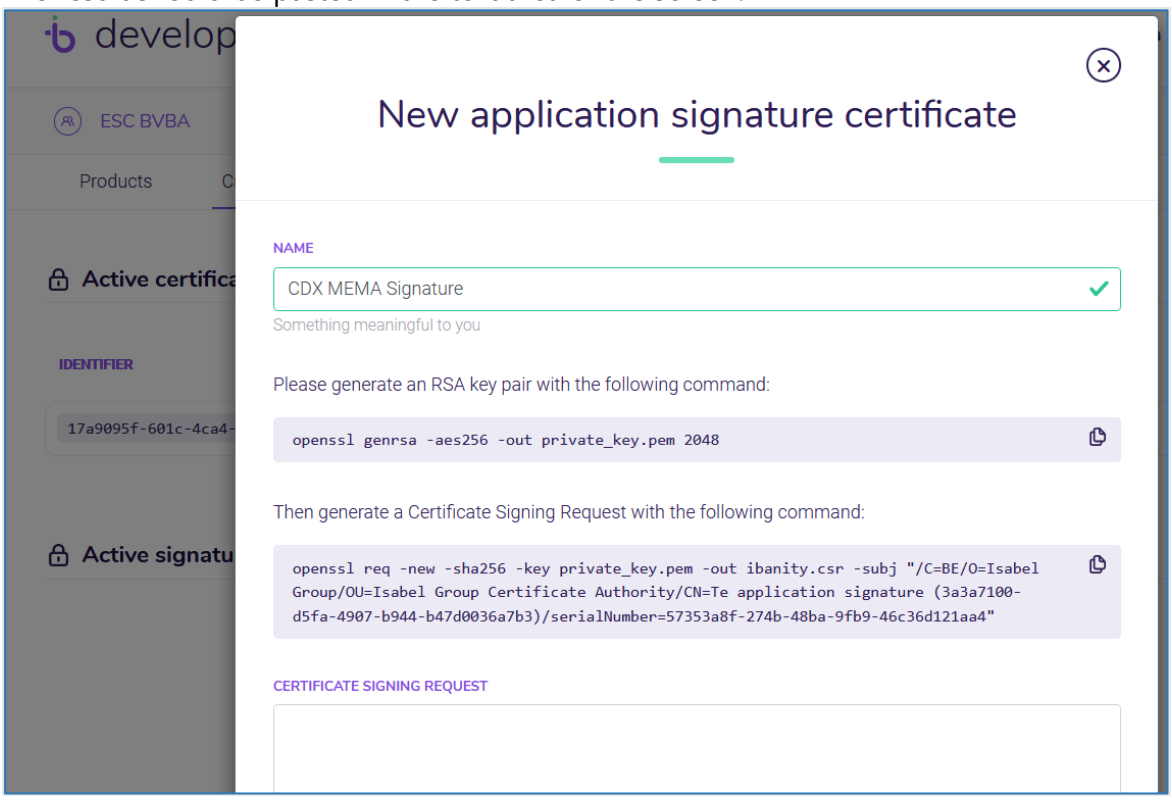
6.3 Signature credential

The steps, mentioned in previous section Certificate credential have to be repeated in order to generate a **Signature Certificate**.
Use the same password as when generating the Certificate, but use the other folder that has been created for the Signature Certificate.

1. Choose the action **Generate** in the **Active signature certificates** tab in order to generate a new Signature Certificate



2. This will open a new window where the name of the signature certificate can be configured.
   Name the certificate after the customer's environment.
   a. To complete the **Certificate signing request part**, 3 commands need to be executed on the local machine.
      The result should be pasted in the text area of the screen.



b. Open a Command Prompt as administrator on the computer (to *open command prompt, use the Windows search function. Make sure to open it as an administrator*).

c. On the Command Prompt, change the directory using the pad of the certificate as a command. *Example given cd C:\Users\UserName\Documents\Signature. This location is the location of the created folder in section Prepare download/backup folders.*
Press enter.

d. Enter the first command that is shown in the Ibanity page.
Copy the command from the ibanity window and paste it right after the last character in the command prompt, finish by pressing enter.
A new line will be created which asks for a password.

e. Enter a **Password**. This will be needed during the Business Central installation.
*When typing in a password, nothing will appear on the screen, just **hit enter when finished**.*
A new line is added where confirmation of the password is asked (type in the same password and **hit enter again**).

f. A .pem file will be generated in the in the folder to which was navigated in the Command Prompt (*step c*).

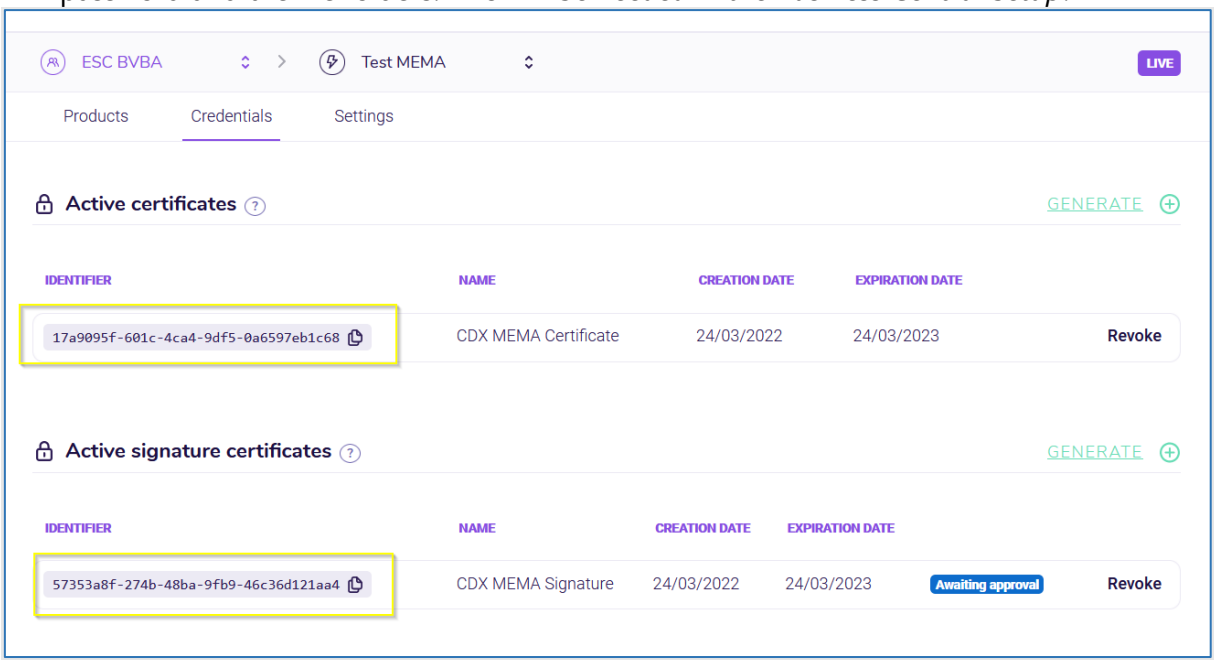
g. Execute following command: `set OPENSSL_CONF=C:\Program Files\OpenSSL-Win64\bin\cnf\openssl.cnf`. (*Change the directory if needed*)
Press Enter.

h. Copy the second command from the ibanity window and paste it in the command prompt. **Press enter**.

i. Enter the same password as entered for the previous Ibanity command. **Press Enter.**

j. A .csr file will be generated in the folder.

k. Open this file (*in NotePad*) and copy the content into the text area of the Ibanity Webpage.
- *Use the CTRL+A button to select all info in Notepad (even the hidden characters), then use CTRL+C and CTRL+V key board combinations*

3. Choose the action **Generate and Download** in order to generate and download the certificate.
Enter the password of the Ibanity account.
4. A ZIP file will be downloaded on the computer (*e.g. in the downloads folder*).
Extract this ZIP file and copy the downloaded files in the Signature folder.
5. Lastly, enter following command in the command prompt :
```
openssl pkcs12 -export -out signature.pfx -inkey private_key.pem -in signature_certificate.pem  -des3 -macalg SHA1
```
Press Enter.
6. Enter the Signature Certificate password created earlier and **press Enter**. After that, enter an export password and confirm that password.
7. **Press enter**. This will generate a .pfx file that later will have to be uploaded in the Business Central environment.

8. Once this is completed save the **certificate ID** of both certificates. Save the used password and the file folders. *This will be needed in the Business Central Setup*.