

POS Developers Apps

This section describes the Developer Portal applications which are used by POS developers.

1. [Dev ESDC](#)
Development ESDC is a software version of ESDC and it is used by POS developers. Dev-ESDC is built according to the latest technical specification for ESDC devices and is used to develop, test and accredit invoicing solutions.
2. [VSDC Request submitter](#)
VSDC Request submitter is a basic [V-SDC](#) signing app, created with the intention of helping POS developers to integrate with the TIMS system.

Dev-ESDC

Development ESDC is a software version of ESDC and it is used by POS developers. Dev-ESDC is built according to the latest technical specification for ESDC devices and is used to develop, test and accredit invoicing solutions.

It simulates the operation of an ESDC on a local network in the production environment, so vendors can upgrade their applications or devices without obtaining any physical device or smart card.

Development ESDC is also used during the accreditation process to check whether an invoicing system is functional.

#Accessing and using Dev-ESDC

1. When you open the Dev-ESDC page you will see the list of all of your ESDC instances, depending on how many Developer certificates you were issued. Your secure access contains URL, along with a token (as a part of the URL), UID of your developer certificate and PIN of your admin/developer card:

Your personal Development ESDC instances.

NOTE: Five invalid PIN inputs will lock card.

List of ESDC Instances

Token	URL	PIN	UID	Card Inserted	PIN Counter	Date Activated	Action
6e136339-27a1-4366-a260-ccaa5cca9383	http://devesdc.ft1.test.taxcore.dti.rs/6e136339-27a1-4366-a260-ccaa5cca9383/api	7478	KE27S68E	<input type="checkbox"/>	0	31/07/2020 01:20:35	Insert Card Remove Card Reset Pin Counter

Dev-ESDC – Image of the Dev-ESDC page

-
2. To start using to one of the ESDC instances, click on the button **Insert Card**
3. Card status will change, and the ticked checkbox will show this change:

List of ESDC Instances

Token	URL	PIN	UID	Card Inserted	PIN Counter	Date Activated	Action
6e136339-27a1-4366-a260-ccaa5cca9383	http://devesdc.ft1.test.taxcore.dti.rs/6e136339-27a1-4366-a260-ccaa5cca9383/api	7478	KE27S68E	<input checked="" type="checkbox"/>	0	31/07/2020 01:20:35	Insert Card Remove Card Reset Pin Counter

Dev-ESDC – Image of the list of ESDC instances

-
-
-
4. Copy the URL into Postman, Swagger or your POS, followed by the command for verifying PIN, for example:

<http://devesdc.ft1.test.taxcore.dti.rs/6e136339-27a1-4366-a260-ccaa5cca9383/api/Status/VerifyPin>

-
-
-
-
5. After you verify your PIN, you can continue with the testing by calling other [commands from Technical Instructions for POS Developers](#)
6. If you accidentally input a wrong PIN more than 5 times, your ESDC instance will get blocked. This also simulates real smart card behavior, in case you wish to implement support for this case. To verify the number of incorrect PIN inputs, check the PIN counter

List of ESDC Instances

Token	URL	PIN	UID	Card Inserted	PIN Counter	Date Activated	Action
6e136339-27a1-4366-a260-ccaa5cca9383	http://devesdc.ft1.test.taxcore.dti.rs/6e136339-27a1-4366-a260-ccaa5cca9383/api	7478	KE27S68E	<input checked="" type="checkbox"/>	0	31/07/2020 01:20:35	Insert Card Remove Card Reset Pin Counter

Dev-ESDC – Image of the list of ESDC instances

-
-
-
-
-
-
7. To reset the PIN counter for your card, click on the button **Reset PIN Counter**
- 8.

To simulate the behavior of smart card removal, click the button **Remove Card**

VSDC Request submitter

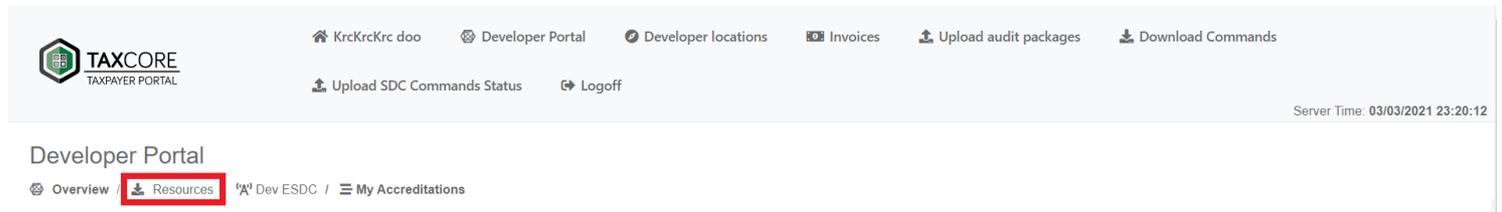
VSDC Request submitter is a basic [V-SDC](#) signing app, created with the intention of helping POS developers to integrate with the TIMS system.

This mini-app is used to send an invoice request in order to get a signature from the V-SDC system.

To use it, you need to install all the certificates from the registration approval email that you received from TIMS.

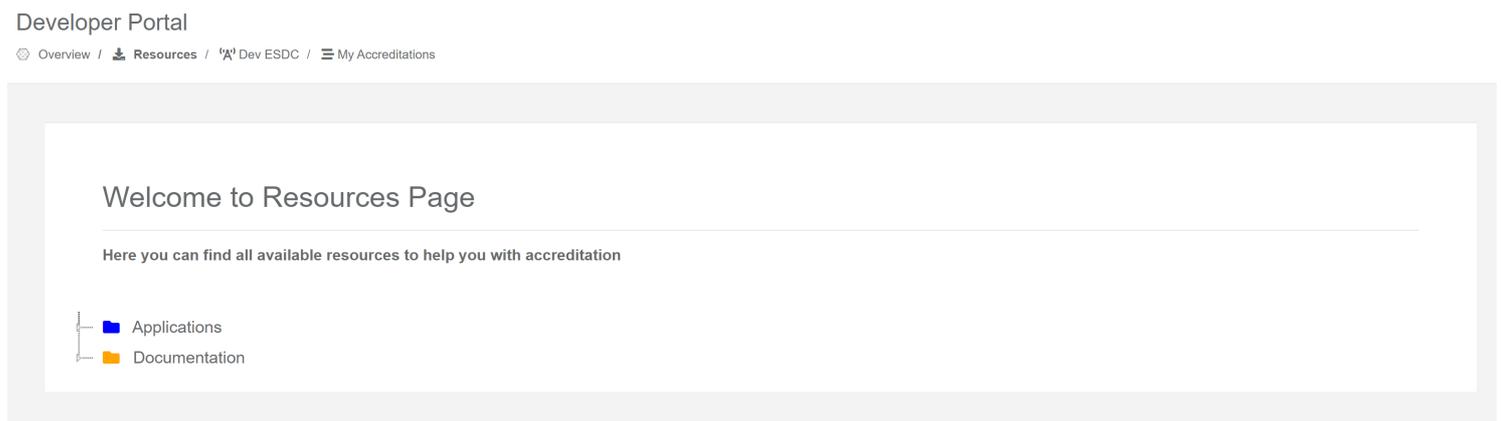
Accessing VSDC Request submitter

To access the VSDC Request submitter, click on **Resources**.



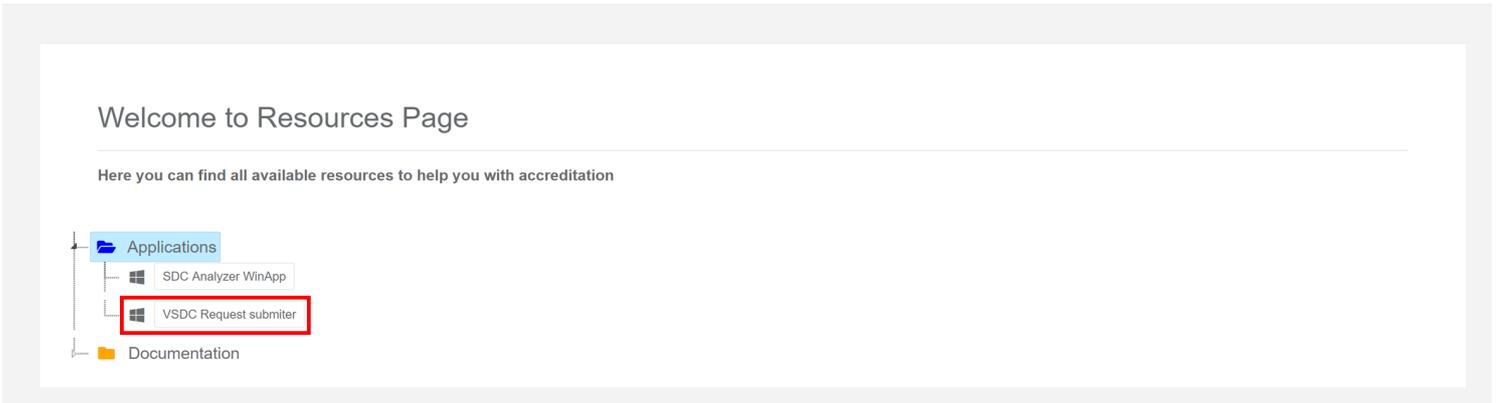
VSDC Request Submitter – Image of the Developer portal page

On the *Resources* page, double-click on **Applications**.



VSDC Request Submitter – Image of the Resources page

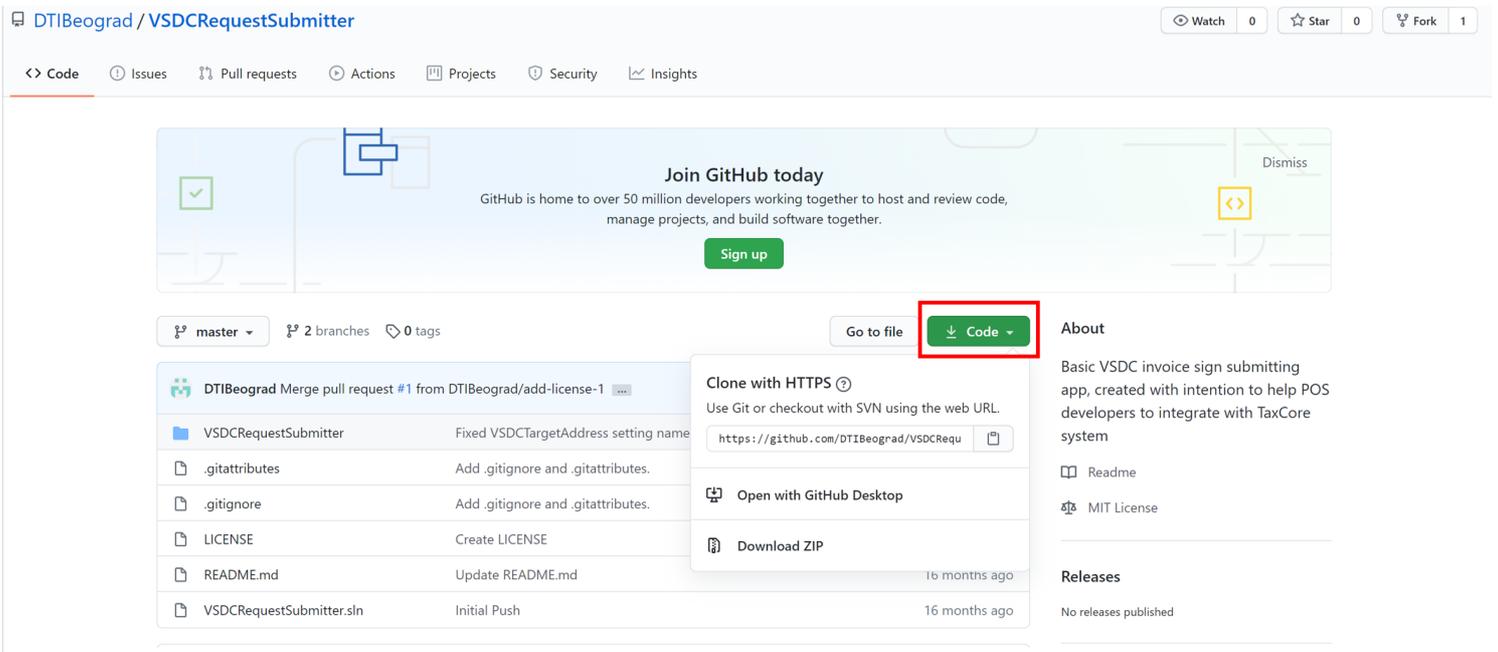
VSDC Request submitter will appear in the drop-down menu.



VSDC Request Submitter – Image of the Resources page

Using VSDC Request submitter

When you click on **VSDC Request submitter** in **Resources** menu, a GitHub page will open. You can download or copy the code by clicking on **Code**.



VSDC Request Submitter – Image of a GitHub page

To submit a request, you will need to replace the values for *VSDC Target Address* and *PFX certificate name* and to enter the PAC for authenticating your certificate.

VSDC Request Submitter

VSDC Target Address

REPLACE WITH VSDC URL

Certificate Name (Subject CN):

REPLACE WITH POS PFX Certificate Name (Subject CN)

Request:

```
{
  "DateAndTimeOfIssue": null,
  "Cashier": null,
  "BD": null,
  "BuyerCostCenterId": null,
  "IT": 0,
  "TT": 0,
  "PaymentType": 1,
  "InvoiceNumber": null,
  "ReferentDocumentNumber": null,
  "PAC": "REPLACE WITH PAC CODE RECEIVED WITH POS PFX FILE!!!!",
  "Items": [
    {
      "GTIN": null,
      "Name": "Network Cable",
      "Quantity": 1.0,
      "Discount": null,
    }
  ]
}
```

Submit

VSDC Request Submitter – Image of the VSDC request submitter page

- For VSDC Target Address use: <https://vsdc.sandbox.taxcore.online/>
- PFX certificate name can be seen in the Subject section of the PFX certificate

Certificate



General Details Certification Path

Show: <All>

Field	Value
Version	V3
Serial number	1f625cbbe5efd65f000000003bb4
Signature algorithm	sha256RSA
Signature hash algorithm	sha256
Issuer	TaxCore ICA1 Development, DT...
Valid from	Thursday, July 30, 2020 3:09:2...
Valid to	Sunday, July 30, 2023 3:19:24 ...
Subject	marko.denic@dti.rs, KE27 Boar'...

E = marko.denic@dti.rs
CN = KE27 Boar's Head
SERIALNUMBER = KE27568E
G = Tony
SN = Adams
OU = Boar's Head
O = Boar's Head
STREET = 1500 W Plum St
L = Fort Collins
S = NOT APPLICABLE

Edit Properties...

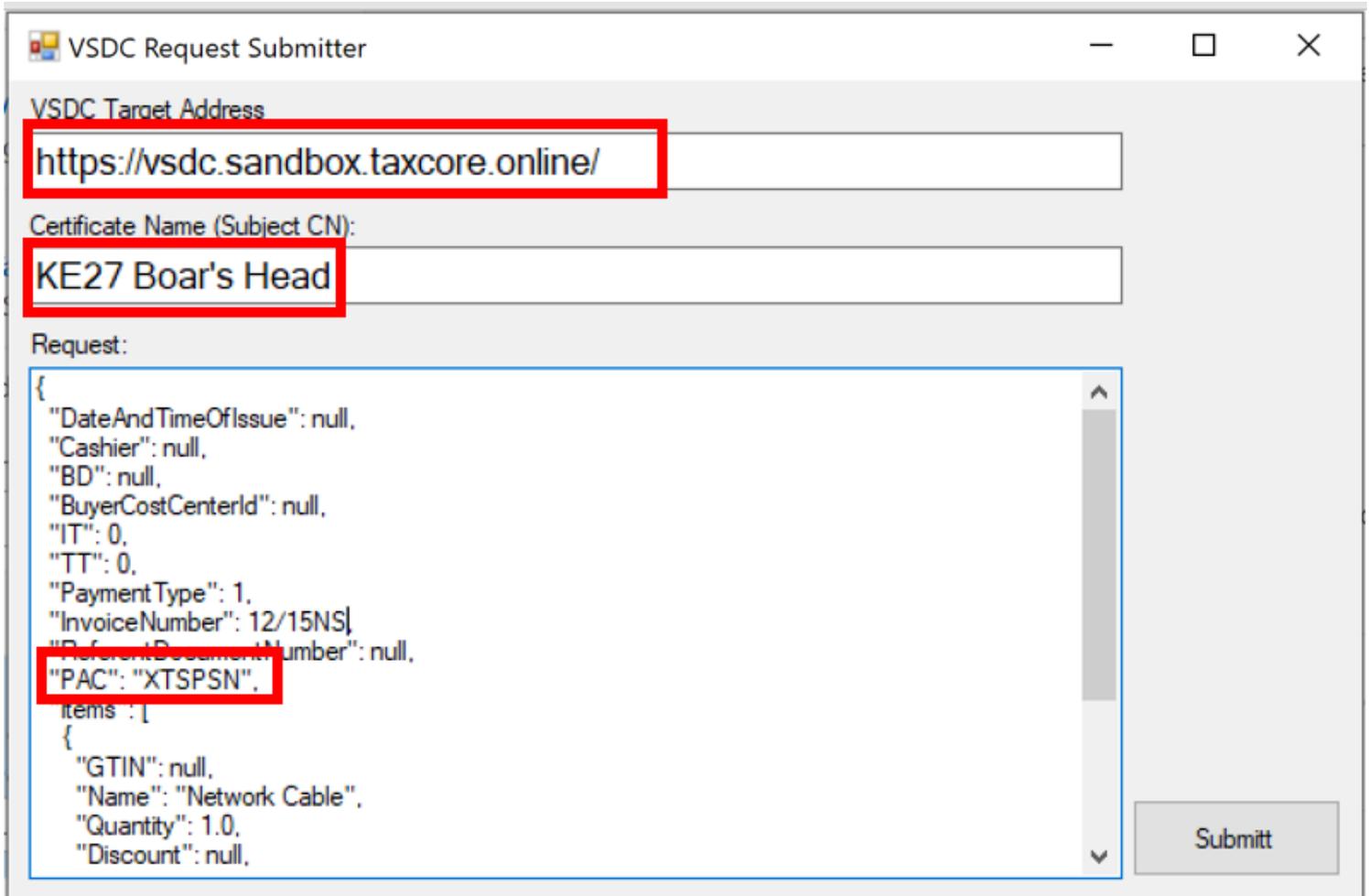
Copy to File...

OK

NOTE:

To avoid the constant setting of the VSDC server address and PFX certificate name from the app interface, you can set them by editing the *app.config* file.

- You can find the certificate PAC in the registration approval email that you received from TIMS



VSDC Request Submitter – Image of the VSDC request submitter page

NOTE:

For detailed instructions and examples for submitting invoice requests, see [Technical Instructions for POS Developers](#).

You can find the results on the link provided in the Message Box.