For POS Developers

This article offers useful initial information about technical requirements for accrediting POS solutions.

NOTE:
Before reading the rest of this article, make sure you have read Getting Started With Accreditation
Also, before you start developing your solution, please read General Information for all vendors.

This article offers POS vendors who are interested in accrediting a POS solution the following insight:

- how a POS solution fits in with other EFD components?
- how to navigate the rest of the technical instructions in order to initialize development?

Quick step-by-step guide for POS accreditation

1. Register as a vendor for the Sandbox environment
2. Receive a Developer Certificate and use it to access the Developer Portal
3. Use the Developer Portal to request additional certificates for testing purposes
4. Consult all the sections in these technical instructions to see understand all the requirements and how they should be implemented
5. Use the testing applications on the Developer Portal to test your POS operation
    - Dev-ESDC for testing POS operation with E-SDC service
    - VSDC Request Submitter for testing POS operation with E-SDC service
6. Compile user documentation for your POS
7. Use the My Accreditations section on Developer Portal to apply for accrediting your POS

Integration with other EFD components

POS is one of three components of any EFD setup.

NOTE:
For an overview of all EFD components and how they communicate with each other, see Electronic Fiscal Device.

POS can work with just one SDC service or with both V-SDC and E-SDC (in which case they are used alternately, depending on the internet availability).

For more details about the differences between the two SDC options, as well as fiscalization recommendations for different business-type scenarios, see:

- Choosing an Appropriate Model
- Differences Between E-SDC and V-SDC

- Recommendation Examples

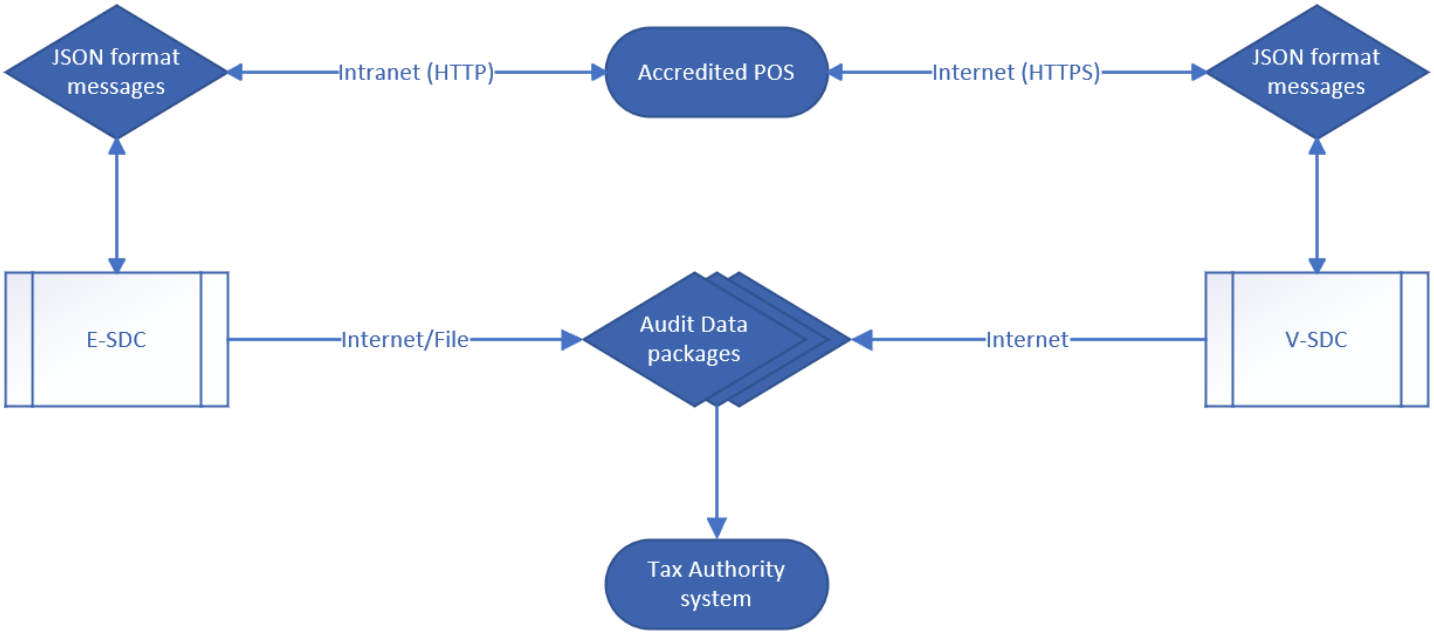

Image of POS connection options with SDC services

What can be accredited as a POS solution?

There are many options when it comes to the type of product that can be accredited as a POS solution - the main rule is that it fulfills all technical requirements contained in these instructions. The options include, but are not limited to:

- Standard cash registers
- ERP systems
- Middlewares that serve as a link between an invoicing system and an SDC service
- Mobile applications
- Web applications, etc.

What is the typical process flow of POS operations?

All accredited EFD solutions must follow the basic steps in the process of creating fiscal invoices (although some might have additional, manufacturer-specific, steps).

For a list of these basic steps, see Typical Process Flow.

Connecting with V-SDC service

Issuing fiscal invoices via a V-SDC service requires an internet connection. For more details about the process, see Connected Scenario.

Advantages of V-SDC service

- No specialized hardware
- POS can be implemented as a mobile app
- Compliance of the existing ERP system can be done quickly

- Cost of taxpayer fiscalization is reduced

Automatic audit

Disadvantages of V-SDC service

- Requires internet connection in order to create fiscal invoices

You also use the V-SDC service to issue fiscal invoices with an online POS solution. For more information, see Online POS and V-SDC Integration.

Communication between a POS solution and V-SDC is established using this POS to SDC protocol.

Connecting with E-SDC service

Issuing fiscal invoices via an E-SDC service can be performed both with or without an internet connection. For more details about the process, see Semi-Connected Scenario.

Advantages of E-SDC service

- Enables issuing fiscal invoices without internet connection

Disadvantages of E-SDC service (if implemented as a hardware/black box solution)

- Increases the cost of taxpayer fiscalization
- If implemented as a hardware/black box solution:
    - Requires a specialized/dedicated hardware
    - Prone to physical damage
    - May require a specialized/dedicated hardware maintenance

Communication between a POS solution and E-SDC is established using the following POS to SDC protocol.

What are the data formats that POS sends and receives?

The formats of all data exchanged between a POS and an SDC service (V-SDC or E-SDC) is described in section Data Formats.

Useful test cases

Please refer to section Test Cases for both standard and special test cases.

All sections of Technical Instructions for POS vendors

Technical instructions specific for POS vendors/developers consist of the following sections:

1. Choosing an Appropriate Model
   The following explanation should help you decide which fiscalization model is the most appropriate for your clients.

2. Typical Process Flow
   This section describes a typical process flow for successful fiscalization scenarios via V-SDC and E-SDC.

3. Connected Scenarios
   In this scenario POS connects to V-SDC and performs instant fiscalization of invoice using web service.

4. Semi Connected Scenarios
   Some jurisdictions may require taxpayers to connect and submit data from their E-SDC on predefined periods of time using any type of audit.

5. Data Formats
   This section describes the main data formats used during fiscalization.

6. Protocols
   Each POS or Invoicing System must communication with either V-SDC or E-SDC to fiscalize invoice.

7. Online POS and V SDC Integration
   Since Taxpayers are encouraged to use online POS capabilities, TaxCore supports scenarios for browser-based client applications. Accredited online POS creates **Invoice Requests**, and submits them via the HTTPS protocol directly to V-SDC API, using the **digital certificate** issued to Taxpayer. This process completes invoice fiscalization with a signed invoice returned to online POS.

8. Test Cases
   Regardless of the type of invoicing system you are building, the same test cases apply:

Related articles

- EFD Vendors General Information