XML FORMAT

PosConneXion

SERVICES API

POS Application

Release	Date	Author	Modification
Rel. 1.00	20210824	Peter Andersson, Infrasec Sweden	New version

Table of contents

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

1 Scope

This document describes the POS conneXion API and is aimed for POS Application Vendor developers that enable provided services in their POS Application. The POS conneXion API supply Retailers/Merchants an easy access to enroll a specific POS in the Infrasec POS conneXion Service Cloud.

Current POS conneXion API services:

This release

- Central Tax Control Unit
- Swish Corporate

Pipeline

- Distributed Order with Clearing Services
- Distributed Voucher Balance with Clearing Services
- Distributed Electronic Receipt Storage

2 Overview

The POS uses a unique client identity when communicating with the Infrasec POS conneXion Services Cloud that connects the POS instance with the requested services.

The process of enabling a POS / Register to the POS conneXion services is called enrollment. The best suitable method for a specific POS Application / Register.

Enrollment can be executed either through IDM system GUI or API by a POS Partner LRA Administrator/User or it can be delegated to trusted enrollment parties acting with credentials from the POS Partner.

Once a POS / Register is enrolled in can execute all services it is enrolled for using the credentials required from the enrollment. When a POS / Register includes a new service the POS conneXion enrolled credentials are used to access the new services in and through the Infrasec PCX cloud.

The various POS conneXion Services a POS / Register requests is bound through this common API. The different services require information relevant to the target service. This means that the POS Application supply different information depending on the service it requests.

The API supports multiple services in one request. This means that the POS Application may send one request that contains both a request to the Central Control Unit and one to the Electronic Receipt Service. Since the Electronic Receipt depends on the success of the transaction to the Central Control Unit the CCU ID and Control Code on completion then is forwarded to the Electronic Receipt Service.

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

3 Enrollment

As stated above the POS conneXion services requires that a POS / Register must be enrolled. Enrollment of a POS / Register is normally executed by a POS conneXion Services Partner. This Partner is responsible for the POS / Register and is often the Vendor/Reseller/Owner.

In order to be allowed to enroll Registers the Partner must first be enrolled to the Infrasec POS conneXion cloud. Once the Partner is enrolled, the Partner itself is provided authority to enroll new POS / Register instances in the POS conneXion cloud.

The method of enrolling a POS with a unique identity is protected by X.509 client certificate distributed to the organization responsible for the POS (Vendor/Reseller/Owner). The POS Application in turn also uses an enrolled X.509 client certificate when communicating to the POS conneXion services.

Once the POS is enrolled and possess an X.509 certificate it may call the POS conneXion services it is authorized for. The process of Enrolling a POS client to the POS conneXion cloud and to specific service includes the following functions

- Enroll POS conneXion
- Enroll POS Organization Register Identity
- Enroll POS conneXion Service

4 Normative references

X.509
Infrasec Enrollment API
Infrasec CCU API

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

5 The POS conneXion API

The POS conneXion API is built to handle provided services through a generic list of extensions. A Request must always contains a header followed by a list of details for requested services. The Response always contains a header with general error information and a list of services holding details for concerned services.

5.1 XML POS conneXion Request Example

The Request contains a header section with general information and a list of extensions:

```
<posConneXionRequest>
  <ApplicationID>ACME POS v1.0</ApplicationID>
  <RequestID>806e589fc9506474</RequestID>
  <OrgNr>1212121212</OrgNr>
  <RegisterId>EX11212121212101</RegisterId>
  <DateTime>20170131142620</DateTime>
  <posConnexionServiceList>
    <posConnexionService>
      <ServiceID>CCU</ServiceID>
      <ServiceVersion>1.0</ServiceVersion>
      <ServiceFormat>application/xml</ServiceFormat>
      <ServiceEncoding>base64</ServiceEncoding>
      <ServiceData>BASE64XXX</ServiceData>
    </posConnexionService>
  </posConnexionServiceList>
</posConneXionRequest>
```

5.2 XML POS conneXion Response Example

The response contains a header section including eventual error information and a list of extensions:

```
[
<posConneXionResponse>
  <TransactionID>18198178230534683852</TransactionID>
  <ApplicationID>ACME POS v1.0</ApplicationID>
  <RequestID>806e589fc9506474</RequestID>
  <OrgNr>1212121212</OrgNr>
  <RegisterId>EX11212121212101</RegisterId>
  <ResponseCode>0</ResponseCode>
  <ResponseMessage>Success</ResponseMessage>
  <ResponseReason></ResponseReason>
  <posConnexionServiceList>
    <posConnexionService>
      <ServiceID>CCU</ServiceID>
      <ResponseCode>0</ResponseCode>
      <ResponseMessage>Success</ResponseMessage>
      <ResponseReason></ResponseReason>
      <ServiceData>BASE64XXX</ServiceData>
    </posConnexionService>
  </posConnexionServiceList>
</posConneXionResponse>
```


Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

5.3 General Heading Attributes

5.3.1 ApplicationID

Application ID is an information that represents the calling application. This is normally the application identification and version info of the POS / Register issuing the request. Information is returned in response.

5.3.2 RequestID

Request Id is information that the marks this request individually. This is normally a sequence number or a guid that uniquely identifies this request. Information is returned in response.

5.3.3 OrgNr

Organization number of the merchant / store responsible for the register issuing the request.

5.3.4 RegisterID

Registered register identity of the POS / Register issuing the request

5.3.5 DateTime

The date and time retreived by the POS / Register when the request is issued.

5.4 General Service Attributes

The POS conneXion API provides a general set of attributes that are common for all services. Information that is specific to the particular service must be passed as a base64 encoded object.

5.4.1 ServiceID

This field identifies the requested service that shall process this entry. The information is authorized that the POS / Register is allowed to communicate with the requested service, determines endpoint

5.4.2 ServiceVersion

This field defines the version the client executes, determines endpoint

5.4.3 ServiceFormat

This field is application/xml (Certain services supports application/json)

5.4.4 ServiceEncoding

This field is base64

5.4.5 ServiceData

This field contains a base64 encoding of the data to be processed by the requested service.

5.4.6 Internal: ServiceForward

This section is for POS conneXion Service Providers as described in General Service Forward Attributes

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

5.5 General Service Response Attributes

The POS conneXion API provides a general set of attributes that are common for all services. Information that is specific to the particular service must be passed as a base64 encoded object.

5.5.1 ServiceID

This field identifies the requested service that has processed this entry.

5.5.2 ResponseCode

This field identifies a numerical value for the success of this request. Value 0 means success

5.5.3 ResponseMessage

This field will contain a textual explanation corresponding to the response code above, Value Success is ok

5.5.4 ResponseReason

This may contain a textual explanation of the reason a failing request.

5.5.5 ResponseAlert

5.5.6 ServiceData

This field contains a base64 encoding of the data to be processed by the requested service.

5.5.7 Internal: ServiceForward

This section is for POS conneXion Service Providers as described in General Service Forward Attributes

5.6 General Service Forward Attributes

This section is for POS conneXion Service Providers as described in General Service Forward Attributes

5.6.1 Internal: ServiceForwardID

This identifies the target ServiceForwardID this information is allowed to be forwarded to.
Information in this field is made available to POS conneXion Service Providers.

5.6.2 Internal: ServiceForwardData

This field contains base64 of data forwarded to target service identified by the ServiceForwardID above. Information in this field is made available to POS conneXion Service Providers.

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

6 POS conneXion Tax Control Unit Service

The POS conneXion Central Control Unit API links a POS / Register to the Infrasec Tax Control Services. Infrasec CCU is a cloud based Tax Control Unit (kontrollenhet) approved by SWEDAC in Sweden. Tax Control Unit Services is currently handled by the following providers:

Infrasec: Central Control Unit. CCU

A POS Partner must first register the concerned POS Store and Register information such as Store organization number, business location, and POS Application version etc with POS conneXion. Infrasec will register the Store and Register to Infrasec CCU Services and forward relevant information to Swedish Tax.

6.1 Service Request Central Control Unit

6.1.1 ServiceID

This field will set to “CCU”

6.1.2 ServiceVersion

This field will set to “1.0”

6.1.3 ServiceFormat

This field default is “application/xml”

6.1.4 ServiceEncoding

This field will be set to “base64”

6.1.5 ServiceData

This base64 content must be formatted as defined by Infrasec PosConneXion CCU API.

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

7 POS conneXion Voucher Balance Service

The POS conneXion Voucher API links a POS / Register to the Infrasec Voucher Services. Infrasec Voucher Service is a cloud based Voucher Service keeping balances for different type of gift cards. Voucher Services is currently handled by the following providers:

- Infrasec: Voucher Service. VOUCHER

A POS Partner must first register the concerned POS Store and Register information such as Store organization number, business location, and POS Application version etc with Infrasec. Infrasec will register the Store and Register to Infrasec Voucher Services.

7.1 Service Request Voucher Balance

7.1.1 ServiceID

This field will set to “VOUCHER”

7.1.2 ServiceVersion

This field will set to “1.0”

7.1.3 ServiceFormat

This field will be set to application/xml

7.1.4 ServiceEncoding

This field will be set to base64

7.1.5 ServiceData

This base64 content must be formatted as defined by Infrasec PosConneXion Voucher API specification.

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

8 POS conneXion Electronic Receipt Service

The POS conneXion Electronic Receipt API links a POS / Register to the Electronic Receipt Service. Electronic Receipt Services is currently handled by the following providers:

- Findity: Spara Kvittot. RECEIPTSP Depricated
- POS ConneXion: TBD
- Kivra: TBD

A POS Partner must first register the concerned POS Store and Register information such as Store organization number, business location, and POS Application version etc with Infrasec. Infrasec will register the Store and Register to Infrasec Electronic Receipt Services and forward relevant information to appropriate Electronic Receipt Provider.

8.1 Service Request Electronic Receipt

8.1.1 ServiceID

This field will set to “RECEIPTSP”

8.1.2 ServiceData

This field will be base64 of formated

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se

9 POS conneXion Swish Corporate

The POS conneXion Swish Corporate API is designed to provide a common interface to the POS Application for Swish payments Independent that the end merchant is running the POS application using SWEDBANK (Swish I kassa) or GETSWISH (Swish Handel) Swish payment service. The provided functionality vary between the SWEDBANK implementation that it supports detection of uninitiated payments. The GETSWISH functionality requires that each payment is initiated with a Getswish payment token before it can be paid upon. This means that the POS Application must call the POS conneXion Swish Corporate API with a INITIATEPAYMENT request that is required when the service method is GETSWISH, optional with SWEDBANK.

9.1 Service Request Swish Corporate

9.1.1 ServiceID

This field will set to “SWISHC”

9.1.2 ServiceVersion

This field will set to “1.0”

9.1.3 ServiceFormat

This field default is “application/xml”

9.1.4 ServiceEncoding

This field will be set to “base64”

9.1.5 ServiceData

This base64 content must be formatted as defined by Infrasec PosConneXion Swish API specification.

Infrasec Sweden AB
Visit address: Rosengatan 8, Sundbyberg
Invoice address: faktura@infrasec.se

Telephone
+46 (0) 8 411 12 40

Bankgiro
5396-5901

Org.nr.
556624-1674

URL
www.infrasec.se