

**Oracle® Hospitality Symphony**  
Store Value Card Interface Message Protocol Specification  
Release 2.6 and Later  
**E91300-01**

November 2017

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# Preface

This document describes the message protocol required to implement a SVC host adapter for the Oracle Hospitality Symphony Store Value Card (SVC) Interface.

## Audience

This document is intended for developers creating an SVC Host adapter.

## Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:  
<https://support.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received and any associated log files
- Screen shots of each step you take

## Documentation

Oracle Hospitality product documentation is available on the Oracle Help Center at  
<http://docs.oracle.com/en/industries/hospitality/>

## Revision History

Date	Description of Change
November 2017	<ul style="list-style-type: none"><li>• Initial publication</li></ul>

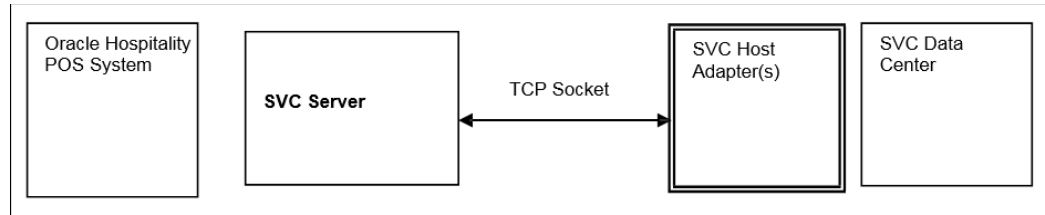
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# Stored Value Card Interface

## Overview

The Oracle Hospitality Store Value Card (SVC) system is comprised of the following components:



**Figure 1 SVC Components**

The SVC Host Adapter handles the message formatting and communications tasks that are unique to each SVC/Gift Card host. This document describes the message protocol required to implement a SVC host adapter for the Oracle Hospitality Store Value Card Interface.

For the purposes of this document the following abbreviations are used:

- SVC – Stored Value Card
- Oracle Hospitality SVC Server – SVCS
- SVC Host Adapter – SVCHA

## Communication Channel

The interface between the Oracle Hospitality Stored Value Server and the host adapter is defined as a set of structured messages passed between the SVCS and SVCHA over a TCP socket. The following sections describe how socket connections are established and the life-cycle of the TCP socket.

It is assumed that the reader is familiar with developing an application that uses TCP sockets.

## Connection Creation

Each message is sent over a socket connection. Once the message has been processed the SVCS shuts down the socket, thus the life span of a socket is a single transaction. The SVCS will attempt multiple, simultaneous connections to the SVCHA when more than one POS request comes in at a time.

The address of the computer running the SVCHA is configurable.

The `getservbyname()` call is used by the SVCHA to obtain the port that the SVCS uses when connecting to the SVCHA. Oracle Hospitality has defined the service name and assigns a port address for each host adapter (see table below).



If the `getservbyname()` call does not return a configured port, then the default value is assumed.

```
# -----
# SVC Host Adapter Port Assignments
# -----
# Service          Port          SVCHA Description
# -----
msvc-Oracle       46231/tcp     # Oracle Hospitality
msvc-vlink        46232/tcp     # Value Link
msvc-givex        46233/tcp     # Givex
msvc-opt          46234/tcp     # OPT
msvc-svs          46235/tcp     # SVS
msvc-ptech        46236/tcp     # PaymentTech
msvc-aafes        46237/tcp     # AAFES
```

The service name is `msvc-<name>`, where `<name>` is the name of the host adapter. This `<name>` is defined when the interface is setup in the POS system and is restricted to 10 alphanumeric characters. There is no need to “pre-register” a name, so any legal value can be chosen by the SVCHA developer.

After the SVCHA has accepted a connection, the SVCS sends a request. If a request is not received within 5 seconds, the SVCHA may terminate the connection.

## Message Structure

Messages sent between the SVCS and SVCHA use the following structure.

Header	Body	Termination
--------	------	-------------

<SOH><Originator><FS><Target><SVC Message> <ETX><EOT>

- <SOH> The SOH character (start-of-header) indicates the start of a new message. The SOH character is represented using the ASCII SOH character. This character has a hexadecimal value of 1.
- <Originator> The Originator identifies the originator of the request. Messages coming from the SVCS have a source value of “msvc-server”. The response message sent to the SVCS uses the same value for the Originator.
- <FS> The FS character is represented using the ASCII FS character. This character has a hexadecimal value of 1C.
- <Target> The Target indicates the Host Adapter implementation that is the intended destination of the message. This information comes from the “System Name” (Oracle Hospitality 9700) and “Outgoing Message Name” (Oracle Hospitality 3700 RES) of the POS interface configuration. This field should be checked by the SVCHA to ensure that it is the intended target. If the value does not match, then an SVCHA error response is returned to the SVCS.

<STX>	The STX character (start of text) indicates the start of the data portion of the message. The STX character is represented using the ASCII STX character. This character has a hexadecimal value of 2.
<SVC Message>	The SVC Message is an XML document that forms the request or response for an SVC message (as defined in <a href="#">SVC Message Format</a> ).
<ETX>	The ETX character (end of text) indicates the end of the data portion of the message. The ETX character is represented using the ASCII ETX character. This character has a hexadecimal value of 3.
<EOT>	The EOT character (end of transmission) indicates the end of the message. The EOT is represented using the ASCII EOT character. This character has a hexadecimal value of 4.

## SVC Message Format

An SVC Message is sent as an XML document. The documents use the UTF-8 encoding. All SVC Message documents contain the same root element structure. This structure is defined below. Refer to the [Transaction Examples](#) section for complete examples.

This section provides an example of a successful request/response transmission sequence between the SVCS and SVCHA.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  hostName="ms
  vc-Oracle
  Hospitality"
  sequence="1"
  retransmit="
  N"
  version="1"
  timeout="20"
  language="en
  -us"
  currency="US
  D">
  ... Message Elements ...
</SVCMessage>
```

- The `hostName` attribute indicates the name of the host adapter to which the message is being sent.
- The `hostVersion` attribute (optional in a response document) provides a space for the host-adapter to provide version information). This attribute is useful for debugging purposes.
- The `sequence` attribute is an incrementing number that can be used by the SVCHA to identify when a response has been lost. The first message from the POS terminal has a sequence value of "00" (double zero). Subsequent messages use the value range from "01" to "99" (wrapping back to "01"). The sequence value is reset back to "00" when the POS client is restarted (see [Message Sequence Error](#) for additional details).

- The retransmit attribute indicates if the current message is a new message or a retransmit of the prior message. The value “N” indicates a new message; the value “Y” indicates a retransmit.
- The version attribute indicates the version of the SVC message
- The timeout attribute indicates the number of seconds the SVCHA has to return a response before the SVCS times out the request.
- The language attribute indicates the language in use for the transaction.
- The currency indicates the currency in use for the transaction.

### **Comments on XML Usage**

- Elements may appear in the request and response documents in any order.
- New elements added to the request and response documents do not invalidate the document.
- The type of transaction represented by the message is identified by a combination of the `<RequestCode>` and `<Reversal>` elements.

## **Error Handling**

This section discusses how errors are handled by the SVCHA and its host.

### **Error Response**

The following is an example of an error response from the host for a POINT\_ISSUE transaction with an unrecognized account number.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  sequence="02"
  retransmit="N"

  timeout="30"
  version="2"
  language="en-
US"
  currency="USD"

  hostName="msv
c-Oracle
Hospitality">

  <RequestCode>POINT_ISSUE</RequestCode>
  <TraceID>041109100120N021799</TraceID>
  <ResponseCode hostCode="ICM32">D</ResponseCode>
  <DisplayMessage>Unrecognized Account Number</DisplayMessage>
</SVCMessage>
```

The value of the `<ResponseCode>` element indicates the originator of the error message (in this case D indicates the host or data center). The `hostCode` value is defined at the source of the error, the only exception is the special value “RESEND”. Refer to the [ResponseCode](#) element definition for additional details.

---

## **Business Rule Error**

Business rule errors occur when a SVCHA or host business rule prevents the transaction from being processed successfully. An invalid account number or insufficient funds are examples of business rule errors. The following is an example of a business rule error detected by the SVCHA when an invalid account number is passed in the request.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  sequence="02"
  retransmit="N"

  timeout="30"
  version="2"
  language="en-
US"
  currency="USD"

  hostName="msv
c-Oracle
Hospitality">

  <RequestCode>POINT_ISSUE</RequestCode>
  <TraceID>041109100120N021799</TraceID>
  <ResponseCode hostCode="99">E</ResponseCode>
  <DisplayMessage>Invalid Account Number: Check digit
  failure.</DisplayMessage>
</SVCMessage>
```

## **Malformed Request Error**

A malformed request is any request that the SVCHA is unable to read or process. Since the request may be unreadable the response may only contain the ResponseCode and DisplayMessage elements.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  sequence="02"
  retransmit="N"

  timeout="30"
  version="2"
  language="en-
US"
  currency="USD"

  hostName="msv
c-Oracle
Hospitality">

  <ResponseCode>E</ResponseCode>
  <DisplayMessage>Malformed request received.</DisplayMessage>
</SVCMessage>
```

## Communication Error

A communication error is an error that prevents the SVCHA from sending and receiving a response from its Host/Data Center. Failures to connect to, or receive a response from the data center are examples of communication failures.

Communication failures are unique because they can result in the POS and data center being out-of-balance. An out-of-balance scenario can result if a failure occurs after the SVCHA has sent a request to the host and before or while receiving a response (i.e., the response is “lost”).

## Lost Response Error

If the SVCHA fails to receive a response from its HOST, the SVCHA can set the `hostCode` attribute of the `ResponseCode` element to “RESEND”. This tells the POS system to resend the message. The content of a resent request is identical to the initial request with the exception of the `retransmit` element. The `retransmit` element value is changed from “N” to “Y”.

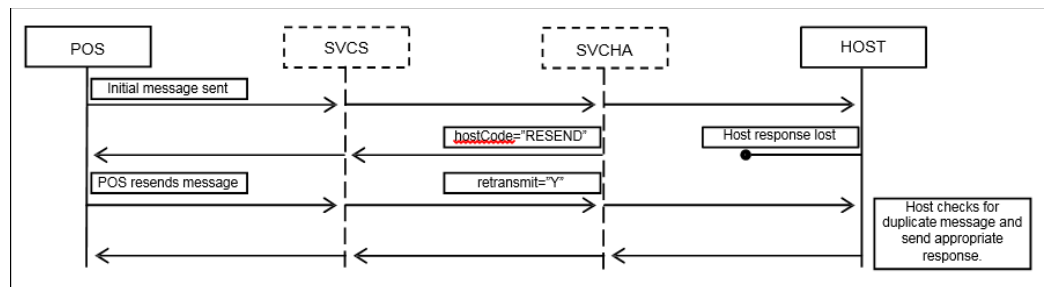


Figure 2 Lost Response Error

When the host detects a resent message (testing for `retransmit="Y"`), it must determine the state of the transaction and send an appropriate response.

## Message Sequence Error

In addition to the `retransmit` attribute, the `sequence` attribute must also be checked to detect transaction failures. The `sequence` value is incremented each time a response from the SVCHA is processed. If the sequence number on two successive transactions from the same site and

`TerminalID` is the same, then the POS did not process the prior transaction and the Host can roll back the last transaction from the `TerminalID`.

The `sequence` value of “00” (double zero) indicates that the POS client was restarted.

## Timeout Settings

Proper configuration of the interface timeout (setup in the POS system) is used to minimize timeout failures. The SVCHA should use the value of the “`timeout`” attribute in the `SVCMessage` element to determine how long before the SVCS will timeout waiting for the SVCHA response.

# SVC Message Definitions

The following table list each of the messages supported by the current version of the interface. Details about each message are provided in a subsequent section.

**Table 1 SVC Message Definitions**

Message	Application
Issue Card	This request is used to issue one or more SV cards with balance
Activate Card	This request is used to activate an existing inactive store-value account and associated preloaded balance
Reload Card	This request is used to credit an existing stored-value account
Authorized Card	This request is used to authorize debiting of an existing stored-value account by a specified amount.
Redeem Card	This request is used to debit an existing stored-value account by a specified amount
Manual Redemption	This request is used to validate a manually entered authorization number
Cash Out Card	This request is used to debit the some or all of the remaining balance on an existing stored-value account
Balance Inquiry	This request is used to obtain the account balance on a stored-value account
Balance Transfer	<b>No 3rd party support</b> This request is used to transfers the outstanding balance from one SV account to another SV account
Issue Points	This request is used to add the specified number of points to an existing account
Void Issue Points	This request is used to void points issued to a guest check. The voided point amount is subtracted from the customers loyalty balance
Point Balance Inquiry	This request is used to obtain the point balance for a loyalty program
Redeem Points	This request is used to redeem points on a loyalty program
Void Redeem Points	This request is used to void point issues that have been associated to a guest check. Voided points are added back to the customer's loyalty point balance

Message	Application
Apply Card To Check	<b>No 3rd party support.</b> This request is used to add the specified number of points to an existing account. It also allows the system to send a Redeem Card request if the customer has a SVC balance tied to their loyalty program after point issue has completed
Issue Coupon	This request is used to issue a new coupon
Accept Coupon	This request is used to accept a coupon and post the appropriate transaction to the POS
Void Accept Coupon	This request is used to void a coupon that has been associated to a guest check
Coupon Inquiry	This request is used check for existing coupons associated with a customer's loyalty account
Lookup Patron	This request is used check for existing loyalty customer accounts. The search criteria is either the customer name or the customer phone number
Unique Item Inquiry	<b>No 3rd party support.</b> This request sends Unique Item Inquiry request to iCare using the selected loyalty account number and any unique items associated with the loyalty account are returned
Load Configuration	This request is used by the point of sales (POS) system to provide specific configuration information

# Base SVC Transactional Request and Response Document

## Overview

The content of all request and response documents are derived from the same base document. This base document is defined below.

### Comments

- The SVAN and the Track2 element in the request document are used to determine if the account number is manually entered or swiped. If the card is manually entered, then the <SVAN> element in the request contains the manually entered account number. If the card is swiped, then the <Track2> and <Track1> elements in the request contain the track data.
- The host should always response with the account number in the <SVAN> element.
- It is the responsibility of the host to extract the account number from the track data elements if the card has been swiped.

**Table 2 Elements, Requests, and Responses**

Element	Request Document	Response Document
RequestCode	Present <Transaction Specific>	Present <Transaction Specific>
Reversal		Required if present in the request
TraceID	Present	Required
TerminalID	Present	
TerminalType	Present	
TipAmount	Present	
PosPlatform	Present	
Amount	Present	Required
LocalDate	Present	
LocalTime	Present	
BusinessDate	Present	
TransactionEmployee	Present	
RevenueCenter	Present	
CheckNumber	Present	
CheckSequence	Present	
Site	Present	
SVAN		Required



---

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
Track1		
Track2		
OldSVAN		
OldTrack		
OldTrack2		
AuthorizationCode	Optional	Optional
AccountCurrency		Optional
LocalBalance		Optional
AccountBalance		Optional
ExchangeRate		Optional
ResponseCode		Element Required (hostCode attribute is optional)
DisplayMessage		Optional
PrintLine		Optional

---

## Issue Card

Version 1.0

### Overview

The SV\_ISSUE message is used to create an SV account with a balance.

### Comments

- Although reload card, issue card, and activate card could have the item type configured as a menu item in iCare, Symphony cannot process a menu item onto the guest check.
- The SVAN may be included with the request; it may also be automatically generated and returned by the SV Data Center.
- The SVAN number should be retained for referencing for future transactions.
- Valid *ItemType* value is: 'S'

**Table 3 Issue Card Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_ISSUE	SV_ISSUE
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Activate Card

Version 1.0

### Overview

The activate request is used to activate an existing inactive SV account and associated preloaded balance.

### Comments

- Although reload card, issue card, and activate card could have the item type configured as a menu item in iCare, Symphony cannot process a menu item onto the guest check.
- This request may be used to activate a batch of cards. When activating multiple cards, the [SVAN \(Track2](#) for swiped data) element is the first card number and the [OldSVAN \(OldTrack2](#) for swiped data) element is the last card number. The Host is expected to activate all valid card numbers in the specified range.
- Valid [ItemType](#) value is: 'S'

**Table 4 Activate Card Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_ACTIVATE	SV_ACTIVATE
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## **Reload Card**

Version 1.0

### **Overview**

This message is used to recharge, reload or add additional value to SV Accounts.

### **Comments**

- Although reload card, issue card, and activate card could have the item type configured as a menu item in iCare, Symphony cannot process a menu item onto the guest check.
- Valid **ItemType** value is: 'S'

**Table 5 Reload Card Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	SV_RELOAD	SV_RELOAD
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Authorized Card

Version 1.0

### Overview

This requests the authorization to debit an SV Account by an amount. Ideally the SV Data Center should reserve this amount in anticipation of a Redemption message. This request will return an authorization code. Typically a reserved amount should be freed if a Redemption message is not received within an arbitrary period. This request may be issued when a guest tenders with the SV instrument and wishes to add a subsequent tip.

### Comments

- Valid **ItemType** value is: 'T'.
- The **ItemNumber** must correspond to a "Service Total" tender type.

**Table 6 Authorized Card Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_REDEMPTION_AUTH	SV_REDEMPTION_AUTH
<a href="#">CheckSummary</a>	Present	
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Redeem Card

Version 1.0

### Overview

This request may be used in two scenarios, the first is when a payment is to be applied without a prior authorization, the second when a prior authorization has occurred. This request frees amount reserved (through a prior redemption authorization transaction) and debits the SV Account.

### Comments

- The SVCHA is required to indicate the type and number of the POS item used to track the redemption. This allows the SVCHA to vary the tender number and amount base on any of the information that is present in the request document (e.g., account number).
- The SVCHA override the user requested redemption amount by altering the **Amount** value in the response document.
- Valid **ItemType** value is: 'T'.
- The [RedeemHasAuth](#) element is present if the redemption transaction is the "finalization" of a [RedemptionCard](#) transaction.

**Table 7 Redemption Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_REDEMPTION	SV_REDEMPTION
<a href="#">CheckSummary</a>	Present	
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">RedeemHasAuth</a>		
< <a href="#">Base Document</a> >		

---

## Manual Redemption

Version 1.0

### Overview

This request provides a method for the host-adapter to authorize a redemption transaction that is performed via an Integrated Voice Response (IVR) system. In cases where the connection to the host is down, an IVR (or some other external system) would be used to process the redemption. The IVR can generate an authorization code that can be authenticated by the host-adapter.

### Comments

- Valid **ItemType** value is: 'T'.

**Table 8 Manual Redemption Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_MANUAL_REDEMPTION	SV_MANUAL_REDEMPTION
<a href="#">CheckSummary</a>	Present	
<a href="#">AuthorizationCode</a>	Present	
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Cash Out Card

Version 1.0

### Overview

This request is used to debit some portion of the remaining balance on an existing SV account.

### Comments

- The **Amount** element may be altered in the response document.
- Valid **ItemType** value is: 'T'.

**Table 9 Cash Out Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_CASHOUT	SV_CASHOUT
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		



---

## **Balance Inquiry**

Version 1.0

### **Overview**

This request is used to obtain the account balance on an SV account.

### **Comments**

N/A

**Table 10 Balance Inquiry Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	SV_BALANCE_INQUIRY	SV_BALANCE_INQUIRY
<a href="#">&lt;Base Document&gt;</a>		

---

## **Balance Transfer**

Version 1.0

### **Overview**

This request is used to transfers the outstanding balance from on SV account to another SV account.

### **Comments**

- The **oldSVAN** (or **oldTrack2**) element represents the “from” account and the **SVAN** (or **Track2**) element is the “to” account.
- There is no third-party support for this message.

**Table 11 Balance Transfer Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	SV_BALANCE_TRANSFER	SV_BALANCE_TRANSFER
<a href="#">OldsVAN</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Issue Points

Version 1.0

### Overview

This request is used to add the specified number of points to an existing SV account.

### Comments

- The [CouponCode](#) element is an optional element added in version 2.0 of the specification.
- This element is only present if the [Load Configuration](#) response contains the PromptForCoupon element.

**Table 12 Issue Points Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	POINT_ISSUE	POINT_ISSUE
<a href="#">CheckSummary</a>	Present	
<a href="#">CouponCode</a>	Optional	
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<Base Document>		

---

## Void Issue Points

Version 1.0

### Overview

This request is used to void points issued to a guest check. The voided point amount is subtracted from the customers loyalty balance.

### Comments

- The [CouponCode](#) element is an optional element added in version 2.0 of the specification. This element is only present if the [Load Configuration](#) response contains the PromptForCoupon element.
- For a void/cancel transaction, the element is present, but contains no data.

**Table 13 Void Issue Points Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	POINT_ISSUE	POINT_ISSUE
<a href="#">CheckSummary</a>	Present	
<a href="#">CouponCode</a>	Optional	
<a href="#">Reversal</a>	Optional	Required if present in the request
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## ***Point Balance Inquiry***

Version 1.0

### **Overview**

This request is used to obtain the point balance for an SV account.

### **Comments**

N/A

**Table 14 Point Balance Inquiry Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	POINT_BALANCE	POINT_BALANCE
<a href="#">&lt;Base Document&gt;</a>		

---

## **Redeem Points**

Version 2.5

### **Overview**

This request is used to add the specified number of points to an existing SV account.

### **Comments**

N/A

**Table 15 Redeem Points Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	POINT_REDEMPTION	POINT_REDEMPTION
<a href="#">CheckSummary</a>	Present	
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Void Redeem Points

Version 1.0

### Overview

This request is used to add the specified number of points to an existing SV account.

### Comments

- This request is used to void points issues that have been associated to a guest check. Voided points are added back to the customer's loyalty point balance.
- For a void/cancel transaction, the element is present, but contains no data.

**Table 16 Void Redeem Points Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	POINT_REDEMPTION	POINT_REDEMPTION
<a href="#">CheckSummary</a>	Present	
<a href="#">Reversal</a>	Optional	Required if present in the request
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## **Apply Card To Check**

Version 1.0

### **Overview**

This request is used to add the specified number of points to an existing account. It also allows the system to send a Redeem Card request if the customer has a SVC balance tied to their loyalty program after point issue has completed.

### **Comments**

- This is essentially Loyalty Issue Points combined with a Store Value Balance inquiry and Store Value redemption.
- There is no third-party support for this message.

**Table 17 Apply Card To Check Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	POINT_ISSUE	POINT_ISSUE
<a href="#">RequestCode</a>	SV_BALANCE_INQUIRY	SV_BALANCE_INQUIRY
<a href="#">RequestCode</a>	SV_REDEMPTION	SV_REDEMPTION
<a href="#">&lt;Base Document&gt;</a>		



---

## Issue Coupon

Version 2.5

### Overview

This request is used to issue a new coupon. The user is prompted to enter an optional mount value (zero is a valid value) and a required to enter a coupon code. The coupon code indicates the type of coupon requested by the user. The SVCHA or Host will typically supply PrintLine elements in the response that inform the guest of additional coupon information (e.g., expiration, coupon number, etc...).

### Comments

- There is no account information associated with this request (the Track1/Track2 and SVAN do not contain any data).
- The SVAN element in the response should contain the coupon identifier.
- The response should contain a tender item (ItemType is 'T'). The transaction is posted as for a zero amount. This is done so that the transaction can be reversed.

**Table 18 Issue Coupon Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	SV_ISSUE_COUPON	SV_ISSUE_COUPON
<a href="#">CouponCode</a>	Present	
<a href="#">CheckSummary</a>	Present	
<a href="#">ItemType</a>		Required (see comments)
<a href="#">ItemNumber</a>		Required (see comments)
<a href="#">&lt;Base Document&gt;</a>		

---

## Accept Coupon

Version 2.0

### Overview

This request is used to apply a coupon to the check.

### Comments

- There is no account information associated with this request.
- The CouponCode is returned in the SVAN element in the response.

**Table 19 Accept Coupon Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_ACCEPT_COUPON	SV_ACCEPT_COUPON
<a href="#">CouponCode</a>	Present	
<a href="#">CheckSummary</a>	Present	
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## Void Accept Coupon

Version 1.0

### Overview

This request is used to void a coupon that has been associated to a guest check.

### Comments

- There is no account information associated with this request.
- The CouponCode is returned in the SVAN element in the response.
- For a void/cancel transaction, the element is present, but contains no data.

**Table 20 Void Accept Coupon Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	SV_ACCEPT_COUPON	SV_ACCEPT_COUPON
<a href="#">CouponCode</a>	Present	
<a href="#">CheckSummary</a>	Present	
<a href="#">Reversal</a>	Optional	Required if present in the request
<a href="#">ItemType</a>		Required
<a href="#">ItemNumber</a>		Required
<a href="#">&lt;Base Document&gt;</a>		

---

## ***Coupon Inquiry***

Version 1.0

### **Overview**

This request is used check for existing coupons associated with a customer's loyalty account.

### **Comments**

N/A

**Table 21 Coupon Inquiry Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	COUPON_INQUIRY	COUPON_INQUIRY
<a href="#">&lt;Base Document&gt;</a>		

---

## Lookup Patron

Version 1.0

### Overview

This request is used check for existing loyalty customer accounts. The search criteria is either the customer name or the customer phone number.

### Comments

- This request sends Unique Item Inquiry request to iCare using the selected loyalty account number and any unique items associated with the loyalty account are returned.

**Table 22 Lookup Patron Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	CUSTOMER_LOOKUP_BY_PHONE or CUSTOMER_LOOKUP_BY_NAME	CUSTOMER_LOOKUP_BY_PHONE or CUSTOMER_LOOKUP_BY_NAME
<a href="#">&lt;Base Document&gt;</a>		

---

## ***Unique Item Inquiry***

Version 1.0

### **Overview**

This request is used check for existing loyalty customer accounts. The search criteria is either the customer name or the customer phone number.

### **Comments**

There is no third-party support for this message.

**Table 23 Unique Item Inquiry Elements, Requests, and Responses**

<b>Element</b>	<b>Request Document</b>	<b>Response Document</b>
<a href="#">RequestCode</a>	SV_UITEM_INQUIRY	SV_UITEM_INQUIRY
<a href="#">&lt;Base Document&gt;</a>		

---

## Load Configuration

Version 2.0

### Overview

This request is used by the point of sales (POS) system to gather certain configuration information. The Request should be initiated by the POS solution.

### Comments

The Configuration element contains configuration settings for the host-adapters. If none of the configuration elements apply the minimal response contains an empty Configuration element (see Examples below). Failure to response this request or an empty response is not considered fatal, i.e., it is handled the same as an empty response and the default configuration options are used.

**Table 24 Load Configuration Elements, Requests, and Responses**

Element	Request Document	Response Document
<a href="#">RequestCode</a>	LOAD_CFG	LOAD_CFG
<a href="#">TraceID</a>	Present	Required
<a href="#">Configuration</a>		Required

### The Configuration Element

This section defines the structure of the configuration element.

**Table 25 Configuration Element Structure**

Element	Description	Type
Options	<p>Contains configuration information for the transaction.</p> <p><b>Attributes</b></p> <ul style="list-style-type: none"><li><b>rc</b> - the value of this attribute identifies the transaction for with options are being set using the transaction <a href="#">RequestCode</a></li><li><b>pinwithManEntry</b>- Set to "Y" to require the pin on a manual/keyed account number entry (default value is "N").</li><li><b>pinwithSwipe</b> - Set to "Y" to require the pin on a swiped account number entry (default value is "N").</li><li><b>encryptedPIN</b> - Set to "Y" have the PIN number entered by the user send as an MD5 encoded string (default value is "N").</li></ul> <p>Example:</p> <pre>&lt;Options rc="POINT_ISSUE" pinwithManEntry="Y" encryptedPIN="Y"&gt;   &lt;PromptForCoupon/&gt; &lt;/Options&gt;</pre>	<a href="#">XML</a>

The following elements are used as part of the Options element for each transaction type. Not all elements will apply to all transaction types. All of the following elements are optional.

**Table 26 Option Elements for Transactions**

Element	Valid Requests	Description	Type
PromptForCoupon	POINT_ISSUE	If present, then the user is prompted to enter a coupon code as part of the POINT_ISSUE transaction. The default behavior is not to prompt for a coupon code.	<a href="#">Empty</a>
ProgramCode	SV_ISSUE SV_ACTIVATE SV_RELOAD SV_CASHOUT SV_REDEMPTION SV_REDEMPTION_AUTH SV_MANUAL_REDEMPTION	<p>Zero to 10 <code>&lt;ProgramCode&gt;</code> elements may be specified.</p> <p><code>&lt;ProgramCode id="1"&gt;Main Account&lt;/ProgramCode&gt;</code></p> <p>The element value of is used as the text when prompting the user to specify the program code. The text has a maximum length of 60 characters.</p> <p>The value of the <code>id</code> attribute is sent as the value of the <code>&lt;ProgramCode&gt;</code> element in the request. This attribute can contain alphanumeric data and has a maximum length of 10- characters.</p> <p>The element value and <code>id</code> attribute value cannot include the “^” character.</p>	<a href="#">A60</a>
AmountPrompt	SV_ACTIVATE	<p>This option is used to alter the default behavior of the SVC user interface with regards to the “Enter Amount” prompt.</p> <p><code>&lt;AmountPrompt prompt="0"/&gt;</code></p> <p>If the <code>prompt</code> attribute has a value of 0 (zero) the user is not prompted to enter an amount for the transaction. Any other value will result in the user being prompted to enter a transaction amount.</p>	<a href="#">Empty</a>



---

## Examples

The following is an example of the LOAD\_CFG request.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  hostname="msvc-micros" sequence="1" retransmit="N" version="2"
  timeout="20" language="en-us" currency="USD">

  <RequestCode>LOAD_CFG</RequestCode>
  <TraceID>0312310000120211234</TraceID>
  <TerminalID>11</TerminalID>
</SVCMessage>
```

The following is an example of an empty response to the LOAD\_CFG request.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  hostname="msvc-micros" sequence="1" retransmit="N" version="2"
  timeout="20" language="en-us" currency="USD">

  <RequestCode>LOAD_CFG</RequestCode>
  <TraceID>0312310000120211234</TraceID>
  <Configuration></Configuration>
</SVCMessage>
```

The following is a non-trivial response to the LOAD\_CFG request.

```
<?xml version="1.0" encoding="UTF-8"?>
<SVCMessage
  hostname="msvc-micros" sequence="1" retransmit="N" version="2"
  timeout="20" language="en-us" currency="USD">

  <RequestCode>LOAD_CFG</RequestCode>
  <TraceID>0312310000120211234</TraceID>
  <Configurati
on>
  <Options rc="POINT_ISSUE">
    <PromptForCoupon/>
  </Options>
  <Options rc="POINT_REDEMPTION" pinwithManEntry="Y"
  encryptedPIN="Y" />
  </Options>
  <Options rc="SV_ACTIVATE">
    <AmountPrompt prompt="0"/>
  </Options>
  <Options rc="SV_ISSUE">
    <ProgramCode id="1">Primary Account </ProgramCode>
    <ProgramCode id="2">Loyalty Account</ProgramCode>
  </Options>
  <Options rc="SV_REDEMPTION">
    <ProgramCode id="1">Primary Account </ProgramCode>
    <ProgramCode id="2">Loyalty Account</ProgramCode>
  </Options>
  </Configuration>
</SVCMessage>
```

# Element Definitions

The following sections describe each of the elements used to create a request and response document.

## Element Listing

Table 27 Listing of Element Definitions

Element	Description	Type
AccountBalance	This element indicates the account balance in the data centers native currency.	<a href="#">Decimal</a>
AccountCurrency	This element indicates the native currency used by the data center for this account. The currency is represented using the 3 character alphabetic code specified in the ISO 4217 standard. ISO 4217 currency codes can be looked up at <a href="http://www.thefinancials.com/vortex/CurrencyFormats.html">http://www.thefinancials.com/vortex/CurrencyFormats.html</a>  Examples: <ul style="list-style-type: none"> <li>• USD is used for US dollar</li> <li>• CAD is used for the Canadian dollar</li> </ul>	<a href="#">A3</a>
Amount	This element indicates the value of the current transaction.	<a href="#">Decimal</a>
AuthorizationCode	This element contains the authorization code created by the data center for the Redemption Authorization transaction. This element is used in the <a href="#">Manual Redemption</a> message to pass an authorization code to the host adapters. In most cases the user obtains the authorization code from an Integrated Voice Response (IVR) system. Additionally, the POS can be configured to prompt for an authorization code as part of a reversal. In this case the user enter value is passed to the host-adapter AuthorizationCode element. A host might use this value to match the reversal to the originating transaction.	<a href="#">A19</a>
BusinessDate	This element indicates the business date of the transaction.	<a href="#">Date</a>
CheckNumber	This element contains the check number for the transaction. It may be 0 (indicating transaction was performed outside of a check).	<a href="#">N9</a>
CheckSequence	This element contains the check sequence number for the transaction. The content of this number is POS platform dependent.	<a href="#">A40</a>
CheckSummary	This element contains summary information about the current POS check. See <a href="#">The CheckSummary Element</a> section for structure of this element.	<a href="#">XML</a>

Element	Description	Type
Configuration	This element contains the configuration information for the Load Configuration request. See <a href="#">Load Configuration</a> for details.	<a href="#">XML</a>
CouponCode	This element contains a coupon code as entered by the user.	<a href="#">A40</a>
DisplayMessage	This element contains a message that is displayed to the user. The standard use of this element is to convey SVCHA/Data center errors to user when a transaction has a ResponseCode value other than 'A'.	<a href="#">A100</a>
ExchangeRate	This element indicates the exchange rate that is used to convert monetary amounts from the account to the local currency.  If this element is omitted it has a default value of 1.00 (i.e., account and local currencies are the same).  The currency conversion is performed as (local currency) = (account currency) * (exchange rate)	<a href="#">Decimal</a>
Extension	This element is used to add additional information to a message without requiring the message version to be updated.  This element uses the "name" attribute to indicate the meaning of the element data.  <pre>&lt;Extension name="address1"&gt; 6900   Lupine Lane &lt;/Extension&gt;</pre> A message may contain zero or more Extension elements.	<a href="#">A100</a>
ItemNumber	This element is used by the host adapter to indicate the number of the item applied to a check on a redemption transaction.  This element also supports an optional attribute ( <b>ref</b> ). This attribute allows the host to provide text that is included w/ the item added to the check. This information is only included when the ItemType is "T". The <b>ref</b> attribute is ignored for other values of ItemType.	<a href="#">N9</a>
ItemType	This element is used by the host adapter to indicate the type of POS item applied to a check on a redemption transaction.  The ItemType element can be one of the following values: <ul style="list-style-type: none"> <li>• 'M' – Menu Item</li> <li>• 'D' – Discount</li> <li>• 'S' – Service Charge</li> <li>• 'T' – Tender</li> </ul> Not all transactions support all values. Refer to the transaction comments to determine which values are valid.	<a href="#">A1</a>

Element	Description	Type
LocalBalance	This element indicates the account balance in the local currency of the interface/POS system.	<a href="#">Decimal</a>
LocalDate	This element indicates the local date of the transaction.	<a href="#">Date</a>
LocalTime	This element indicates the local time of the transaction.	<a href="#">Time</a>
OldSVAN	This value contains an additional account number. It is used to perform operations on range of cards, or to transfer a balance between cards.	<a href="#">A19</a>
OldTrack1	This element contains the track 1 data when a SV card is read. This element is empty if no track 1 data exists.	<a href="#">A255</a>
OldTrack2	This value contains an additional track 2 data. It is used to perform operations on range of cards, or to transfer a balance between cards. The presence of this element indicates that the number was electronically entered. If the number is manually entered, then the OldSVAN element is used. See definition of Track2 element for additional details.	<a href="#">A40</a>
PIN	This value contains the PIN value entered on the POS terminal.  The <a href="#">LOAD_CFG</a> message is used to inform the POS which transactions require a PIN number entry and whether this value is an encoded value. See discussion of the <a href="#">LOAD_CFG</a> message for details.	<a href="#">A32</a>
PosPlatform	This element contains a string that identifies the type of POS platform from which the transaction originates.  Examples: "3700" – for MICROS RES POS platform "9700" – for MICROS HMS 9700 POS platform	<a href="#">A32</a>
PrintLines	This element contains one or more PrintLine elements. Each PrintLine element represents one line of text that is printed by the POS client application. In addition to literal text, several formatting print-directives are supported. See <a href="#">The PrintLines Element</a> for details on how the text is printed.  The message may contain zero to 100 PrintLine elements. The maximum length of the printed text is 512-characters (16 lines of 32 characters).	<a href="#">XML</a>
ProgramCode	This element contains the number of the program code selected by the user. This element is only present if the LOAD_CFG message specifies one or more Item elements in the ProgramCodes element for the transaction.  The value of this element is the value of the id attribute for the ProgramCodes item selected by the user.	<a href="#">A32</a>

Element	Description	Type
RedeemHasAuth	This element is present on a redemption transaction if the redemption is paired with a corresponding <a href="#">Redemption Authorization</a> transaction. This element is only significant as part of the <a href="#">Redemption</a> transaction.	<a href="#">Empty</a>
RequestCode	This element is used to identify the type of transaction represented by the request document.	<a href="#">A100</a>
ResponseCode	<p>This element indicates the success or failure of the request. The following values are valid:</p> <ul style="list-style-type: none"> <li>'A' = Approved</li> <li>'D' = Data center error</li> <li>'E' = Host adapter error</li> <li>'X' = External host error</li> <li>'P' = Reserved value (do not use)</li> </ul> <p>Examples:</p> <p>"A" - Successful transaction  "E" - Host adapter could not communicate with the host  "D" - Host denied the transaction due to insufficient funds</p> <p>This element also supports an optional attribute (<b>hostCode</b>) that allows the SVCHA/host to supply its own error code.</p> <p>Sample element:</p> <pre>&lt;ResponseCode hostCode="ICM3"&gt;D&lt;/ResponseCode&gt;</pre> <p>The value of <b>hostCode</b> is displayed to the user in the following error message format:</p> <p>[ResponseCode hostCode] DisplayMessage</p> <p>The error message displayed to the user for the following response elements</p> <pre>&lt;ResponseCode hostCode="32"&gt;D&lt;/ResponseCode&gt; &lt;DisplayMessage&gt;Account already active&lt;/DisplayMessage&gt;</pre> <p>is</p> <pre>[D32] Account already active</pre> <p>The maximum length of the error message is 79-characters; this leaves 73-characters for the <b>hostCode</b> and <b>DisplayMessage</b>. If the total length is greater than the maximum, then the content of <b>DisplayMessages</b> is truncated.</p> <p>If the <b>hostCode</b> value is the text "RESEND", then the SVCS will inform the POS that the last message should be resent. The SVCHA should use this response to recover from communication failures that result in a lost response (see <a href="#">Lost Messages</a>).</p>	<a href="#">A1</a>
RevenueCenter	This element identifies the POS revenue center from which the request originates.	<a href="#">N9</a>

<b>Element</b>	<b>Description</b>	<b>Type</b>
Reversal	This element is used to indicate that the transaction is a void/cancel of the normal RequestCode transaction. The element is omitted for normal RequestCode transaction. For a void/cancel transaction, the element is present, but contains no data.	<a href="#">Empty</a>
Site	This element contains a string that identifies the site (i.e., the POS system) that originated the message. This can be used in cases where the host-adapter is processing request for multiple POS systems.	<a href="#">A32</a>
SVAN	This element contains the account number for which the transaction is being executed.	<a href="#">A19</a>
TerminalID	This element specifies the ID number of the POS terminal from which the request is originating.	<a href="#">N9</a>
TerminalType	This element indicates the type of POS terminal from which the request is originating. Possible values are: PCWS – Oracle MICROS PC Workstation HHTG – Hand Held Granite HHTMM – Hand Held Mobile Micros UWS1 UWS2 UWS3 UWS4 OTF – off-the-shelf PC	<a href="#">A10</a>
TipAmount	This element specifies the portion of the <a href="#">Amount</a> element that is allocated to a tip payment.	<a href="#">Decimal</a>
TraceID	This element contains an auditing code that can be used to uniquely identify each transaction originating from a store system. It is possible for two stores to generate the same TraceID. This element has the format YYMMDDHHMMSSRXXCCCC YY = current year (00-99) MM = current month (01-12) DD = current day (01-31) HH = current hour (00-23) MM = current minute (00-59) SS = current second (00-59) R = Retransmit flag, “R” indicates a retransmit, while “N” indicates a new message XX = the message sequence number (01-99) CCCC = Check number (1-9999)	<a href="#">A19</a>
Track1	This element contains the track 1 data when a SV card is read. This element is empty if no track 1 data exists.	<a href="#">A255</a>

Element	Description	Type
Track2	<p>This element contains the track 2 data when a SV card is read. The format of the track data is defined in ISO 7811-1. Per this standard the track 2 data has a maximum length of 40 characters.</p> <p>The presence of this element indicates that the number was electronically entered. If the number is manually entered, then the SVAN element is used.</p> <p>This element does not contain the start and end sentinels of the card data, but does including the '=' field separator character between account and discretionary data fields.</p>	<a href="#">A40</a>
TransactionEmployee	This element identifies the employee performing the transaction.	<a href="#">N9</a>

## Field Type Definitions

**Table 28 Field Type Definitions**

Field Type	Description
Ax	Used for alphanumeric data where "x" indicates the maximum number of characters in the field.
Date	<p>Used for date data.</p> <p>Date is specified in YYYYMMDD format.</p> <p>Example: July 20, 2015 is specified as "20150720"</p>
Decimal	<p>Used for decimal or monetary data. Decimal data has the following format: [-][1-9][0-9]*[.][0-9]*</p> <p>The leading negative sign, ASCII value of 2D ('-'), is optional. Leading zeros are not permitted.</p> <p>The decimal is represented using the ASCII value of 2E ('.') and is optional if there is no fractional part for the value.</p> <p>Monetary Examples:</p> <ul style="list-style-type: none"> <li>• 0 - decimal currency: -99</li> <li>• 2 - decimal currency: -99.99</li> <li>• 3 - decimal currency: -99.999</li> </ul>
Empty	Used for elements that do not require any element data.

Field Type	Description
List	<p>This field type is used for elements that contain a list of information. The list has a maximum character length of 4096, which makes it equivalent to an A4096 field. The individual values in the list are separated by the '   ' character (ASCII hexadecimal value 7C). For example,</p> <p style="text-align: center;">123     abc   123</p> <p>Specifies 4 elements, the second element is empty.</p>
Nx	<p>Used for numeric/integer data where "x" indicates the maximum number of digits in the field.</p>
Time	<p>Used for time data. Time is specified using the format HHMMSS. Example: 1:03:23 PM is specified as 130323. 12:00:00 AM is specified as 000000</p>
XML	<p>Used for element that contain one or more XML elements as children.</p>



---

## The CheckSummary Element

This section identifies the structure of the CheckSummary element. The CheckSummary element contains information about the current POS check. The following is an example of a CheckSummary element:

```
<CheckSummary>
  <SalesItemizers>
    <SI ID="1">8.94</SI>
    <SI ID="2">0.00</SI>
    <SI ID="3">6.25</SI>
    <SI ID="4">0.00</SI>
    <SI ID="5">0.00</SI>
    <SI ID="6">0.00</SI>
    <SI ID="7">0.00</SI>
    <SI ID="8">0.00</SI>
  </SalesItemizers>
  <MenuItems>
    <MI ID="209009" QTY="1">6.25</MI>
    <MI ID="1001" QTY="1">4.68</MI>
    <MI ID="11001" QTY="1">4.26</MI>
  </MenuItems>
  <Discounts>
    <DS ID="207" QTY="1">-1.00</DS>
    <DS ID="202" QTY="1">-0.50</DS>
  </Discounts>
  <Surcharges>
    <SC ID="902" QTY="1">2.28</SC>
  </Surcharges>
  <Payments>
    <Payment ID="101" QTY="1">1.25</Payment>
  </Payments>
  <Totals
    ttlTax="0.97"
    ttlDsc="1.50"
    ttlSvc="2.28"
    ttlPay="1.25"
    ttlDue="15.39">
</CheckSummary>
```

### Sales Itemizers

The document contains an <SI> element for the number of sales itemizers supported by the POS system (if the POS supports 8 sales itemizers then the document contains 8 <SI> elements). The ID attribute indicates the sales itemizer number. The element data indicates the amount of the itemizer. The POS system uses sales itemizers to group menu items into categories. For example, Food, Beer, Liquor, Merchandise, and Gift Cards are commonly used categories.

### Check Data

The document contains a <MI>, <DS>, <SC> and <Payment> element for each menu item, discount, service charge, and tender on the check. The ID attribute is the item number. The QTY attribute indicates the quantity of the item. The element data indicates cumulative value for the item on the check. The element data for the <SI>, <MI> and <Payment> elements is expressed using the Decimal data type (see [Field Type Definitions](#) for details). These values can be negative.

The <Payments> element is only present if the check has 1 or more payments. It contains payments that are on the check prior to the current transaction.

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## Check Summary

The <Totals> element contains summary information about the check. It and its attributes are always present. All attribute values are expressed using the Decimal data type. All values are positive.

- The ttlTax value is the total of tax collected for all tax rates. This value include both inclusive and add-on tax rates.
- The ttlDsc value is the sum of all discounts on the check. Its value is equal to the sum of all DS elements.
- The ttlSvc value is the sum of all service charges on the check.
- The ttlPay value is the sum of all payments that exist on the check prior to the current transaction. The ttlDue value is the amount required to pay the check in full.

## The PrintLines Element

The PrintLines element is used by the SVCHA to specify one or more lines of text to be appended to the chit printed as part of the transaction. The chit is printed to the POS client's printer in a stand-alone print session; it is not appended to a guest check.

Each line of data to be printed is specified in a <PrintLine> element. The PrintLines element must contain at least one PrintLine element; and may not contain more than 100 PrintLine elements.

```
<PrintLines>
  <PrintLine></PrintLine>
  <PrintLine></PrintLine>
  <PrintLine></PrintLine>
  <PrintLine></PrintLine>
</PrintLines>
```

The data being printed has a maximum length of 32 normal width characters or 16 doublewide characters. Any characters that exceed the allowed width are not printed. Empty elements, or element with spaces are printed as a blank line. Leading spaces are preserved.

In addition to the literal text, formatting directives can be used to control how the printed data is formatted. The table below lists the recognized formatting directives.

**Table 29 PrintLine Elements**

Name	Directive	Description
Doublewide On	%DWON%	Used to change the format of the text that follows to print as doublewide. Example: "%DWON%Hello world!" prints as "Hello world!"
Doublewide Off	%DWOFF%	Used to turn off doublewide formatting. Example: "%DWON%H%DWOFF%ello world!" prints as "Hello world!" A doublewide character for the letter "H" and normal characters for the remaining characters.
Red On	%RON%	Used to turn on the print-in-red formatting for the current line of text. Example: "Entire line is printed red.%RON%" prints as "Entire line is printed red." <b>NOTE:</b> On a thermal printer, the &RON; directive results in text printing using white-on-black text. In addition, it is not possible to print only part of a line in red. The line "red off%RON% red on %ROFF% still prints the entire line using white-on-black text.
Red Off	%ROFF%	Used to turn off the print-in-red formatting for the current line of text. This directive does not have any effect when printing to a thermal printer.
Center	%C%	Centers the line of text by adding leading spaces. The center directive can appear anywhere in the line. Example: center me%C% prints as center me Processing of the center directive results in 11 leading spaces being added to the line. <b>NOTE:</b> The number of leading spaces added to the print line take into account "width" of the text being printed; thus the center directive can be used with the doublewide directives.

Name	Directive	Description
Cut	%CUT%	<p>Used to tell the printer to form-feed and cut the paper. This command is only necessary if the lines being printed should be on to different documents. Some printers do not support this directive; in these cases the directive is ignored.</p> <p>Example: %CUT%</p> <p><b>NOTE:</b> The cut directive is <b>not</b> necessary at the end of a set of print lines.</p>
Barcode	%BCODE%	<p>Prints numeric value contained after the directive as a barcode.</p> <p>Example: %BCODE%123456789</p> <p>prints the numbers 123456789 as a barcode</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• All data after the directive is used to construct the barcode value, thus, this directive should be the only item in the <code>&lt;PrintLine&gt;</code> element.</li> <li>• Not all printer hardware supports the printing of the barcode.</li> </ul>

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## Transaction Examples

In the following example, carriage returns and white-space has been added for clarity.

### *Issue Card Account*

**Table 30 Issue Card Request Example**

Issue Card Account Request	
Header Body	<pre>&lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt;   &lt;?xml version="1.0" encoding="UTF-8"?&gt;   &lt;SVCMessage     sequence="01"     retransmit="N"     timeout="45"     version="2"     language="en-US"     currency="USD"     hostName="msvc-micros"&gt;      &lt;RequestCode&gt;SV_ISSUE&lt;/RequestCode&gt;     &lt;TraceID&gt;041108160717N013064&lt;/TraceID&gt;     &lt;TerminalID&gt;2&lt;/TerminalID&gt;     &lt;Amount&gt;25.00&lt;/Amount&gt;     &lt;TipAmount&gt;0.00&lt;/TipAmount&gt;     &lt;Track2&gt;0030000000456710&lt;/Track2&gt;     &lt;TransactionEmployee&gt;9&lt;/TransactionEmployee&gt;     &lt;RevenueCenter&gt;1&lt;/RevenueCenter&gt;     &lt;CheckNumber&gt;3064&lt;/CheckNumber&gt;     &lt;CheckSequence&gt;485088&lt;/CheckSequence&gt;     &lt;LocalDate&gt;20041108&lt;/LocalDate&gt;     &lt;LocalTime&gt;160717&lt;/LocalTime&gt;     &lt;BusinessDate&gt;20041108&lt;/BusinessDate&gt;     &lt;TerminalType&gt;PCWS&lt;/TerminalType&gt;     &lt;PosPlatform&gt;3700&lt;/PosPlatform&gt;   &lt;/SVCMessage&gt;  Termination &lt;ETX&gt;&lt;EOT&gt;</pre>

**Table 31 Issue Card Response Example**

Issue Card Account Response	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt; &lt;xml version="1.0" encoding="UTF-8"?&gt; &lt;SVCMessage   retransmit="N"   timeout="45"   version="2"   hostVersion="0.100.08"   sequence="01"   language="en-US"   currency="USD"   hostName="msvc-micros"&gt;    &lt;RequestCode&gt;SV_ISSUE&lt;/RequestCode&gt;   &lt;TraceID&gt;041108160717N013064&lt;/TraceID&gt;   &lt;Amount&gt;25.00&lt;/Amount&gt;   &lt;ItemType&gt;S&lt;/ItemType&gt;   &lt;ItemNumber&gt;3000&lt;/ItemNumber&gt;   &lt;AuthorizationCode&gt;4866402&lt;/AuthorizationCode&gt;   &lt;SVAN&gt;00300000003456710&lt;/SVAN&gt;   &lt;AccountCurrency&gt;USD&lt;/AccountCurrency&gt;   &lt;LocalBalance&gt;25.00&lt;/LocalBalance&gt;   &lt;AccountBalance&gt;25.00&lt;/AccountBalance&gt;   &lt;ExchangeRate&gt;1.00&lt;/ExchangeRate&gt;   &lt;ResponseCode&gt;A&lt;/ResponseCode&gt;   &lt;ProgramCode&gt;300 Gift &lt;/ProgramCode&gt;   &lt;ProgramName&gt;Gift Card&lt;/ProgramName&gt;   &lt;DisplayMessage&gt;     This account has been issued with a balance of \$25.00   &lt;/DisplayMessage&gt; &lt;/SVCMessage&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>

## Issue Points

Table 32 Issue Points Request Example

Issue Points Request	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt; &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;SVCMessage   sequence="52"   retransmit="N"   timeout="105"   version="2"   language="en-US"   currency="USD"   hostName="msvc-micros"&gt;    &lt;RequestCode&gt;POINT_ISSUE&lt;/RequestCode&gt;   &lt;TraceID&gt;041103000636N520604&lt;/TraceID&gt;   &lt;TerminalID&gt;5&lt;/TerminalID&gt;   &lt;Amount&gt;16.77&lt;/Amount&gt;   &lt;TipAmount&gt;0.00&lt;/TipAmount&gt;   &lt;Track2&gt;001020000672340&lt;/Track2&gt;   &lt;TransactionEmployee&gt;194&lt;/TransactionEmployee&gt;   &lt;RevenueCenter&gt;1&lt;/RevenueCenter&gt;   &lt;CheckNumber&gt;0604&lt;/CheckNumber&gt;   &lt;CheckSequence&gt;969677&lt;/CheckSequence&gt;   &lt;LocalDate&gt;20041103&lt;/LocalDate&gt;   &lt;LocalTime&gt;000636&lt;/LocalTime&gt;   &lt;BusinessDate&gt;20041103&lt;/BusinessDate&gt;   &lt;TerminalType&gt;PCWS&lt;/TerminalType&gt;   &lt;PosPlatform&gt;3700&lt;/PosPlatform&gt;   &lt;CheckSummary&gt;     &lt;SalesItemizers&gt;       &lt;SI ID="1"&gt;15.97&lt;/SI&gt;       &lt;SI ID="2"&gt;0.00&lt;/SI&gt;       &lt;SI ID="3"&gt;0.00&lt;/SI&gt;       &lt;SI ID="4"&gt;0.00&lt;/SI&gt;       &lt;SI ID="5"&gt;0.00&lt;/SI&gt;       &lt;SI ID="6"&gt;0.00&lt;/SI&gt;       &lt;SI ID="7"&gt;0.00&lt;/SI&gt;       &lt;SI ID="8"&gt;0.00&lt;/SI&gt;     &lt;/SalesItemizers&gt;     &lt;MenuItems&gt;       &lt;MI ID="3415" QTY="4"&gt;0.00&lt;/MI&gt;       &lt;MI ID="3407" QTY="1"&gt;1.49&lt;/MI&gt;       &lt;MI ID="2301" QTY="1"&gt;6.99&lt;/MI&gt;       &lt;MI ID="913003" QTY="4"&gt;0.00&lt;/MI&gt;       &lt;MI ID="919006" QTY="1"&gt;0.00&lt;/MI&gt;       &lt;MI ID="911003" QTY="1"&gt;0.00&lt;/MI&gt;       &lt;MI ID="915015" QTY="2"&gt;0.00&lt;/MI&gt;       &lt;MI ID="1506" QTY="1"&gt;7.49&lt;/MI&gt;       &lt;MI ID="919004" QTY="4"&gt;0.00&lt;/MI&gt;     &lt;/MenuItems&gt;     &lt;Totals&gt;       ttlTax="0.80"       ttlDsc="0.00"       ttlSvc="0.00"       ttlPay="0.00"       ttlDue="16.77"/     &gt;   &lt;/CheckSummary&gt; &lt;/SVCMessage&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>

Table 33 Issue Points Response Example

Issue Points Response	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt; &lt;xml version="1.0" encoding="UTF-8"?&gt; hostVersion="0.100.08" sequence="52" retransmit="N" timeout="105" version="2" language="en-US" currency="USD" hostName="msvc-micros"&gt;  &lt;RequestCode&gt;POINT_ISSUE&lt;/RequestCode&gt; &lt;TraceID&gt;041103000636N520604&lt;/TraceID&gt; &lt;Amount&gt;0&lt;/Amount&gt; &lt;ItemType&gt;T&lt;/ItemType&gt; &lt;ItemNumber ref="Added 1 visit(s)"&gt;305&lt;/ItemNumber&gt; &lt;SVAN&gt;001020000672340&lt;/SVAN&gt; &lt;AccountCurrency&gt;USD&lt;/AccountCurrency&gt; &lt;LocalBalance&gt;2.00&lt;/LocalBalance&gt; &lt;AccountBalance&gt;2.00&lt;/AccountBalance&gt; &lt;ExchangeRate&gt;1.00&lt;/ExchangeRate&gt; &lt;ResponseCode&gt;A&lt;/ResponseCode&gt; &lt;ProgramCode&gt;RC&lt;/ProgramCode&gt; &lt;ProgramName&gt;Rewards Club&lt;/ProgramName&gt; &lt;PrintLines&gt;   &lt;PrintLine&gt;%C%** RC AWARD TRACKING **&lt;/PrintLine&gt;   &lt;PrintLine&gt;%C%Start month: Sep 2004&lt;/PrintLine&gt;   &lt;PrintLine&gt;%C%You just earned 1 visit(s)&lt;/PrintLine&gt;   &lt;PrintLine&gt;%C%You now have 2 visit(s)&lt;/PrintLine&gt;   &lt;PrintLine&gt;%C%You need 3 more visit(s)&lt;/PrintLine&gt;   &lt;PrintLine&gt;%C%by Dec 31, 2004 &lt;/PrintLine&gt; &lt;/PrintLines&gt; &lt;DisplayMessage&gt; Points have been issued, the new balance is 2 visit(s) &lt;/DisplayMessage&gt; &lt;PointsIssued&gt;1&lt;/PointsIssued&gt; &lt;BonusPointsIssued&gt;0&lt;/BonusPointsIssued&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>



## Redemption Authorization

Table 34 Redemption Authorization Request Example

Redemption Authorization Request	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt;   &lt;?xml version="1.0" encoding="UTF-8"?&gt;   &lt;SVCMessage     sequence="05"     retransmit="N"     timeout="30"     version="2"     language="en-US"     currency="USD"     hostName="msvc-micros"&gt;      &lt;RequestCode&gt;SV_REDEMPTION_AUTH&lt;/RequestCode&gt;     &lt;TraceID&gt;041108170255N053057&lt;/TraceID&gt;     &lt;TerminalID&gt;2&lt;/TerminalID&gt;     &lt;Amount&gt;1.12&lt;/Amount&gt;     &lt;TipAmount&gt;0.00&lt;/TipAmount&gt;     &lt;SVAN&gt;003000000004949&lt;/SVAN&gt;     &lt;TransactionEmployee&gt;9&lt;/TransactionEmployee&gt;     &lt;RevenueCenter&gt;1&lt;/RevenueCenter&gt;     &lt;CheckNumber&gt;3057&lt;/CheckNumber&gt;     &lt;CheckSequence&gt;485081&lt;/CheckSequence&gt;     &lt;LocalDate&gt;20041108&lt;/LocalDate&gt;     &lt;LocalTime&gt;170256&lt;/LocalTime&gt;     &lt;BusinessDate&gt;20041108&lt;/BusinessDate&gt;     &lt;TerminalType&gt;PCWS&lt;/TerminalType&gt;     &lt;PosPlatform&gt;3700&lt;/PosPlatform&gt;     &lt;CheckSummary&gt;       &lt;SalesItemizers&gt;         &lt;SI ID="1"&gt;1.95&lt;/SI&gt;         &lt;SI ID="2"&gt;0.00&lt;/SI&gt;         &lt;SI ID="3"&gt;0.00&lt;/SI&gt;         &lt;SI ID="4"&gt;0.00&lt;/SI&gt;         &lt;SI ID="5"&gt;0.00&lt;/SI&gt;         &lt;SI ID="6"&gt;0.00&lt;/SI&gt;         &lt;SI ID="7"&gt;0.00&lt;/SI&gt;         &lt;SI ID="8"&gt;0.00&lt;/SI&gt;       &lt;/SalesItemizers&gt;       &lt;MenuItems&gt;         &lt;MI ID="30014" QTY="1"&gt;1.95&lt;/MI&gt;       &lt;/MenuItems&gt;       &lt;Payments&gt;         &lt;Payment ID="403" QTY="2"&gt;0.00&lt;/Payment&gt;         &lt;Payment ID="402" QTY="1"&gt;1.00&lt;/Payment&gt;       &lt;/Payments&gt;       &lt;Totals         ttlTax="0.17"         ttlDsc="0.00"         ttlSvc="0.00"         ttlPay="1.00"         ttlDue="1.12"/       &gt;     &lt;/CheckSummary&gt;   &lt;/SVCMessage&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>

**Table 35 Redemption Authorization Response Example**

<b>Redemption Authorization Response</b>	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt; &lt;xml version="1.0" encoding="UTF-8"?&gt; &lt;SVCMessage   hostVersion="0.100.08"   sequence="05"   timeout="30"   version="2"   language="en-US"   currency="USD"   hostName="msvc-micros"&gt;    &lt;RequestCode&gt;SV_REDEMPTION_AUTH&lt;/RequestCode&gt;   &lt;TraceID&gt;041108170255N053057&lt;/TraceID&gt;   &lt;Amount&gt;1.12&lt;/Amount&gt;   &lt;SVAN&gt;003000000004949&lt;/SVAN&gt;   &lt;ItemType&gt;T&lt;/ItemType&gt;   &lt;ItemNumber&gt;403&lt;/ItemNumber&gt;   &lt;AuthorizationCode&gt;7610656&lt;/AuthorizationCode&gt;   &lt;AccountCurrency&gt;USD&lt;/AccountCurrency&gt;   &lt;LocalBalance&gt;23.76&lt;/LocalBalance&gt;   &lt;AccountBalance&gt;23.76&lt;/AccountBalance&gt;   &lt;ExchangeRate&gt;1.00&lt;/ExchangeRate&gt;   &lt;ResponseCode&gt;A&lt;/ResponseCode&gt;   &lt;ProgramCode&gt;300 Gift &lt;/ProgramCode&gt;   &lt;ProgramName&gt;Gift Card&lt;/ProgramName&gt;   &lt;PrintLines&gt;     &lt;PrintLine&gt;%C% Your current card balance is&lt;/PrintLine&gt;     &lt;PrintLine&gt;%C% \$23.76&lt;/PrintLine&gt;   &lt;/PrintLines&gt;   &lt;DisplayMessage&gt;Authorized&lt;/DisplayMessage&gt; &lt;/SVCMessage&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>

## Redemption Transaction

Table 36 Redemption Request Example

Redemption Request	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt; &lt;?xml version="1.0"?&gt; &lt;SVCMessage   sequence="15"   retransmit="N"   timeout="25"   version="2"   language="en-US"   currency="USD"   hostName="msvcmicros"&gt;    &lt;RequestCode&gt;SV_REDEMPTION&lt;/RequestCode&gt;   &lt;RedeemHasAuth&gt;&lt;/RedeemHasAuth&gt;   &lt;TraceID&gt;041110223938N151638&lt;/TraceID&gt;   &lt;TerminalID&gt;11&lt;/TerminalID&gt;   &lt;Amount&gt;1.00&lt;/Amount&gt;   &lt;TipAmount&gt;0.00&lt;/TipAmount&gt;   &lt;SVAN&gt;0010002500000047&lt;/SVAN&gt;   &lt;TransactionEmployee&gt;101&lt;/TransactionEmployee&gt;   &lt;RevenueCenter&gt;1&lt;/RevenueCenter&gt;   &lt;CheckNumber&gt;1638&lt;/CheckNumber&gt;   &lt;CheckSequence&gt;350&lt;/CheckSequence&gt;   &lt;LocalDate&gt;20041110&lt;/LocalDate&gt;   &lt;LocalTime&gt;223938&lt;/LocalTime&gt;   &lt;BusinessDate&gt;20041110&lt;/BusinessDate&gt;   &lt;TerminalType&gt;PCWS&lt;/TerminalType&gt;   &lt;PosPlatform&gt;3700&lt;/PosPlatform&gt;   &lt;CheckSummary&gt;     &lt;SalesItemizers&gt;       &lt;SI ID="1"&gt;8.52&lt;/SI&gt;       &lt;SI ID="2"&gt;0.00&lt;/SI&gt;       &lt;SI ID="3"&gt;0.00&lt;/SI&gt;       &lt;SI ID="4"&gt;0.00&lt;/SI&gt;       &lt;SI ID="5"&gt;0.00&lt;/SI&gt;       &lt;SI ID="6"&gt;0.00&lt;/SI&gt;       &lt;SI ID="7"&gt;0.00&lt;/SI&gt;       &lt;SI ID="8"&gt;0.00&lt;/SI&gt;     &lt;/SalesItemizers&gt;     &lt;MenuItems&gt;       &lt;MI ID="11001" QTY="2"&gt;8.52&lt;/MI&gt;     &lt;/MenuItems&gt;     &lt;Payments&gt;       &lt;Payment ID="303" QTY="2"&gt;0.00&lt;/Payment&gt;     &lt;/Payments&gt;     &lt;Totals       ttlTax="0.74"       ttlDsc="0.00"       ttlSvc="0.00"       ttlPay="0.00"       ttlDue="9.26"/     &gt;   &lt;/CheckSummary&gt; &lt;/SVCMessage&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>

**Table 37 Redemption Response Example**

<b>Redemption Response</b>	
Header Body	<pre> &lt;SOH&gt;msvc-server&lt;FS&gt;msvc-micros&lt;STX&gt; &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;SVCMessage   hostVersion="0.100.07"   sequence="15"   retransmit="N"   timeout="25"   version="2"   language="en-US"   currency="USD"   hostName="msvc-micros"&gt;    &lt;RequestCode&gt;SV_REDEMPTION&lt;/RequestCode&gt;   &lt;TraceID&gt;041110223938N151638&lt;/TraceID&gt;   &lt;Amount&gt;1.00&lt;/Amount&gt;   &lt;SVAN&gt;0010002500000047&lt;/SVAN&gt;   &lt;ItemType&gt;T&lt;/ItemType&gt;   &lt;ItemNumber&gt;302&lt;/ItemNumber&gt;   &lt;AuthorizationCode&gt;63896106&lt;/AuthorizationCode&gt;   &lt;AccountCurrency&gt;USD&lt;/AccountCurrency&gt;   &lt;LocalBalance&gt;29.49&lt;/LocalBalance&gt;   &lt;AccountBalance&gt;29.49&lt;/AccountBalance&gt;   &lt;ExchangeRate&gt;1.00&lt;/ExchangeRate&gt;   &lt;ResponseCode&gt;A&lt;/ResponseCode&gt;   &lt;PrintLines&gt;     &lt;PrintLine&gt;%C% Your current card balance is&lt;/PrintLine&gt;     &lt;PrintLine&gt;%C% \$29.49&lt;/PrintLine&gt;   &lt;/PrintLines&gt;   &lt;DisplayMessage&gt;     The Redemption has been processed, a balance of \$29.49 remains   &lt;/DisplayMessage&gt; &lt;/SVCMessage&gt; </pre>
Termination	<pre> &lt;ETX&gt;&lt;EOT&gt; </pre>