



PAYMENT SERVICES

Payflow Pro Developer's Guide

Payflow Pro Developer's Guide

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Printed in the United States of America.

Revision date: July 24, 2001

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Summary of Revisions

This document supports Payflow Pro V3.00.

The following changes have been made to this manual since document revision 2:

Reference	Description
Chapter 2, "Getting Started"	The "getting started" process has been simplified.
"Commercial Card Transactions" on page 22	Section has been shortened and clarified.
"Testing Your Configuration" on page 32	New method of testing is described.
Appendix A "Processors"	Country codes and units of measurement are updated. Parameter tables are improved. Description of the Vital processor is updated.
Appendix B "Country Codes, Units of Measure, and Currency Codes"	New appendix.

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Introduction

VeriSign Payflow Pro is a high performance TCP/IP-based Internet payment solution. Payflow Pro is pre-integrated with leading e-commerce solutions and is also available as a downloadable software development kit (SDK).

About Payflow Pro

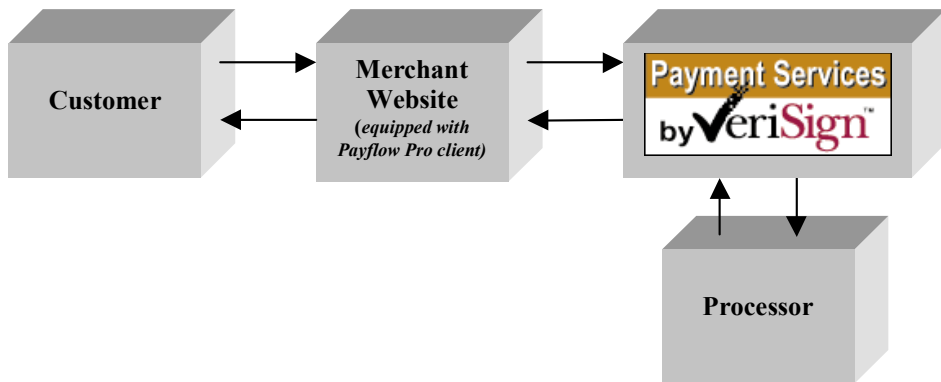
The Payflow Pro client resides on your computer system and is available on all major Web server platforms in a variety of formats to support integration requirements. It comes as a binary executable, activated via a Common Gateway Interface (CGI) script, or integrated as a C-interface application library. It is also available as DLL, COM, Site Server, Java Native Interface, or Perl Module Interface.

Payflow Pro is multi-threaded and allows multiple concurrent transactions from a single client. It can be integrated as a Web-based or a non-Web-based application. It does not require the HTTP protocol to run, which allows for greater flexibility in configuration and reduced processing overhead for higher performance.

How Payflow Pro Works

Payflow Pro uses a client/server architecture to transfer transaction data from you to the processing networks, and then returns the authorization results to you.

Payflow Pro can process real time credit card and/or check transactions to most of the financial processing centers in the United States.



- 1 The Payflow Pro client encrypts each transaction request using industry standard Secure Sockets Layer (SSL) encryption and establishes a secure link with the VeriSign processing server over the Internet.
- 2 The VeriSign server, which is a multi-threaded processing environment, receives the request and transmits it over a private network to the appropriate financial processing network for real-time payment authorization.
- 3 The response (approved/declined, and so on) is received from the financial network and is returned via the same session to the Payflow Pro client.
- 4 The Payflow Pro client completes each transaction session by transparently sending a transaction receipt to the VeriSign server before disconnecting the session.

The entire process is a real-time synchronous transaction. Once connected, the transaction is immediately processed and the answer returned, typically within three seconds. Payflow Pro does not affect or define the time periods of authorizations, nor does it influence the approval or denial of a transaction.

When integrating with Payflow Pro, you need only be concerned with passing all the required data for transaction authorization. The settlement or close batch function is handled by VeriSign.

Payflow Pro Advantages

- **Configurable to any e-commerce application.** Payflow Pro is ideal for enterprise merchants who require complete customizability for a controlled buyer experience.
- **Easy to install and implement.** Downloadable from VeriSign's Web site, Payflow Pro can be easily integrated into a customized e-commerce solution in a matter of hours.
- **Integration versatility.** Payflow Pro can be integrated as an application library or can be run using CGI scripts.

Pre-integrated Solutions

Payflow Pro is integrated with the majority of third party shopping carts and store management systems. Some VeriSign integrations are included with the third party solution and others are available from the download section of the VeriSign Manager Web site (<https://manager.verisign.com>). Some of the solutions supported are:

- Inex
- Miva
- Open Market Shopsite
- Openshop
- Site Server

Processors

Here are some of the processors supported by Payflow Pro:

- American Express
- EDS Aurora
- FDMS Nashville, FDMS South
- Norwest
- Nova
- Paymentech
- TeleCheck
- Vital

Credit Cards

Payflow Pro supports multiple credit card types, including:

- Visa
- MasterCard
- American Express/Optima
- Diners Club
- Discover/Novus
- JCB

Payment Types

Payflow Pro supports multiple payment types in a single installation, including:

- Credit cards
- Electronic check
- Delayed shipment billing
- Purchase cards Level II (also known as corporate purchase or procurement cards)
- Automated Clearing House

Customer Support

For problems related to transaction processing or your connection to VeriSign, contact:

VeriSign Payment Services

Online Info: www.verisign.com

E-mail: vps-support@verisign.com

Mail: VeriSign Payment Services
 Attn: Customer Support
 487 E. Middlefield Rd.
 Mountain View, CA 94043

Phone: (650) 961-7500

For questions regarding transaction settlement, contact one of the following:

American Express

American Express
19640 N. 31st Avenue
Phoenix, AZ 85027

(800) 297-5555

EDS Aurora

EDS Aurora
5400 Legacy Drive
M/S B1-2A-19
Plano, TX 75024

(800) 526-9839

FDMS Nashville

First Data Corporation
2525 Perimeter Place Drive
Suite 123
Nashville, TN 37214

(800) 647-3722

FDMS South

First Data Corporation
Business Payment Services Group
4000 Coral Ridge Drive
Coral Springs, FL 33065

(800) 326-2217

Norwest

Norwest Operations Center
Attn: ACH
255 2nd Ave South
Minneapolis, MN 55479

(800) 745-2426

Nova

Nova Information Systems, Inc.
Knoxville Operations Center
7300 Chapman Highway
Knoxville, TN 37920-6609

(800) 725-1243

Paymentech

Paymentech, Inc.
4 Northeastern Blvd.
Salem, NH 03079

(800) 782-1266

TeleCheck

TeleCheck Merchant Services
P.O. Box 4513
Houston, TX 77210-4513

(800) 366-1054 (Merchant Services)

Vital

Vital
Visanet Processing Services
8320 South Hardy Road
Tempe, AZ 85284

(800) 847-2772 (Merchant Help Desk)

About this Document

This document is organized as follows:

- Chapter 2, “Getting Started,” shows a typical Payflow Pro installation procedure for NT and UNIX.
- Chapter 3, “Configuring Payflow Pro,” discusses the transaction parameters, format, and responses you need to configure and test your Payflow Pro integration.
- Chapter 4, “Going Live,” specifies the steps you need to follow when you are ready to go live with your Payflow Pro configuration.
- Appendix A, “Processors,” lists processors and their processor-specific parameters.
- Appendix B, “Country Codes, Units of Measure, and Currency Codes,” lists Country Codes, Units of Measure, and Currency Codes.
- Appendix C, “VeriSign Reporting Parameters,” details the parameters that can be passed to VeriSign for reporting purposes.
- Appendix D, “Payflow Fraud Screen,” discusses the eFalcon add-on fraud detection service and presents the elements you need to configure it.
- Appendix E, “XMLPay,” briefly describes XMLPay and tells where you may obtain a copy of the *XMLPay 1.0 Core Specification* document.
- Appendix F, “Frequently Asked Questions,” contains answers to the most commonly asked questions about Payflow Pro.

Getting Started

- Step 1** Download the Payflow Pro SDK from the Download section of the VeriSign Manager (<https://manager.verisign.com>) to your hard drive.
- Step 2** Extract the files to a directory.
- Step 3** Refer to the Readme file for the particular system (Perl, Java, and so on) that you are using. The Readme file includes information on samples that illustrate how to use the client.

Configuring Payflow Pro

Before You Begin

If you plan to configure and customize Payflow Pro SDK yourself

- You should be familiar with Web development tools and procedures. If you are not, consider letting one of VeriSign's Web development partners help you. You can find a VeriSign Web development partner at <http://www.verisign.com/products/payflow/partners/solution.html>.

If you do not have Web development expertise and you do not want to hire someone to help you

- Consider using one of the shopping carts that integrate Payflow Pro. You can find more information at <http://www.verisign.com/products/payflow/partners/carts.html>.

Examples Used in this Chapter

The examples used in this chapter refer to the executable client. Other Payflow Pro clients will differ in where and how the parameters are set, but the meaning and uses are the same.

Setting the Certificate Path

For the client to authenticate the VeriSign Payment Services server, the **PFPRO_CERT_PATH** environment variable must point to the **certs** directory (included in the SDK that you downloaded).

For specific information on setting **PFPRO_CERT_PATH**, see the Readme file and example applications in the SDK that you downloaded.

Transaction Format

General Syntax

Use the following syntax when calling the Payflow Pro client (**pfpro**) to process a transaction for any payment type:

```
pfpro <HostAddress> <HostPort> "<ParmList>" <TimeOut>  
<ProxyAddress> <ProxyPort> <ProxyLogon> <ProxyPassword>
```

Follow these guidelines:

- Use a single string with no line breaks.
- Use spaces as argument separators.
- Enclose the **ParmList** in quotation marks ("").
- Separate all **name=value** pairs in the **ParmList** using an ampersand (&).
- Calling **pfpro** without the required parameters results in an error message.

The following example credit card sale transaction differs from check or purchasing card transactions only in the list of parameters required in the **ParmList**.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=S&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
00016&EXPDATE=0804&AMT=1.00"
```

Table 3-1 Syntax Breakdown

Parameter	Required	Description
HostAddress	Yes	VeriSign's host name. For live transactions, use <i>payflow.verisign.com</i> . For testing purposes use <i>test-payflow.verisign.com</i> .
HostPort	Yes	Use port 443
ParmList	Yes	The ParmList is the list of parameters that specify the payment information for the transaction. The contents of the ParmList will vary by the type of transaction being processed and the payment method (tender type) that is being used. For example, the required parameters for a void transaction differ from the parameters required to process a sale transaction, an ACH, or an electronic check transaction. The ParmList must be enclosed in quotes. (See "The following parameters are required for every credit card, electronic check, or ACH transaction. Additional tender-specific parameters are required." on page 14 for ParmLists by tender type.)
TimeOut	Yes	This value specifies a time-out period for the transaction. The minimum recommended time-out value is 30 seconds. The VeriSign client will begin tracking the time-out value from the point that it actually sends the transaction request to the VeriSign server.
ProxyAddress*	No	Proxy server address
ProxyPort*	No	Proxy server port
ProxyLogon*	No	Proxy server logon ID
ProxyPassword*	No	Proxy server logon password
*Use these items for servers behind a firewall. Your network administrator can provide these values.		

Required Parameters

All Transactions — Required Parameters

The following parameters are required for every credit card, electronic check, or ACH transaction. Additional tender-specific parameters are required.

- **TRXTYPE**
- **TENDER**
- **PARTNER**
- **VENDOR**
- **USER**
- **PWD**
- **AMT**

Credit Card Transactions — Required Parameters

The tables define the parameters used in this example.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=S&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
00016&EXPDATE=0804&AMT=1.00"
```

Table 3-2 Syntax Breakdown

Item	Description
HostAddress	VeriSign host name: pfpro test-payflow.verisign.com
HostPort	VeriSign host port number: 443
ParmList	"TRXTYPE=S&TENDER=C&PARTNER=partner ID or <i>Veri-Sign</i> &VENDOR=login&USER=login&PWD=pass-word&ACCT=5499740000000016&EXPDATE=0804&AMT=1.00"

Table 3-3 ParmList Breakdown

Parameter	Description
TRXTYPE=S	Type of transaction affecting the cardholder's account (S = sale)
TENDER=C	Type of tender being used (C = credit card)

Table 3-3 ParmList Breakdown

Parameter	Description
PARTNER=partner ID or <i>VeriSign</i>	This field is case-sensitive. Your partner ID is provided to you by the authorized VeriSign Reseller who signed you up for the Payflow Pro service. If you signed up yourself, use <i>VeriSign</i> .
VENDOR=login	The case-sensitive login that you defined at registration.
USER=login	This field is case-sensitive. Use your login for this parameter. In future releases you will be able to use this parameter to create multiple users for a single account.
PWD=password	Case-sensitive password
ACCT=5499740000000016	Customer's account number. If ACCT is not used in the string, you must use ORIGID. See "Common Credit Card Parameters" on page 18.
EXPDATE=0804	Cardholder's expiration date
AMT=5.00	Transaction amount. A decimal point separates dollars from cents.

Electronic Check Transactions — Required Parameters

VeriSign offers electronic check acceptance through TeleCheck. Before processing electronic check transactions, merchants must obtain an account through TeleCheck (www.telecheck.com). For more information, see "TeleCheck" on page 55.

Electronic check transactions are processed under a "best possible" delivery method. The transaction is deposited through the ACH system, unless the account holder's bank is not a participant, in which case a facsimile draft is created and deposited on behalf of the merchant.

The tables define the parameters used in this example.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=S&TENDER=K&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&AMT=101.00&MIC
R=1234567804390850014321&CHKNUM=4321&NAME=Bob
Smith&STREET=121 Park
```

```
Street&CITY=Pleasanton&STATE=CA&ZIP=123451234&DL=CA1234567&E  
MAIL=customer@customer.com"
```

Table 3-4 Syntax Breakdown

Item	Description
HostAddress	VeriSign host name: pfpro test-payflow.verisign.com
HostPort	VeriSign host port number: 443
ParmList	"TRXTYPE=S&TENDER=K&PARTNER=partner ID or <i>VeriSign</i> &VEN- DOR=login&USER=login&PWD=pass- word&AMT=101.00&MICR=1234567804390850014321&CHKNUM =4321&NAME=Bob Smith&STREET=121 Park Street&CITY=Pleas- anton&STATE=CA&ZIP=123451234&DL=CA1234567&EMAIL=cus tomer@customer.com"

Table 3-5 ParmList Breakdown

Parameter	Description
TRXTYPE=S	Type of transaction affecting the cardholder's account (S = sale)
TENDER=K	Type of tender being used (K = check)
PARTNER=partner ID or <i>VeriSign</i>	This field is case-sensitive. Your partner ID is provided to you by the authorized VeriSign Reseller who signed you up for the Payflow Pro service. If you signed up yourself, use <i>VeriSign</i> .
VENDOR=login	The case-sensitive login that you defined at registration.
USER=login	This field is case-sensitive. Use your login for this parameter. In future releases you will be able to use this parameter to create multiple users for a single account.
PWD=password	Case-sensitive password
AMT=1.01	Transaction amount. A decimal '.' separates dollars from cents.
MICR=1234567804390850011001	MICR stands for Magnetic Ink Check Reader. This is the entire line of numbers at the bottom of all checks. It includes the transit number, account number, and check number.
CHKNUM=1001	Account holder's next unused (available) check number
NAME=Bob Smith	Account holder's name, as it appears on the check

Table 3-5 ParmList Breakdown (Continued)

Parameter	Description
STREET=121 Park Street	Account holder's street address
CITY=Pleasanton	Account holder's city
STATE=CA	Account holder's state
ZIP=123451234	Account holder's zip code
DL=CA1234567	Account holder's driver's license number. Format is: Xx = State Code, Nnnnnnnn = DL Number.
EMAIL= customer@customer.com	Account holder's e-mail address

ACH Transactions — Required Parameters

Unlike credit card processing, ACH is not instantaneous. Inquiries are required to determine the status of a transaction. See Appendix A, "Processors."

The tables define the parameters used in this example.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=S&TENDER=A&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=passwd&AMT=23.47&ABA=9485
73627&ACCT=14576385&ACCTTYPE=C&NAME=John Smith"
```

Table 3-6 Syntax Breakdown

Call Item	Description
HostAddress	VeriSign host name: pfpro test-payflow.verisign.com
HostPort	VeriSign host port number: 443
ParmList	"TRXTYPE=S&TENDER=A&PARTNER=partner ID or <i>Veri-Sign</i> &VENDOR=login&USER=login&PWD=passwd&AMT=23.47&ABA=948573627&ACCT=1457638567&ACCTTYPE=C&NAME=John Smith"

Table 3-7 ParmList Breakdown

Parameter	Description
TRXTYPE=S	Type of transaction affecting the cardholder's account (S = sale)

Table 3-7 ParmList Breakdown

Parameter	Description
TENDER=A	Type of tender being used (A = ACH)
PARTNER=partner ID or <i>VeriSign</i>	This field is case-sensitive. Your partner ID is provided to you by the authorized VeriSign Reseller who signed you up for the Payflow Pro service. If you signed up yourself, use <i>VeriSign</i> .
VENDOR=login	The case-sensitive login that you defined at registration.
USER=login	This field is case-sensitive. Use your login for this parameter. In future releases you will be able to use this parameter to create multiple users for a single account.
PWD=password	Case-sensitive password
AMT=23.47	Dollar amount of EFT transaction. A decimal point separates dollars from cents. The AMT parameter is not required for a prenote.
ABA=948573627	Customer's transit ABA routing number
ACCT=1457638567	Customer's account number
ACCTTYPE=C	'S'avings, 'C'hecking – Customer's account type
NAME=John Smith	Customer's name on the account

Common Credit Card Parameters

All credit card processors accept the parameter fields listed in Table 3-8.

- Some of the listed parameters are required: TRXTYPE, TENDER, PARTNER, VENDOR, USER, PWD, ACCT, EXPDATE, AMT.
- Some of the listed parameters are fully optional: COMMENT1, COMMENT2, STREET, ZIP.
- Some processors require other parameters, as listed in Appendix A, "Processors."

- See Appendix C, “VeriSign Reporting Parameters.” for a list of parameters that you can pass for reporting purposes.

Table 3-8 Credit-card processor parameters

Parameter	Description	Required	Type	Max. Length
ACCT	The credit card or purchase card number may not contain spaces, non-numeric characters, or dashes. ACCT= 5105105105105100	Yes ¹	Numeric	19
AMT	Amount (USD) U.S. based currency. The transaction amount should always specify a decimal, and the exact amount, to the cent (34.00, not 34). Do not include comma separators in the amount. Use 1199.95 instead of 1,199.95. Maximum amounts may be predetermined by your processor and/or merchant account provider.	Yes ¹	Numeric USD only	10
AUTHCODE	Used only when processing Voice Authorization transactions. AUTHCODE is used to define an approval code that is obtained by calling the processing network directly and getting an approval for the transaction over the phone. Note: AUTHCODE is also returned for approved transactions	No, except for Voice Authorizations.	Numeric	6
COMMENT1	User-defined field for reporting and auditing purposes.	No	Alpha-numeric	128
COMMENT2	User-defined field for reporting and auditing purposes.	No	Alpha-numeric	128
EXPDATE	Specifies the expiration date of the credit card. The format is MMYY. “MM” represents the two-digit month and “YY” represents the two-digit year. VeriSign supports year 2000 credit cards. 0798 July, 1998 0202 February, 2002 0804 August 2004	Yes ¹	Numeric	4
ORIGID	This field is case-sensitive. The VeriSign Reference ID (PNREF) which is returned for all transactions. The ORIGID is used when referencing a previous transaction.	Yes ¹	Alpha-numeric	12

Table 3-8 Credit-card processor parameters

Parameter	Description	Required	Type	Max. Length
PARTNER	This field is case-sensitive. Your partner ID is provided to you by the authorized VeriSign Reseller who signed you up for the Payflow Pro service. If you signed up yourself, use <i>VeriSign</i> .	Yes	Alpha-numeric	12
PWD	The case-sensitive password must be 6-12 characters and is defined at registration.	Yes	Alpha-numeric	12
STREET	The cardholder's street address (number and street name). This parameter is a component of called AVS.	No	Alpha-numeric	30
TENDER	The tender type field indicates what kind of tender is desired. For credit cards the only recognized value is C. Other tender types apply to other payment methods (electronic check and ACH).	Yes	Alpha	1
TRXTYPE	The transaction type indicates what kind of transaction is desired. Described in "Credit Card Transactions" on page 20.	Yes	Alpha	1
USER	This field is case-sensitive. For now you must use your login for this parameter. In future releases you will be able to use this parameter to create multiple users for a single account.	Yes	Alpha-numeric	64
VENDOR	The case-sensitive login that you defined at registration.	Yes	Alpha-numeric	64
ZIP	The zip code field is used for AVS and should contain the cardholder's 5 to 9-digit zip code. It should not contain any spaces or non-numeric characters.	No	Numeric	9
1. Some transaction types do not require this parameter field. See "Creating Transactions" on page 20.				

Creating Transactions

Credit Card Transactions

When creating credit card transactions, you must specify the **TRXTYPE** (Transaction Type) as follows:

S –Sale Charges the specified amount against the account, and marks the transaction for immediate funds transfer during the next settlement period. VeriSign automatically performs settlement for each merchant on a daily basis.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=S&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
00016&EXPDATE=0804&AMT=1.00"
```

C – Credit Returns the specified amount to the account holder. It is not necessary to have the credit card number available if you have the original VeriSign Reference ID (PNREF) that was issued with the transaction. If you issue a credit with the PNREF without specifying an amount, the amount of the original transaction is used.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=C&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password
&ACCT=5499740000000016&EXPDATE=0804&AMT=1.00"
or
pfpro test-payflow.verisign.com 443
"TRXTYPE=C&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ORIGID=PA0102000
000"
```

A – Authorization Authorizes transactions that may be captured later. A delayed capture (D) transaction must be issued to capture the original authorization.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=A&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
00016&EXPDATE=0804&AMT=1.00"
```

D - Delayed Capture Used to capture a previously authorized (A) transaction. The transaction is scheduled for settlement during the next settlement period. This provides support for delayed order fulfillment.

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=D&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&ORIGID=PA0102000000&PWD=passw
ord"
```

V -Void A void is the reversal of a charge prior to the settlement process. A void prevents a transaction from being settled. A void does not release the authorization (hold on funds) on the cardholder's account.

```
pfpro test-payflow.verisign.com 443  
"TRXTYPE=V&TENDER=C&PARTNER=partner ID or  
VeriSign&VENDOR=login&USER=login&PWD=password&ORIGID=PA0102000  
000
```

F- Voice Authorization A voice authorization transaction may be performed after obtaining an approval code from the cardholder's issuing bank. This offline process establishes the transaction as a settleable item.

```
pfpro test-payflow.verisign.com 443  
"TRXTYPE=F&TENDER=C&PARTNER=partner ID or  
VeriSign&VENDOR=login&USER=login&PWD=password&AUTHCODE=543210&  
ACCT=5499740000000016&EXPDATE=0804&AMT=1.00"
```

I- Inquiry An inquiry transaction may be performed to check the result and status of a transaction.

```
pfpro test-payflow.verisign.com 443 "TRXTYPE=I&PARTNER=partner ID  
or  
VeriSign&VENDOR=login&USER=login&PWD=password&ORIGID=VABC12345  
678"
```

Commercial Card Transactions

A commercial card (also referred to as a purchase card, corporate card, or business card) is a credit card that is issued at the request of an employer. It is usually reserved for business-related charges. The card issuer provides specialized reporting for this card type so the employer can monitor the use of the card. There is no method for determining whether a card is a purchase card or a commercial card based on the card number.

To obtain the best bank interchange rates for commercial cards, you must pass additional information. Commercial card support and parameters vary from processor to processor. See Appendix A, "Processors" for additional information.

Using Address Verification Service (AVS)

Merchants who wish to qualify for the lowest bank rate must pass Address Verification Service (AVS) information (street address and Zip code).

The processing network compares the passed AVS values with the values on file at the cardholder's bank and returns the character **Y**, **N**, or **X** for street address and for Zip code. **Y** means match, **N** means no match, **X** means the cardholder's bank does not support AVS.

Note Banks do not decline transactions based on the AVS result. This information is advice only.

AVS is supported only by US banks — international banks return **X** or no value at all.

Requesting AVS for a Transaction

This example request include the AVS request parameters **STREET** and **ZIP**:

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=A&TENDER=C&PWD=password&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&ACCT=42222222222222&EXPDATE=08
04&AMT=14.42&STREET=5199 JOHNSON&ZIP=94588"
```

Example AVS response:

```
RESULT=0&PNREF=VXW412345678&RESPMSG=APPROVED&AUTHCODE=123456
&AVSADDR=Y&AVSZIP=N
```

See “Credit Card Response Fields” on page 28 for descriptions of the **AVSADDR** and **AVSZIP** response fields. See Appendix A, “Processors,” for processor-specific information.

Using Ampersand and Equal Sign Characters in Values

Because the ampersand (&) and equal sign (=) characters have special meanings in the ParmList, name/value pairs like **NAME=Ruff & Johnson**, and **COMMENT1=Level=5** are not valid.

You must employ a *length tag* to use these characters in the value field of a parameter. A length tag specifies the exact number of characters and spaces that appear in the value field. The following name/value pairs are valid:

```
NAME [14] =Ruff & Johnson
COMMENT1 [7] =Level=5
```

Transaction Responses

When a VeriSign transaction is initiated and completed, VeriSign returns a response string made up of name/value pairs separated by an ampersands.

Common Response Fields

Field	Description	Type	Length
PNREF	VeriSign Reference ID, a unique number that identifies the transaction.	Alpha-numeric	12
RESULT	The outcome of the attempted transaction. A result of 0 (zero) indicates the transaction was approved. Any other number indicates a decline or error.	Numeric	Variable
RESPMSG	The response message returned with the transaction result. Exact wording varies. Sometimes a colon appears after the initial RESPMSG followed by more detailed information.	Alpha-numeric	Variable

PNREF

The Reference ID field (**PNREF**) is a unique transaction identification number issued by VeriSign that identifies the transaction for billing and reporting purposes.

PNREF is 12 characters with the format **Vxxxxxxxxxxx**, for example, **VXYZ01234567**.

This value is also used as the **ORIGID** (Original ID) in delayed capture transactions (**TRXTYPE=D**), credits (**TRXTYPE=C**), and voids (**TRXTYPE=V**).

Result Status

The transaction result status response field (**RESULT**) is the first parameter returned from the VeriSign server. This status indicates the overall result of the transaction attempt.

- A value of **0** (zero) indicates that no errors occurred and the transaction was approved.
- A value less than zero indicates that a communication error occurred. In this case, no transaction is attempted.

- A value greater than zero indicates a decline or error.

Communications Error Results

A value less than zero indicates that a communication error occurred. In this case, no transaction is attempted.

A value of -1 or -2 usually indicates a configuration error. Either the VeriSign server is unavailable, or incorrect server/socket pairs have been specified. A value of -1 can also result when there are Internet connectivity errors. Refer other errors to VeriSign at vps-support@verisign.com.

Result	Description
-1	Failed to connect to host
-2	Failed to resolve hostname
-5	Failed to initialize SSL context
-6	Parameter list format error: & in name
-7	Parameter list format error: invalid [] name length clause.
-8	SSL failed to connect to host
-9	SSL read failed
-10	SSL write failed
-11	Proxy authorization failed
-12	Timeout waiting for response
-13	Select failure
-14	Too many connections
-15	Failed to set socket options
-20	Proxy read failed
-21	Proxy write failed
-22	Failed to initialize SSL certificate
-23	Host address not specified
-24	Invalid transaction type
-25	Failed to create a socket
-26	Failed to initialize socket layer
-27	Parameter list format error: invalid [] name length clause.
-28	Parameter list format error: name.
-29	Failed to initialize SSL connection
-30	Invalid timeout value

Result	Description
-31	The certificate chain did not validate, no local certificate found
-32	The certificate chain did not validate, common name did not match URL
-99	Out of memory

Transaction Decline or Error RESULTS and RESPMSGs

A RESULT greater than zero indicates a decline or error. Exact wording of the RESPMSG (shown in **bold**) may vary. Sometimes a colon appears after the initial RESPMSG followed by more detailed information.

Table 3-9 VeriSign Transaction RESULTS/RESPMSGs

RESULT	RESPMSG/Explanation
1	User authentication failed
2	Invalid tender. Your merchant bank account does not support the following credit card type that was submitted.
3	Invalid transaction type. Transaction type is not appropriate for this transaction. For example, you cannot credit an authorization-only transaction.
4	Invalid amount
5	Invalid merchant information. Processor does not recognize your merchant account information. Contact your bank account acquirer to resolve this problem.
7	Field format error. Invalid information entered.
8	Not a transaction server
9	Too many parameters or invalid stream
10	Too many line items
11	Client time-out waiting for response
12	Declined. Check the credit card number and transaction information to make sure they were entered correctly. If this does not resolve the problem, have the customer call the credit card issuer to resolve.
13	Referral. Transaction was declined but could be approved with a verbal authorization from the bank that issued the card. Submit a manual Voice Authorization transaction and enter the verbal auth code.
19	Original transaction ID not found. The transaction ID you entered for this transaction is not valid.

Table 3-9 VeriSign Transaction RESULTS/RESPMSGs (Continued)

RESULT	RESPMSG/Explanation
20	Cannot find the customer reference number
22	Invalid ABA number
23	Invalid account number. Check credit card number and re-submit.
24	Invalid expiration date. Check and re-submit.
25	Transaction type not mapped to this host
26	Invalid vendor account
27	Insufficient partner permissions
28	Insufficient user permissions
50	Insufficient funds available
99	General error
100	Invalid transaction returned from host
101	Time-out value too small
102	Processor not available
103	Error reading response from host
104	Timeout waiting for processor response. Try your transaction again.
105	Credit error. Make sure you have not already credited this transaction, or that this transaction ID is for a creditable transaction. (For example, you cannot credit an authorization.)
106	Host not available
107	Duplicate suppression time-out
108	Void error. Make sure the transaction ID entered has not already been voided. If not, then look at the Transaction Detail screen for this transaction to see if it has settled. (The Batch field is set to a number greater than zero if the transaction has been settled). If the transaction has already settled, your only recourse is a reversal (credit a payment or submit a payment for a credit).
109	Time-out waiting for host response
111	Capture error. Only authorization transactions can be captured.

Table 3-9 VeriSign Transaction RESULTS/RESPMSGs (Continued)

RESULT	RESPMSG/Explanation
112	Failed AVS check. Address and Zip code do not match. An authorization may still exist on the cardholder's account.
113	Cannot exceed sales cap. For ACH transactions only.
114	CVV2 Mismatch. An authorization may still exist on the cardholder's account.
1000	Generic host error. This is a generic message returned by your credit card processor. The message itself will contain more information describing the error.

Credit Card Response Fields

The following fields are common to credit card processors.

Field	Description	Type	Length
AUTHCODE	Transactions approved by the bank receive an authorization code.	Alpha-numeric	6
AVSADDR	AVS address responses are for advice only. This process does not affect the outcome of the authorization. See "Using Address Verification Service (AVS)" on page 22.	Alpha Y, N, X, or no response	1
AVSZIP	AVS zip code responses are for advice only. This process does not affect the outcome of the authorization. See "Using Address Verification Service (AVS)" on page 22.	Alpha Y, N, X, or no response	1

Configuring Delayed Capture Transactions

Visa/MasterCard regulations prohibit merchants from capturing credit card transaction funds until product has shipped to the buyer. Because of this rule most processing networks implement a two-stage transaction solution. VeriSign refers to this as delayed capture processing. This process consists of an authorization (A) transaction followed by a delayed capture (D) transaction.

Step 1 Authorization Transaction

Sending a transaction for authorization is similar to a sale (S) transaction except that the transaction type is **A**. All other parameters should be passed in the same manner as a sale transaction.

The output for an authorization transaction is also the same as for a sale transaction. To capture this transaction later, you must save the PNREF returned from the successful authorization.

Note The authorization does not transfer any funds but rather places a hold on the cardholder's open-to-buy or credit limit. This lowers the cardholder's credit limit by the amount of the transaction.

Authorization Example

Issue Authorization-only Transaction

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=A&TENDER=C&PWD=password&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&ACCT=422222222222&EXPDATE=08
04&AMT=14.42&COMMENT1=STUFF&COMMENT2=MORE
STUFF&INNUM=1234567890&STREET=5199 JOHNSON&ZIP=94588"
```

Authorization Response

```
RESULT=0&PNREF=VXYZ01234567&RESPMSG=APPROVED&AUTHCODE=123456
&AVSADDR=Y&AVSZIP=N
```

The data returned in the PNREF field is required to capture the transaction later. This value is sent in the capture transaction described below.

Step 2 Delayed Capture Transaction

To convert a transaction from an authorization state to a captured state, you must send a delayed capture transaction to the VeriSign transaction server. Place the PNREF response from the original authorization transaction in the ORIGID field. (There is no need to retransmit the credit card or billing address information—it is stored at VeriSign.) Only the following parameters are required for a delayed capture transaction:

Delayed Capture Transaction Parameters
TRXTYPE=D
TENDER=C
PARTNER=<merchant specific>
VENDOR=<merchant specific>

Delayed Capture Transaction Parameters
USER=<merchant specific>
PWD=<merchant specific>
AMT= (if the amount is different from the original transaction)
ORIGID=VXYZ01234567

If the capture succeeds, the amount of the sale is transferred to the merchant's account during the daily settlement process. If the capture does not succeed, the hold on the cardholder's open-to-buy is still in effect.

Delayed Capture Example

Issue Delayed Capture Transaction

```
pffpro test-payflow.verisign.com 443
"TRXTYPE=D&TENDER=C&PWD=password&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&ORIGID=VXYZ00887892"
```

Response for Delayed Capture Transaction

```
RESULT=0&PNREF=VXYZ00895642&AUTHCODE=25TEST&AVSADDR=Y&AVSZIP
=N
```

Capturing Transactions for Lower Amounts

You can capture an authorized transaction for an amount lower than the original authorization amount. To do this, issue a delayed capture and specify the lower amount.

```
pffpro test-payflow.verisign.com 443
"TRXTYPE=D&TENDER=C&PWD=password&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&ORIGID=VXYZ00887892&AMT=10.42
"
```

Capturing Transactions for Higher Amounts

You can capture an authorized transaction for an amount higher than the original authorization amount. To do this, issue a delayed capture and specify the higher amount.

Note The disadvantage to using this transaction is that you are charged for an extra transaction and the cardholder's open-to-buy is reduced by the sum of the original authorization-only amount and the final delayed capture amount.

Error Handling and Retransmittal

If an error occurs while processing a delayed capture transaction for a previous authorization, it is safe to retry the capture with values that will allow the VeriSign server to successfully process it. Conversely, if a capture for a previous authorization succeeds, subsequent attempts to recapture it will return an error.

Initiating Voice Authorizations

Sometimes processing networks decline transactions with a referral message indicating that you must call the cardholder's issuing bank to complete the transaction. The payment information is then submitted over the phone. If the transaction is approved, you are provided with an authorization code (AUTHCODE) for the transaction. You must send this AUTHCODE to the VeriSign server as part of a voice authorization (F) transaction.

Voice Authorization Transaction Example

```
pfpro test-payflow.verisign.com 443
"TRXTYPE=F&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
00016&EXPDATE=0804&AMT=1.00&AUTHCODE=123456&COMMENT1=first
comment& and COMMENT2=second comment&INVMNUM=1234567890"
```

Once a voice authorization has been approved, it is treated like a sale or a delayed capture transaction and it will be settled with no further action required. Like sale or delayed capture transactions, approved voice authorization transactions can be voided.

Logging Transaction Information

VeriSign maintains a record of all transactions executed on your account. The VeriSign Manager password-protected site (<https://manager.verisign.com>) allows you to access this record and use the information to help reconcile your accounting records.

This record is not the official bank statement. The credit card transaction summary that you receive from your acquiring bank is the official record.

In addition, VeriSign strongly recommends that you log all transaction results (except for credit card information) on your own system. At minimum, log the following data:

- PNREF
- Transaction Date
- Transaction Amount
- AUTHCODE

If you have any questions regarding a transaction, reference the **PNREF** (also referred to as a transaction ID.)

Testing Your Configuration

VeriSign provides a test configuration server to support testing and configuration. To configure your application for testing purposes, direct all transactions to *test-payflow.verisign.com*.

For specific information on testing, see the *Readme* file and example applications in the SDK that you downloaded.

Test Data

For more detailed information, see the *Readme* file and example applications in the SDK that you downloaded.

- If your processor is **FDMS Nashville**, use the data in the table to test your configuration.
- You can use the data in the table for **American Express**, **EDS Aurora**, **FDMS South**, **Nova**, and **Vital**, but the responses may vary or may not work at all.
- For **Norwest** and **TeleCheck**, see Appendix A, “Processors.”
- For **Paymentech**, use real credit card numbers.

FDMS Nashville Test Cards/Numbers	
Credit Card	Number
American Express	378282246310005

Discover	6011111111111117
MasterCard	5105105105105100
MasterCard	5555555555551111
Visa	4242424242424242
Visa	4111111111111111

Use the following variables to generate the following results and response messages:

FDMS Nashville Test Data		
Variable	RESULT	RESPMSG
\$0 – \$100.00	0	Approved
\$100.01 – \$1000.00	13	Referral
\$1000.01 →	12	Declined
Any invalid expiration date	24	Invalid expiration date

CAUTION The variables in the table return the expected responses only if all other parameters (**TRXTYPE**, **TENDER**, **PARTNER**, **VENDOR**, **USER**, **PWD**, and so on) are correct. If you are testing AVS, the test servers typically return **X** for Zip and address.

Going Live

When you are ready to go live, follow these steps:

- 1 Go to VeriSign Manager (<https://manager.verisign.com/>).
- 2 Click the **Click Here to Go Live!** button and complete the VeriSign Registration/Enable Live Transactions screen.
- 3 Change **test-payflow.verisign.com** to **payflow.verisign.com** in your Payflow Pro integration.
 - Change **test-payflow.verisign.com** to **payflow.verisign.com** wherever **pfpro** is invoked. For the executable client, this is in your cgi script analogous to **cgitest.cgi** in the testing examples.
 - The individual Readme files for the other SDKs contain information about where test-payflow.verisign.com is used. Make the **payflow.verisign.com** change in these places.

Note You must use DNS resolution for transaction processing. In its effort to achieve high availability, VeriSign retains the right to change the IP address without notice. VeriSign cannot be held responsible for any outages that result.

Processors

American Express

Mail: American Express
19640 N. 31st Avenue
Phoenix, AZ 85027

Phone: 800-297-5555

Commercial Card Parameters

The following fields are recommended to obtain the best rates for processing commercial purchasing cards with American Express

Table A-1 American Express Commercial Card Parameters

Field	Description	Required	Type	Length
PONUM	Up to 17 alphanumeric characters, specified by the cardholder to identify the order. Usually used as a Purchase Order number.	No	Alpha-numeric	17
DESC	General description of the transaction.	No (but provides best rate when used)	Alpha-numeric	23
DESC1-4	Up to 4 lines of additional description of the charge.	No	Alpha-numeric	40

Table A-1 American Express Commercial Card Parameters (Continued)

Field	Description	Required	Type	Length
INVNUM	Merchant invoice number. (Also referred to as Supplier Reference Number). This generated reference number appears on merchant's bank reconciliation statement. Acquirer decides if this information will appear on the statement. PNREF numeric digits are the default.	No	Numeric	9
SHIPTOZIP	Ship to Zip code.	No (but provides best rate when used)	Alpha-numeric	6
SWIPE	Allows Track 1 and Track 2 data to be passed to enable a card-present transaction.	No	Alpha-numeric	80
TAXAMT	Tax Amount. Do not include comma separators. Use 1199.95 instead of 1,199.95.	No (but provides best rate when used)	Currency	10

EDS Aurora

Mail: EDS
5400 Legacy Drive
M/S B1-2A-19
Plano, TX 75024

Phone: 800-526-9839

Note There are no unique parameters and codes for this processor (EDS Aurora). Use the appropriate parameters described in “The following parameters are required for every credit card, electronic check, or ACH transaction. Additional tender-specific parameters are required.” on page 14 and “Common Credit Card Parameters” on page 18.

FDMS Nashville

Mail: First Data Corporation
2525 Perimeter Place Drive
Suite 123
Nashville, TN 37214

Phone: 800-647-3722

Commercial Card Parameters

The following fields are recommended to obtain the best rates for processing commercial cards with FDMS Nashville.

Table A-2 FDMS Commercial Card Parameters

Field	Description	Required	Type	Length
COMMCARD	One-character field representing type of commercial card account number sent. P Purchase Card C Corporate Card B Business Card U Unknown (default) N None	No (defaults to U - Unknown)	Alpha-numeric	1
DUTYAMT	Sometimes called import tax. Amount should always be a decimal. Exact amount to the cent (34.00, not 34). Do not include comma separators. Use 1199.95 instead of 1,199.95.	No	Currency	10
FREIGHTAMT	Freight Amount. Amount should always be a decimal. Exact amount to the cent (34.00, not 34). Do not include comma separators. Use 1199.95 instead of 1,199.95.	No	Currency	10
INVNUM	Merchant invoice number. This generated reference number appears on merchant's bank reconciliation statement. Acquirer decides if this information will appear on the statement. PNREF numeric digits are the default.	No	Numeric	10

Table A-2 FDMS Commercial Card Parameters (Continued)

Field	Description	Required	Type	Length
PONUM	Purchase Order Number.	No (but provides best rate when used)	Alpha-numeric	25
SHIPTOZIP	Ship to Zip code.	No (but provides best rate when used)	Numeric	9
TAXAMT	Tax Amount. Amount should always be a decimal. Exact amount to the cent (34.00, not 34). Do not include comma separators. Use 1199.95 instead of 1,199.95.	No (but provides best rate when used)	Currency	10
TAXEXEMPT	Is the customer tax exempt? Y or N	No	Alpha	1

Additional Credit Card Parameter

In addition to the “Common Credit Card Parameters” on page 18, FDMS Nashville accepts the following parameter.

Field	Description	Required	Type	Length
INVNUM	Merchant invoice number. This generated reference number appears on merchant’s bank reconciliation statement. Acquirer decides if this information will appear on the statement. PNREF numeric digits are the default.	No	Numeric	10

FDMS South

Mail: First Data Corporation
Business Payment Services Group
4000 Coral Ridge Drive
Coral Springs, FL 33065

Phone: 800-326-2217

Purchase Card Parameters

The following fields are recommended to obtain the best rates for processing purchase cards (Level 2/3) with FDMS South.

Table A-3 FDMS South Purchase Card Parameters

Field	Description	Required	Type	Length
CITY	Cardholder's city.	No	Alpha	13
COUNTRY-CODE	Destination Country Code. Visa and MasterCard are different. Refer to Country Code tables. (See Appendix B, "Country Codes, Units of Measure, and Currency Codes.")	No	Alpha	3
CUSTCODE	Customer code/customer reference ID	No	Alpha-numeric	17
CVV2	3 or 4 digit code printed (not imprinted) on credit cards. CVV2 (Card Verification Value) is a fraud prevention tool. CVV2 for AmEx is 4 digits; for all other credit cards it is 3 digits.	No	Numeric	3 or 4
DISCOUNT	Discount amount on total sale	No	Currency	10

Table A-3 FDMS South Purchase Card Parameters (Continued)

Field	Description	Required	Type	Length
DUTYAMT	Sometimes called import tax. If the currency uses a decimal, then this parameter should specify the exact amount to the last decimal place (for example, 34.00, not 34). See "FDMS South Currency Codes and Decimal Positions" on page 82. Do not include comma separators in the amount. Use 1199.95 instead of 1,199.95.	No	Currency	10
FIRSTNAME	Cardholder's first name.	No	Alpha	15
FREIGHTAMT	Freight Amount - If the currency uses a decimal, then this parameter should specify the exact amount to the last decimal place (for example, 34.00, not 34). See "FDMS South Currency Codes and Decimal Positions" on page 82. Do not include comma separators in the amount. Use 1199.95 instead of 1,199.95.	No	Currency	10
INVNUM	The merchant invoice number is a generated reference number that will appear on merchant's bank reconciliation statement. The acquirer decides whether this information will appear on the statement. PNREF numeric digits are used as the default.	No	Numeric	10
LASTNAME	Cardholder's last name.	No	Alpha	15
ORDERDATE	Order date: Format is <i>mmddyy</i> with no slashes or dashes. Example: Feb. 12, 2000 would be 021200.	No	Numeric	6
PONUM	Purchase Order Number / Merchant related data	No (but provides best rate when used)	Alpha-numeric	25

Table A-3 FDMS South Purchase Card Parameters (Continued)

Field	Description	Required	Type	Length
SHIPFROMZIP	Ship from zip/postal code.	No (but provides best rate when used)	Numeric	9
SHIPTOZIP	Ship to zip/postal code.	No (but provides best rate when used)	Numeric	9
STATE	Cardholder's state.	No	Alpha	2
SWIPE	Allows Track 1 and Track 2 data to be passed to enable a card-present transaction.	No	Alpha-numeric	80
TAXAMT	Tax Amount - If the currency uses a decimal, then this parameter should specify the exact amount to the last decimal place (for example, 34.00, not 34). See "FDMS South Currency Codes and Decimal Positions" on page 82. Do not include comma separators in the amount. Use 1199.95 instead of 1,199.95.	No (but provides best rate when used)	Currency	10
TAXEXEMPT	Is the customer tax exempt? Y or N	No	Alpha	1

Purchase Card Line Item Parameters

Line item data describes the details of the item purchased and can be passed for each transaction. The convention for passing line item data in name/value pairs is that each name/value starts with 'L_' and ends with 'n' where n is the line item number. For example L_QTY0=1 is the quantity for line item 0 and is equal to 1, with 'n' starting at 0.

Field	Description	Required	Type	Length
L_QTYn	Quantity (whole units only)	Yes	Numeric	10
L_UPCn	Item commodity code	No	Alpha-numeric	12
L_DESCn	Item description	No	Alpha-numeric	35
L_UOMn	Item unit of measure. See "Units of Measure" on page 78.	No	Alpha	3
L_COSTn	Cost per item, excluding tax	No	Currency	10
L_PRODCODEn	Supplier specific product code	No	Alpha-numeric	12
L_DISCOUNTn	Discount per line item	No	Currency	10
L_AMTn	Total line item amount including tax and discount. + for Debit, - for credits	Yes	Currency	10
L_TAXAMTn	Line item Tax amount	No	Currency	10

Purchase Card Level 2 and 3 Parameter Example

```
STATE=CA&FIRSTNAME=John&LASTNAME=Smith&CITY=Redwood&COUNTRYC
ODE=USA&CUSTCODE=12345&DISCOUNT=.25&DUTYAMT=34.00&FREIGHTAMT
=12.00&INVNUM=1234567890&ORDERDATE=021700&PONUM=123456789012
3456789012345&SHIPFROMZIP=940151234&SHIPTOZIP=94065&TAXAMT=1
.00&TAXEXEMPT=Y
```

Line Item Parameter Example

```
"L_QTY1=1&L_UPC1=PN&L_DESC1=Test&L_UOM1=INQ&L_COST1=1.00&L_P
RODCODE1=12345&L_DISCOUNT1=.25&&L_AMT1=.75&L_TAXAMT1=0" 30
```

Norwest

Mail: Norwest Operations Center
Attn: ACH
255 2nd Ave South
Minneapolis, MN 55479

Phone: 800-745-2426

About the VeriSign-Norwest ACH Service

Payflow Pro is designed to provide ACH transactions through the Norwest ACH processing network. The VeriSign-Norwest ACH service consists of two types of APIs: the Transaction API and Inquiry API. Used together, these interfaces provide a facility for submitting ACH transactions.

Norwest ACH Parameters

The following are the available parameters for submitting ACH transactions.

Table A-1 Norwest ACH Parameters

Field	Description	Required	Type	Length
TRXTYPE	'S'ale or 'C'redit – Transaction type	Yes	Alpha upper-case	1
PRENOTE	Y. A prenote is a transaction with no amount that you can use to verify account validity. A receiving bank is not required to respond to a prenote.	No (defaults to N)	Y or N	1
TENDER	'A' – ACH	Yes	Alpha upper-case	1
ACCT	Customer's account number	Yes	Numeric	17
AMT	Dollar amount (USD)	Yes, unless doing a prenote	Numeric	10 with decimal

Table A-1 Norwest ACH Parameters (Continued)

Field	Description	Required	Type	Length
ABA	Customer's transit ABA routing number	Yes	Numeric	9
ACCTTYPE	'S'avings, 'C'hecking – Customer's account type	Yes	Alpha upper-case	1
NAME	Customer's name on the account	No, but suggested	Alpha-numeric upper-case	30
COMMENT1	User-defined field for reporting/auditing purposes.	No	Alpha-numeric	128
COMMENT2	User-defined field for reporting/auditing purposes.	No	Alpha-numeric	128
DESC*	Description of the transaction.	Yes	Alpha-numeric	80

*This parameter only applies if you are using CCD format.

Norwest Inquiry Parameters

The following name value pairs are required for submitting inquiries for previously submitted ACH transactions.

Name	Description	Required	Type	Length
TRXTYPE	'I'nquiry – Transaction type	Yes	Alpha uppercase	1
TENDER	'A' – ACH	Yes	Alpha uppercase	1
ORIGID	PNREF	Yes	Alphanumeric Uppercase	12

Norwest Voiding Parameters

The following name value pairs are required for voiding previously submitted ACH transactions.

Name	Description	Required	Type	Length
TRXTYPE	'V'oiding – Transaction type	Yes	Alpha uppercase	1
TENDER	'A' – ACH	Yes	Alpha uppercase	1
ORIGID	PNREF	Yes	Alphanumeric Uppercase	12

Norwest Inquiry Response Keywords and Descriptions

Name	Description
RESULT	Result for this inquiry ('O' for good)
ORIGRESULT	Original result for the transaction in question
STATUS	Current status code of the transaction
RESPMSG	Human-readable message describing the status/result

Norwest Sample Inquiry Transaction

The following posts an inquiry request for a previously submitted ACH transaction:

```
pfpro payflow.verisign.com 443 "&PARTNER=partner ID or  
VeriSign&VENDOR=login&USER=login&PWD=password&TRXTYPE=I&TENDER  
=A&ORIGID=VXYZ01475826"
```

The result may appear as:

```
RESULT=0&ORIGRESULT=A&STATUS=P02&RESPMSG=Settle request has not  
yet been sent&
```


Norwest Status Codes

The status code table below denotes return values for the **STATUS NAME=value** pair. All codes (with the exception of P02, P03, and P15) are NACHA (National Automated Clearing House Association) specification reject and return reason codes.

- P02, P03, and P15 are VeriSign-specific and are used to describe the status of a transaction with respect to handling by VeriSign. Transactions are collected daily until the merchant-specified settlement time is reached, at which time all transactions are submitted to Norwest for settlement.

Note Test transactions need to have a valid ABA routing number or they will fail VeriSign's Mod 10 check. All test transactions with **RESULT=0** will show an initial status of P02. Within 24 hours the status will switch to P03. Response Message Codes for FDMS South can be found in the *VeriSign Manager User Guide*. (Processor Response Message Codes are codes that sometimes appear in the Response Message field of the VeriSign Manager *Transaction Detail* screen.)

Table A-2 Norwest Status Codes

Code	Reason	Description
C01	Incorrect account number	Account number incorrect or formatted incorrectly
C02	Incorrect transit/routing number	Once valid transit/routing number must be changed
C03	Incorrect transit/routing number and account number	Once valid transit/routing number must be changed and causes a change to account number structure
C04	Account name change	Customer has changed name or ODFI submitted name incorrectly
C05	Incorrect transaction code	Entry posted to demand account should contain savings transaction codes or vice versa
C06	Incorrect account number and transit code	Account number must be changed and transaction code should indicate posting to another account type (demand/savings)
C07	Incorrect transit/routing number, account number and transaction code	Changes required in three fields indicated

Table A-2 Norwest Status Codes (Continued)

Code	Reason	Description
C09	Incorrect individual ID number	Individual's ID number is incorrect
C10	Incorrect company name	Company name is no longer valid and should be changed.
C11	Incorrect company identification	Company ID is no longer valid and should be changed
C12	Incorrect company name and company ID	Both the company name and company id are no longer valid and must be changed
P02	Pending	Settle request has not yet been sent
P03	Submitted	Settle request has been sent
P05	Will not settle	Status for inquiry and voided transactions
P06	Will not settle	Status for void transactions
P15	Rejected	Rejected by the VeriSign server. Check submitted transaction data.
R01	Insufficient funds	Available balance is not sufficient to cover the amount of the debit entry
R02	Account closed	Previously active amount has been closed by the customer of RDFI
R03	No account/unable to locate account	Account number does not correspond to the individual identified in the entry, or the account number designated is not an open account
R04	Invalid account number	Account number structure is not valid
R06	Returned per ODFI request	ODFI requested the RDFI to return the entry
R07	Authorization revoked by customer	Receiver has revoked authorization
R08	Payment stopped	Receiver of a recurring debit has stopped payment of an entry
R09	Uncollected funds	Collected funds are not sufficient for payment of the debit entry
R10	Customer advises not authorized	Receiver has advised RDFI that originator is not authorized to debit his account
R11	Check truncation entry return	To be used when returning a check truncation entry
R12	Branch sold to another RDFI	RDFI unable to post entry destined for an account maintained at a branch sold to another financial institution

Table A-2 Norwest Status Codes (Continued)

Code	Reason	Description
R13	RDFI not qualified to participate	Financial institution does not receive commercial ACH entries
R14	Representative payee deceased or unable to continue in that capacity	The representative payee authorized to accept entries on behalf of a beneficiary is either deceased or unable to continue in that capacity
R15	Beneficiary or account holder	(Other than representative payee) deceased* - (1) the beneficiary entitled to payments is deceased or (2) the account holder other than a representative payee is deceased
R16	Account frozen	Funds in account are unavailable due to action by RDFI or legal order
R17	File record edit criteria	Fields rejected by RDFI processing (identified in return addenda)
R18	Improper effective entry date	Entries have been presented prior to the first available processing window for the effective date.
R19	Amount field error	Improper formatting of the amount field
R20	Non-transaction account	Entry destined for non-transaction account defined by reg. D
R21	Invalid company ID number	The company ID information not valid (normally CIE entries)
R22	Invalid individual ID number	Individual id used by receiver is incorrect (CIE entries)
R23	Credit entry refused by receiver	Receiver returned entry because minimum or exact amount not remitted, account is subject to litigation, or transaction represents an overpayment, originator is not known to receiver or receiver has not authorized this credit entry to this account
R24	Duplicate entry	RDFI has received a duplicate entry
R25	Addenda error	Improper formatting of the addenda record information
R26	Mandatory field error	Improper information in one of the mandatory fields
R27	Trace number error	Original entry trace number is not valid for return entry; or addenda trace numbers do not correspond with entry detail record

Table A-2 Norwest Status Codes (Continued)

Code	Reason	Description
R28	Transit routing number check digit error	Check digit for the transit routing number is incorrect
R29	Corporate customer advises not authorized	RDFI has been notified by corporate receiver that debit entry of originator is not authorized
R30	RDFI not participant in check truncation program	Financial institution not participating in automated check safekeeping application
R31	Permissible return entry (CCD and CTX only)	RDFI has been notified by the ODFI that it agrees to accept a CCD or CTX return entry
R32	RDFI non-settlement	RDFI is not able to settle the entry
R33	Return of XCK entry	RDFI determines at its sole discretion to return an XCK entry; an XCK return entry may be initiated by midnight of the sixtieth day following the settlement date if the XCK entry
R34	Limited participation RDFI	RDFI participation has been limited by a federal or state supervisor
R35	Return of improper debit entry	ACH debit not permitted for use with the CIE standard entry class code (except for reversals)

Nova

Mail: Nova Information Systems, Inc.
 Knoxville Operations Center
 7300 Chapman Highway
 Knoxville, TN 37920-6609

Phone: 800-725-1243

Nova Commercial Card Parameters

The following fields are recommended to obtain the best rates for processing commercial cards with Nova:

Field	Description	Required	Type	Length
COM-MCARD	This is a one-character field representing the type of commercial card account number being sent. P Purchase Card C Corporate Card B Business Card U Unknown (default) N None	No (defaults to U - Unknown)	Alpha-numeric	1
PONUM	Purchase Order Number	No (when used provides best rate)	Alpha-numeric	25
TAXAMT	Tax Amount - The amount should always specify a decimal, and the exact amount, to the cent (34.00, not 34). Do not include comma separators in the amount. Use 1199.95 instead of 1,199.95.	No (when used provides best rate)	Currency	10

Paymentech

Mail: Paymentech
4 Northeastern Blvd.
Salem, NH 03079

Phone: 800-782-1266

Additional Credit Card Parameters

In addition to the “Common Credit Card Parameters” on page 18, Paymentech accepts the following parameters. For best AVS results, pass the city and state parameters in the parameter list.

Field	Description	Required	Type	Length
CITY	Cardholder's billing city.	No	Alpha	20
CVV2	3 or 4 digit code printed (not imprinted) on credit cards. CVV2 (Card Verification Value) is a fraud prevention tool. CVV2 for AmEx is 4 digits; for all other credit cards it is 3 digits.	No	Numeric	3 or 4
INVNUM	Merchant invoice number. This generated reference number appears on merchant's bank reconciliation statement. Acquirer decides if this information will appear on the statement. PNREF numeric digits are the default.	No	Numeric	10
STATE	Cardholder's billing state.	No	Alpha	2

TeleCheck

Mail: TeleCheck Merchant Services
PO Box 4513
Houston, TX 77210-4513

Phone: 800-366-1054 (Merchant Services)

TeleCheck Parameters

The following parameters are used for processing electronic checks through TeleCheck. Many of these parameters are not used when processing credit card transactions.

Table A-4 TeleCheck Parameters

Field	Description	Required	Type	Length
AMT	This is the transaction amount in U.S. dollars. The transaction amount should always specify a decimal, and the exact amount to the cent (for example, 34.00, instead of 34). Do not include comma separators in the amount. Use 1199.95 instead of 1,199.95.	Yes	Numeric USD only.	7
CITY	Account holder's city	Yes	Alpha	20
COMMENT1	User-defined field for reporting and auditing purposes.	No	Alphanumeric	128
COMMENT2	User-defined field for reporting and auditing purposes.	No	Alphanumeric	128
CHKNUM	Account holder's next unused (available) check number	Yes	Numeric	7
DL	Driver's license number. Format is: Xx = State Code Nnnnnnnn – DL Number	Yes, unless SS is provided	Alphanumeric	33
DOB	Account holder's date of birth. Format is: MMDDYYYY	No	Alphanumeric	8

Table A-4 TeleCheck Parameters (Continued)

Field	Description	Required	Type	Length
EMAIL	Account holder's e-mail address	Yes	Alphanumeric	40
INVNUM	Check invoice number	No	Alphanumeric	17
MICR	Stands for Magnetic Ink Check Reader. This is the entire line of numbers at the bottom of all checks. It includes the transit number, account number, and check number.	Yes	Alphanumeric	35
NAME	Account holder's name, as it appears on the check	Yes	Alphanumeric	30
PARTNER	This field is case-sensitive. Your partner ID is provided to you by the authorized VeriSign Reseller who signed you up for the Payflow Pro service. If you signed up yourself, use <i>VeriSign</i> .	Yes	Alphanumeric	12
PHONENUM	Account holder's telephone number	No	Numeric	20
PWD	Case-sensitive password defined at registration with VeriSign.	Yes	Alphanumeric	12
SS	Account holder's social security number	Yes, unless DL is provided	Alphanumeric	35
STATE	Account holder's state	Yes	Alpha	2
STREET	Account holder's street address	Yes	Alphanumeric	30
TENDER	Tender type field indicates what kind of tender is being used. Use K only.	Yes	Alpha	1
USER	This field is case-sensitive. For now you must use your login for this parameter. In future releases you will be able to use this parameter to create multiple users for a single account.	Yes	Alphanumeric	12

Table A-4 TeleCheck Parameters (Continued)

Field	Description	Required	Type	Length
VENDOR	The case-sensitive login that you defined at registration.	Yes	Alpha-numeric	12
TRXTYPE	Used to indicate the type of transaction that should be processed. Use S only.	Yes	Alpha	1
ZIP	Used to specify the account holder's zip code (spaces, dashes and non-numeric characters should be excluded)	Yes	Numeric	9

TeleCheck Sample Response

Here is a sample response for a TeleCheck transaction:

```
RESULT=0&PNREF=VXYZ01234567&HOSTCODE=000500&RESPMSG=Approved
```

TeleCheck Hostcodes

This parameter is used to return the processor's response code for the transaction. In the case of TeleCheck, it returns a six-digit TeleCheck system response code that describes the results of the authorization attempt. This section contains a complete list of TeleCheck system response codes. Many of these codes will not be encountered under normal operating conditions, but they are included as a troubleshooting aid.

For online electronic check authorizations through TeleCheck, the integrated application is required to display certain verbiage when certain system response codes are returned.

General Failure

Code	Response	Description	Frequency
000100	General Failure	General host based failure	Rare
000101	Invalid Value	Invalid for one or more fields in transaction	Common
999999	Unknown Response	TeleCheck received an unknown response	Rare

Inquiry Declined

Table A-5 Inquiry Declined

Code	Response	Description	Frequency
000200	Preauth Declined	Declined by credit card or Telco network (LIDB)	Common
000201	PIN Mismatch	Mismatch on PIN stored in TeleCheck database	Not Used
000210	Negative Card Record ¹	Temporary and permanent blocks. Prior OTB decline, sale decline or CS block Transaction falls below minimum scoring standards.	Common
000215	Negative ANI Record	ANI previously blocked by CS	Common
000220	Chargeback Card	Card with chargeback history	Common
000225	Chargeback ANI	ANI with chargeback history	Common
000230	Exceed card profile ²	Card has exceeded usage limits	Uncommon
000240	Too many Cards ²	ANI has excessive number of cards	Uncommon
000250	Exceed ANI profile ²	ANI has exceeded usage limits	Uncommon
000260	Too Many Phones ²	Card has been used from excessive ANI	Uncommon
000270	OTB/AVS Decline	OTB decline and AVS mismatch	AVS OTB only
000271	OTB/AVS Decline	OTB approved and AVS mismatch	AVS OTB only
000272	OTB/AVS Decline	OTB decline and AVS match	AVS OTB only
000280	Risk Referral	Temporary Risk referral, AVS necessary	Common
000281	Card Not Qualified	Card does not meet minimum bank restrictions	Not Used
000282	PB Risk Referral	Private billing risk referral, AVS necessary	PB Only

¹ Most frequently used for risk scoring declines, where a transaction falls below minimum standards.

² This data is included in risk scoring decisions and that response (210) has higher precedence.

Inquiry Approved

Code	Response	Description	Frequency
000400	OTB Approved	Preauth approved. AVS matches if provided.	Common
000401	No Response	No response from credit card network for preauth.	Common
000402	AVS Time-out	Preauth approved, AVS timed out	AVS only
000403	PB Approved	Private billing approved.	PB only
000410	Positive Record	Previous positive history.	Common
000420	Test card Approved	Test Card	Common
000421	OTB/AVS Approval	Preauth Approved, AVS match	AVS only
000503	ANI Bill approved	900/TELCO billing approved	ANI bill only

Sale Declined

Code	Response	Description	Frequency
000300	Sale Declined	Sale declined by credit card network	Common
000301	Sale Rejected	Sale does not meet risk standards	Common
000804	Check Declined	Direct Check Sale declined negative data	Direct Check
000805	Check Declined	Direct Check Sale Decline Scoring	Direct Check
000807	Check Failure	Direct Check Sale	Direct Check

Sale Approved

Code	Response	Description	Frequency
000500	Sale Approved	Sale Approved by credit card network	Common
000501	Sale Time-out	Sale transaction time-out in credit card network	Common
000502	Test Card	Test card sale approved (never billed)	Common
000504	ANI Sale Approved	900/Telco sale approved	ANI bill only
000505	PB Sale Approved	Private billing sale approved	PB only
000800	Sale Approved	Direct Check Sale/ECA approved	Direct Check
000801	Sale Approved	Direct Check Sale approved (no ECA)	Direct Check
000802	Sale Approved	Direct Check Sale/ECA approved no guarantee	Direct Check
000803	Sale Approved	Direct Check Sale approved no ECA no guarantee	Direct Check

Submitting TeleCheck Test Transactions

VeriSign provides a test configuration to support your testing and configuration needs. To configure your application for testing purposes, use the following information:

HostAddress	test-payflow.verisign.com
HostPort	443
PARTNER	Your partner ID is provided to you by the authorized VeriSign Reseller who signed you up for the Payflow Pro service. If you signed up yourself, use <i>VeriSign</i> .
VENDOR	Your case-sensitive login that you defined at registration.
USER	For now you must use your login for this parameter. In future releases you will be able to use this parameter to create multiple users for a single account.
PWD	The case-sensitive password defined at registration with VeriSign.

Use the following data for your test transactions:

DL State	CA
DL Number	123456
MICR	see test transaction data below
CHKNUM	see test transaction data below

MICR is the string of numbers at the bottom of an account holder's check. Use the list of test MICR values to test transactions. Multiple transactions sent in succession using the same MICR will not return the predicted response, due to the nature of the TeleCheck approval process.

The numbers in the CHKNUM field must match the last four digits in the MICR field, or the test will return an invalid response. These numbers only work when connecting to the test host (see above).

MICR	CHECKNUM	ERRCODE	TeleCheck Result
1234567804390850001001	1001	000800	Check Approved ECA
1234567804390850011001	1001	000801	Check Approved No ECA
1234567804390850021001	1001	000802	Check Approved ECA, No Guarantee
1234567804390850031001	1001	000803	Check Approved No ECA, No Guarantee
1234567804390850041001	1001	000804	Check Decline Negative Data
1234567804390850051001	1001	000805	Check Decline Scoring
1234567804390850071001	1001	000807	Check Failed

Preparing for TeleCheck Production Transactions

Before going into production with your check integration, you must certify your storefront with TeleCheck. To begin the certification process, send an e-mail to **ica_certification@telecheck.com**. Be sure to include the following information:

- Your test Web site address where test transactions can be processed
- The name, e-mail address and phone # of the person to contact about any needed corrections.

The certification process usually takes 2-3 days.

Vital

Mail: Vital
Visanet Processing Services
8320 South Hardy Road
Tempe, AZ 85284

Phone: 800-847-2772 (Help Desk)

Vital does not require unique parameters or codes. Use the appropriate parameters described in “The following parameters are required for every credit card, electronic check, or ACH transaction. Additional tender-specific parameters are required.” on page 14 and “Common Credit Card Parameters” on page 18.

Country Codes, Units of Measure, and Currency Codes

MasterCard Country Codes

ALBANIA	ALB
ALGERIA	DZA
AMERICAN SAMOA	ASM
ANDORRA	AND
ANGOLA	AGO
ANGUILLA	AIA
ANTARCTICA	ATA
ANTIGUA	ATG
AO PEOPLES DEMO- CRATIC	LAO
APHGANISTAN	AFG
ARGENTINA	ARG
ARMENIA	ARN
ARUBA	ABW
AUSTRALIA	AUS
AUSTRIA	AUT
AZERBAIJAN	AZE
BAHAMAS	BHS
BAHRAIN	BHR
BANGLADESH	BGD

BARBADOS	BRB
BELARUS	BLR
BELGIUM	BEL
BELIZE	BLZ
BENIN	BEN
BERMUDA	BMU
BHUTAN	BTN
BOLIVIA	BOL
BOSNIA AND HERZIGOVINA	BIH
BOTSWANA	BWA
BOUVET ISLAND	BVT
BRAZIL	BRA
BRITISH INDIAN OCEAN TERRITORY	IOT
BRUNEI	BRN
BULGARIA	BGR
BURKINA FASO	BFA
BURUNDI	BDI
CAMBODIA	KHM
CANADA	CAN
CAPE VERDE	CPV
CAYMAN ISLANDS	CYM
CENTRAL AFRICAN REPUBLIC	CAF
CHAD	TCD
CHILE	CHL
CHINA	CHN
CHRISTMAS ISLAND	CXR
CMEROON, UNITED REP.	CMR
COCOS (KEELING) ISLAND	CCK
COLUMBIA	COL
COMOROS	COM
CONGO	GOG

COOK ISLANDS	COK
COSTA RICA	CRI
COTED'IVOIRE	CIV
CROATIA	HRV
CYPRUS	CYP
CZECH REPUBLIC	CZE
DENMARK	DNK
DJIBOUTI	DJI
DOMINICA	DMA
DOMINICAN REPUBLIC	DOM
EL SALVADOR	SLV
EQUATORIAL GUINEA	GNQ
ESTONIA	EST
ETHIOPIA	ETH
FAEROE ISLANDS	FRO
FALKLAND ISLANDS (MALVINAS)	FLK
FIJI	FJI
FINLAND	FIN
FRANCE	FRA
FRENCH GUIANA	GUF
FRENCH POLYNESIA	PYF
FRENCH SOUTHERN TERRITORY	ATF
GABON	GAB
GAMBIA	GMB
GEORGIA	GEO
GERMAN DEMO- CRATIC REP	DDR
GERMANY	DEU
GHANA	GHA
GIBRALTER	GIB
GRECE	GRC
GREENLAND	GRL
GRENADA	GRD
GUADALUPE	GLP

GUAM	GUM
GUATEMALA	GTM
GUINEA	GIN
GUINEA-BISSAU	GNB
GUYANA	GUY
HAITI	HTI
HEARD & MCDONALDS ISLAND	HMD
HONDURAS	HND
HONG KONG	HKG
HUNGARY	HUN
ICELAND	ISL
INDIA	IND
INDONESIA	IDN
IRAN	IRN
IRAQ	IRQ
IRELAND	IRL
ISRAEL	ISR
ITALY	ITA
JAMAICA	JAM
JAPAN	JPN
JORDAN	JOR
KAZAKHSTAN	KAZ
KENYA	KEN
KOREA, REPUBLIC OF	KOR
KUWAIT	KWT
KYRGYZSTAN	KGZ
LATVIA	LVA
LEBANON	LBN
LESOTHO	LSO
LIBERIA	LBR
LIBYAN ARAB JAMAHIRIYA	LBY
LIECHTNSTIEN	LIE
LITHUANIA	LTU

LUXEMBOURG	LUX
MACAU	MAC
MALAYSIA	MYS
MALDIVES	MDV
MALI	MLI
MALTA	MLT
MANACO	MCO
MARSHALL ISLANDS	MHL
MATINIQUE	MTQ
MAURITANIA	MRT
MAURITIUS	MUS
MEXICO	MEX
MICRONESIA	FSM
MOLDOVA	MDA
MONGOLIA	MNG
MONTSERRAT	MSR
MOROCCO	MAR
MOZAMBIQUE	MOZ
MYANMAR	MMR
NAMIBIA	NAM
NAURU	NRU
NEGEL	SEN
NEPAL	NPL
NETHERLANDS	NLD
NETHERLANDS ANTI-LLES	ANT
NEW CALDONIA	NCL
NEW ZEALAND	NZL
NICARAGUA	NIC
NIGER	NER
NIGERIA	NGA
NIUE	NIU
NORFOLK ISLAND	NFK
NORTHERN MARIANA ISLAND	MNP

NORWAY	NOR
OMAN	OMN
PAKISTAN	PAK
PALAU	PLW
PANAMA	PAN
PAPAU NEW GUINEA	PNG
PARAGUAY	PRY
PERU	PER
PHILIPPINES	PHI
PITCAIRN ISLAND	PCN
POLAND	POL
PORTUGUL	PRT
PUERTO RICO	PRI
QATAR	QAT
REUNION	REU
ROMANIA	ROM
RUSSIAN FERERATION	RUS
RWANDA	RWA
SAMOA	WSM
SAN MARINO	SMR
SAN TOME AND PRICI- PEL	STP
SAUDI ARABIA	SAU
SEYCHELLES	SYC
SIERRA LEONE	SLE
SINGAPORE	SGP
ST. HELENA	SHN
ST. KITTS-NEVIS-ANGUILLA	KNA
ST. LUCIA	LCA
ST. PIERRE AND MIQUELON	SPM
ST. VINCENT AND THE GRENADINES	VCT
SUDAN	SDN
SURINAM	SUR

SVALBARD & JAN MAYEN IS.	SJM
SWAZILAND	SWZ
SWEDEN	SWE
SWITZERLAND	CHE
SYRIAN ARAB REPUB- LIC	SYR
TAIWAN, PROVIDENCE OF CHINA	TWN
TAJIKISTAN	TJK
TANZANIA, UNITED REPUBLIC	TZA
THAILAND	THA
TOGO	TGO
TOKELAU	TKL
TONGA	TON
TRINIDAD AND TOBAGO	TTO
TUNISIA	TUN
TURKEY	TR
TURKMENISTAN	TM
TURKS & CAICOS ISLANDS	TC
TUVALU	TUV
U.S. MINOR OUTLYING ISL.	UMI
UGANDA	UGA
UKRAINIAN SSR	UKR
UNITED ARAB EMIR- ATES	ARE
UNITED KINGDOM	GBR
UNITED STATES	USA
URAGUAY	URY
UZBEKISTAN	UZB
VANUATU	VUT
VATICAN CITY STATE	VAT
VENEZUELA	VEN

VIETNAM	VNM
VIRGIN ISLANDS BRIT- ISH	VGB
VIRGIN ISLANDS US	VIR
WALLIS AND FUTUNA IS	WLF
WESTERN SAHARA	ESH
YEMEN	YEM
YUGOSLAVIA	YUG
ZAIRE	ZAR
ZAMBIA	ZMB
ZIMBABWE	RHO

Visa Country Codes

ALBANIA	AL
ALGERIA	DZ
AMERICAN SAMOA	AS
ANDORRA	AD
ANGOLA	AO
ANGUILLA	AI
ANTARCTICA	AQ
ANTIGUA	AG
APHGANISTAN	AF
ARGENTINA	AR
ARMENIA	AM
ARUBA	AW
AUSTRALIA	AU
AUSTRIA	AT
AZERBAIJAN	AZ
BAHAMAS	BS
BAHRAIN	BH
BANGLADESH	BD
BARBADOS	BB
BELARUS	BY
BELGIUM	BE
BELIZE	BZ
BENIN	BJ
BERMUDA	BM
BHUTAN	BT
BOLIVIA	BO
BOSNIA AND HERZIGOVINA	BA
BOTSWANA	BW
BOUVET ISLAND	BV
BRAZIL	BR

BRITISH INDIAN OCEAN TERRITORY	IO
BRUNEI	BN
BULGARIA	BG
BURKINA FASO	BF
BURUNDI	BI
CAMBODIA	KH
CANADA	CA
CAPE VERDE	CV
CAYMAN ISLANDS	KY
CENTRAL AFRICAN REPUBLIC	CF
CHACOS (KEELING) ISLAND	CC
CHAD	TD
CHILE	CL
CHINA	CN
CHRISTMAS ISLAND	CX
CMEROON, UNITED REP.	CM
COLUMBIA	CO
COMOROS	KM
CONGO	CG
COOK ISLANDS	CK
COSTA RICA	CR
COTED'IVOIRE	CI
CROATIA	HR
CYPRUS	CY
CZECH REPUBLIC	CZ
DENMARK	DK
DJIBOUTI	DJ
DOMINICA	DM
DOMINICAN REPUBLIC	DO
EAST TIMOR	TP

ECUADOR	EC
EGYPT	EG
EL SALVADOR	SV
EQUATORIAL GUINEA	GQ
ERITREA	ER
ESTONIA	EE
ETHIOPIA	ET
FAEROE ISLANDS	FO
FALKLAND ISLANDS	FK
FIJI	FJ
FINLAND	FI
FRANCE	FR
FRENCH GUIANA	GF
FRENCH METROPOLITAN	FX
FRENCH POLYNESIA	PF
FRENCH SOUTHERN TERRITORY	TF
GABON	GA
GAMBIA	GM
GEORGIA	GE
GERMANY	DE
GHANA	GH
GIBRALTER	GI
GREECE	GR
GREENLAND	GL
GRENADA	GD
GUADALUPE	GP
GUAM	GU
GUATEMALA	GT
GUINEA	GN
GUINEA-BISSAU	GW
GUYANA	GY
HAITI	HT
HEARD & MCDONALDS ISLAND	HM

HONDURAS	HN
HONG KONG	HK
HUNGARY	HU
ICELAND	IS
INDIA	IN
INDONESIA	ID
IRAN	IR
IRAQ	IQ
IRELAND	IE
ISRAEL	IL
ITALY	IT
JAMAICA	JM
JAPAN	JP
JORDAN	JO
KAZAKHSTAN	KZ
KENYA	KE
KIRIBATI	KI
KOREA, REPUBLIC OF	KR
KUWAIT	KW
KYRGYZSTAN	KG
LAO PEOPLES DEMOCRATIC	LA
LATVIA	LV
LEBANON	LB
LESOTHO	LS
LIBERIA	LR
LIBYAN ARAB JAMAHIRIYA	LY
LIECHTNSTIEN	LI
LITHUANIA	LT
LUXEMBOURG	LU
MACAU	MO
MACEDONIA	MK
MADAGASCAR	MG
MALAWI	MW

MALAYSIA	MY
MALDIVES	MV
MALI	ML
MALTA	MT
MANACO	MC
MARSHALL ISLANDS	MH
MATINIQUE	MQ
MAURITANIA	MR
MAURITIUS	MU
MAYOTTE	YT
MEXICO	MX
MICRONESIA	FM
MOLDOVA	MD
MONGOLIA	MN
MONTSERRAT	MS
MOROCCO	MA
MOZAMBIQUE	MZ
MYANMAR	MM
NAMIBIA	NA
NAURU	NR
NEPAL	NP
NETHERLANDS	NL
NETHERLANDS ANTI- LLES	AN
NEW CALDONIA	NC
NEW ZEALAND	NZ
NICARAGUA	NI
NIGER	NE
NIGERIA	NG
NIUE	NU
NORFOLK ISLAND	NF
NORTHERN MARIANA ISLAND	MP
NORWAY	NO
OMAN	OM

PAKISTAN	PK
PALAU	PW
PANAMA	PA
PAPAU NEW GUINEA	PG
PARAGUAY	PY
PERU	PE
PHILIPPINES	PH
PITCAIRN ISLAND	PN
POLAND	PL
PORTUGUL	PT
PUERTO RICO	PR
QATAR	QA
REUNION	RE
ROMANIA	RO
RUSSIAN FERERATION	RU
RWANDA	RW
SAMOA	WS
SAN MARINO	SM
SAN TOME AND PRICI- PEL	ST
SAUDI ARABIA	SA
SENEGAL	SN
SEYCHELLES	SC
SIERRA LEONE	SL
SINGAPORE	SG
ST. HELENA	SH
ST. KITTS-NEVIS-ANGUILLA	KN
ST. LUCIA	LC
ST. PIERRE AND MIQUE- LON	PM
ST. VINCENT AND THE GRENADINES	VC
SUDAN	SD
SURINAM	SR

SVALBARD & JAN MAYEN IS.	SJ
SWAZILAND	SZ
SWEDEN	SE
SWITZERLAND	CH
SYRIAN ARAB REPUBLIC	SY
TAIWAN, PROVIDENCE OF CHINA	TW
TAJIKISTAN	TJ
TANZANIA, UNITED REPUBLIC	TZ
THAILAND	TH
TOGO	TG
TOKELAU	TK
TONGA	TO
TRINIDAD AND TOBAGO	TT
TUNISIA	TN
TURKEY	TR
TURKMENISTAN	TM
TURKS & CAICOS ISLANDS	TC
TUVALU	TV
U.S. MINOR OUTLYING ISL.	UM
UGANDA	UG
UKRAINIAN SSR	UA
UNITED ARAB EMIRATES	AE
UNITED KINGDOM	GB
UNITED STATES	US
URAGUAY	UY
UZBEKISTAN	UZ
VANUATU	VU
VATICAN CITY STATE	VA
VENEZUELA	VE
VIETNAM	VN

VIRGIN ISLANDS BRITISH	VG
VIRGIN ISLANDS US	VI
WALLIS AND FUTUNA IS	WF
WESTERN SAHARA	EH
YEMEN	YE
YUGOSLAVIA	YU
ZAIRE	ZR
ZAMBIA	ZM
ZIMBABWE	ZW

ISO Country Codes

The following International Standards Organization (ISO) country codes are used when filling the order fields COUNTRY, SHIPTOCOUNTRY, and CORP-COUNTRY.

ISO Codes

Country Name	Code
Afghanistan	4
Albania	8
Algeria	12
American Samoa	16
Andorra	20
Angola	24
Anguilla	660
Antarctica	10
Antigua and Barbuda	28
Argentina	32
Armenia	51
Aruba	533
Australia	36
Austria	40
Azerbaijan	31
Bahamas	44
Bahrain	48
Bangladesh	50
Barbados	52
Belarus	112
Belgium	56
Belize	84
Benin	204
Bermuda	60
Bhutan	64
Bolivia	68
Bosnia-Herzegovina	70
Botswana	72
Bouvet Island	74
Brazil	76
British Indian Ocean Territory	86

ISO Codes (Continued)

Country Name	Code
Brunei Darussalam	96
Bulgaria	100
Burkina Faso	854
Burundi	108
Cambodia	116
Cameroon	120
Canada	124
Cape Verde	132
Cayman Islands	136
Central African Republic	140
Chad	148
Chile	152
China	156
Christmas Island	162
Cocos (Keeling) Islands	166
Colombia	170
Comoros	174
Congo	178
Cook Islands	184
Costa Rica	188
Cote D'Ivoire (formerly Ivory Coast)	384
Croatia (local name: Hrvatska)	191
Cuba	192
Cyprus	196
Czech Republic	203
Denmark	208
Djibouti	262
Dominica	212
Dominican Republic	214
East Timor	626
Ecuador	218
Egypt	818
El Salvador	222
Equatorial Guinea	226
Eritrea	232

ISO Codes (Continued)

Country Name	Code
Estonia	233
Ethiopia	231
Falkland Islands (Malvinas)	238
Faroe Islands	234
Fiji	242
Finland	246
France	250
France, Metropolitan	249
French Guiana	254
French Polynesia	258
French Southern Territories	260
Gabon	266
Gambia	270
Georgia	268
Germany	276
Ghana	288
Gibraltar	292
Greece	300
Greenland	304
Grenada	308
Guadeloupe	312
Guam	316
Guatemala	320
Guinea	324
Guinea-Bissau	624
Guyana	328
Haiti	332
Heard and McDonald Islands	334
Honduras	340
Hong Kong	344
Hungary	348
Iceland	352
India	356
Indonesia	360
Iran (Islamic Republic of)	364
Iraq	368
Ireland	372
Israel	376

ISO Codes (Continued)

Country Name	Code
Italy	380
Jamaica	388
Japan	392
Jordan	400
Kazakhstan	398
Kenya	404
Kiribati	296
Korea, Democratic People's Republic of (formerly North Korea)	408
Korea, Republic of (formerly South Korea)	410
Kuwait	414
Kyrgyzstan	417
Lao People's Democratic Republic (formerly Laos)	418
Latvia	428
Lebanon	422
Lesotho	426
Liberia	430
Libyan Arab Jamahiriya (formerly Libya)	434
Liechtenstein	438
Lithuania	440
Luxembourg	442
Macau	446
Macedonia, the Former Yugoslav Republic of	807
Madagascar	450
Malawi	454
Malaysia	458
Maldives	462
Mali	466
Malta	470
Marshall Islands	584
Martinique	474
Mauritania	478
Mauritius	480
Mayotte	175

ISO Codes (Continued)

Country Name	Code
Mexico	484
Micronesia, Federated States of	583
Moldova, Republic of	498
Monaco	492
Mongolia	496
Montserrat	500
Morocco	504
Mozambique	508
Myanmar (formerly Burma)	104
Namibia	516
Nauru	520
Nepal	524
Netherlands	528
Netherlands Antilles	530
New Caledonia	540
New Zealand	554
Nicaragua	558
Niger	562
Nigeria	566
Niue	570
Norfolk Island	574
Northern Mariana Islands	580
Norway	578
Oman	512
Pakistan	586
Palau	585
Panama	591
Papua New Guinea	598
Paraguay	600
Peru	604
Philippines	608
Pitcairn	612
Poland	616
Portugal	620
Puerto Rico	630
Qatar	634
Reunion	638
Romania	642

ISO Codes (Continued)

Country Name	Code
Russian Federation	643
Rwanda	646
Saint Kitts and Nevis	659
Saint Lucia	662
Saint Vincent and the Grenadines	670
Samoa	882
San Marino	674
Sao Tome and Principe	678
Saudi Arabia	682
Senegal	686
Seychelles	690
Sierra Leone	694
Singapore	702
Slovakia (Slovak Republic)	703
Slovenia	705
Solomon Islands	90
Somalia	706
South Africa	710
South Georgia and the South Sandwich Islands	239
Spain	724
Sri Lanka	144
St. Helena	654
St. Pierre and Miquelon	666
Sudan	736
Suriname	740
Svalbard and Jan Mayen Islands	744
Swaziland	748
Sweden	752
Switzerland	756
Syrian Arab Republic (formerly Syria)	760
Taiwan, Province of China	158
Tajikistan	762
Tanzania, United Republic of	834
Thailand	764
Togo	768

ISO Codes (Continued)

Country Name	Code
Tokelau	772
Tonga	776
Trinidad and Tobago	780
Tunisia	788
Turkey	792
Turkmenistan	795
Turks and Caicos Islands	796
Tuvalu	798
Uganda	800
Ukraine	804
United Arab Emirates	784
United Kingdom	826
United States	840
United States Minor Outlying Islands	581
Uruguay	858
Uzbekistan	860
Vanuatu	548
Vatican City State	336
Venezuela	862
Viet Nam	704
Virgin Islands (British)	92
Virgin Islands (U.S.)	850
Wallis and Futuna Islands	876
Western Sahara	732
Western Samoa	882
Yemen	887
Yugoslavia	891
Zaire	180
Zambia	894
Zimbabwe	716

Units of Measure

Acre (4840 yd ²)	ACR
Alcoholic strength by mass	ASM
Alcoholic strength by volume	ASV
Ampere*	AMP
Ampere=hour (3,6 kC)*	AMH
Are (100 m ²)	ARE
Bar*	BAR
Barrel (petroleum) (158,987 dm ³)	BLL
Becquerel*	BQL
Billion EUR	BIL
Billion US	MLD
Board foot	BFT
Brake horse power (245,7 watts)	BHP
British thermal unit (1,055 kilojoules)	BTU
Bushel (35,2391 dm ³)	BUA
Bushel (36,36874 dm ³)	BUI
Candela*	CDL
Carrying capacity in metric tonnes	CCT
Cental GB (45,359237 kg)	CNT
Center, metric (100 kg) (syn.: Hectokilogram)	DTN
Centigram*	CGM
Centilitre*	CLT
Centimetre*	CMT
Cord (3,63 m ³)	WCD
Coulomb per kilogram*	CKG
Coulomb*	COU
Cubic centimetre*	CMQ
Cubic decimetre*	DMQ

Cubic foot	FTQ
Cubic inch	INQ
Cubic metre per hour*	MQH
Cubic metre per second*	MQS
Cubic metre*	MTQ
Cubic millimetre*	MMQ
Cubic yard	YDQ
Curie	CUR
Day*	DAY
Decade (ten years)	DEC
Decare	DAA
Decilitre*	DLT
Decimetre*	DMT
Decitonne*	DTN
Degree Celsius	CEL
Degree Fahrenheit	FAH
Degree Kelvin: Kelvin	
Displacement tonnage	DPT
Dozen	DZN
Dozen packs	DZP
Dozen pairs	DZR
Dozen pieces	DCP
Dozen rolls	DRL
Drachm GB (3,887935 g)	DRM
Dram GB (1,771745 g)	DRI
Dram US (3,887935 g)	DRA
Dry Barrel (115,627 dm ³)	BLD
Dry gallon (4,404884 dm ³)	GLD
Dry pint (0,55061 dm ³)	PTD
Dry quart (1,101221 dm ³)	QTD
Farad*	FAR
Fluid ounce (28,413 cm ³)	OZI
Fluid ounce (29,5735 cm ³)	OZA

Foot (0,3048 m)	FOT
Gallon (4,546092 dm3)	GLI
Gigabecquerel*	GBQ
Gigawatt-hour (1 million kW/h)*	GWH
Gill (0,142065 dm3)	GII
Gill (11,8294 cm3)	GIA
Grain GB, US (64,798910 mg)	GRN
Gram of fissile isotopes	GFI
Gram*	GRM
Great gross (12 gross)	GGR
Gross	GRO
Gross (register) ton	GRT
Half year (six months)	SAN
Hectare	HAR
Hectobar*	HBA
Hectogram*	HGM
Hectokilogram*	DTH
Hectolitre of pure alcohol	HPA
Hectolitre*	HLT
Hectometre*	HMT
Hertz*	HTZ
Hour*	HUR
Hundred	CEN
Hundred boxes	BHX
Hundred international units	HIU
Hundred leaves	CLF
Hundred packs	CNP
Hundredweight US (45,3592 kg)	CWA
Inch (25,4 mm)	INH
Joule*	JOU
Kelvin*	KEL
Kilobar*	KBA
Kilogram of caustic potash	KPH

Kilogram of caustic soda	KSH
Kilogram of named substance	KNS
Kilogram of nitrogen	KNI
Kilogram of phosphonic anhydride	KPP
Kilogram of phosphorus pentoxide	KPP
Kilogram of potassium hydroxide	KPH
Kilogram of potassium oxide	KPO
Kilogram of sodium hydroxide	KSH
Kilogram of substance 90 per cent dry	KSD
Kilogram per cubic meter*	KMQ
Kilogram per second*	KGS
Kilogram*	KGM
Kilohertz*	KHZ
Kilojoule*	KJO
Kilometre per hour*	KMH
Kilometre*	KMT
Kilopascal*	KPA
Kilogram of uranium	KUR
Kilotonne*	KTN
Kilovar	KVR
Kilovolt*	KVT
Kilovolt-ampere*	KVA
Kilowatt*	KWT
Kilowatt-hour*	KWH
Knot (1 nautical mile per hour)	KNT
Leaf	LEF
Liquid gallon (3,78541 dm3)	GLL
Liquid pint (0,473176 dm3)	PTL
Liquid quart (0,946353 dm3)	QTL
Litre (1 dm3)*	LTR
Litre of pure alcohol	LPA

Long ton GB, US (1,0160469 t)	LTN
(long) hundredweight GB (50,802345 kg)	CWI
Lumen*	LUM
Lux	LUX
Megahertz*	MHZ
Megalitre*	MAL
Megametre*	MAM
Megapascal*	MPA
Megavolt-ampere (1000 KVA)*	MVA
Megawatt*	MAW
Megawatt-hour (100 kW/h)*	MWH
Metre per second squared*	MSK
Metre per second*	MTS
Metre*	MTR
Metric carat (200 mg=2,10-4 kg)	CTM
Metric ton (1000 kg)	TNE
Milliard	MLD
Millibar*	MBR
Millicurie	MCU
Milligram*	MGM
Millilitre*	MLT
Millimetre*	MMT
Million	MIO
Million cubic metres*	HMQ
Million international units	MIU
Minute*	MIN
Month	MON
Nautical mile (1852 m)	NMI
Net (register) ton	NTT
Newton*	NEW
Number	NMB
Number of articles	NAR
Number of bobbons	NBB

Number of cells*	NCL
Number of international units	NIU
Number of packs	NMP
Number of pairs	NMR
Number of parcels	NPL
Number of parts	NPT
Number of rolls	NRL
Ohm*	OHM
Ounce GB, US (28,349523 g)	ONZ
Ounce GB, US (31,103448 g) (syn: Troy ounce)	APZ
Pascal*	PAL
Pennyweight GB, US (1555174 g)	DWT
Piece	PCE
Pint (0,568262 dm3)	PTI
Pound GB, US (0,45359237 kg)	LBR
Proof gallon	PGL
Quart (1,136523 dm3)	QTI
Quarter (of a year)	QAN
Quarter, GB (12,700586 kg)	QTR
Quintal, metric (100 kg)	DTN
Revolution per minute*	RPM
Revolution per second*	RPS
Score	SCO
scruple, GB (1,2955982 g)	SCR
Second*	SEC
Set	SET
Shipping ton	SHT
Short standard (7200 matches)	SST
Short ton GB, US (0,90718474 t)	STN
Siemens*	SIE
Square centimetre*	CMK

Square decimetre*	DMK
Square foot	FTK
Square inch	INK
Square kilometre*	KMK
Square metre*	MTK
Square mile	MIK
Square millimetre*	MMK
Square yard	YDK
Standard	WSD
standard atmosphere (101325 Pa)	ATM
(statue) mile (1609,344 m)	SMI
Stone GB (6,350293 kg)	STI
Technical atmosphere (98066,5 Pa)	ATT
Ten days	DAD
Ten pairs	TPR
Thousand	MIL
Thousand ampere-hour*	TAH
Thousand board feet (2,36 m3)	MBF
Thousand cubic metres per day*	TQD
Thousand standard brick equivalent	MBE
Ton of steam per hour	TSH
Tonne (1000 kg)*	TNE
Tonne of substance 90 per-cent dry	TSD
Trillion EUR	TRL
Trillion US	BIL
Troy ounce	APZ
Troy pound, US (373,242 g)	LBT
Volt*	VLТ
Watt*	WTT
Watt-hour*	WHR
Weber	WEB

Week	WEE
Yard (0,9144 m)	YRD
Year	ANN

FDMS South Currency Codes and Decimal Positions

Currency Name	Currency Code	Decimal Positions
Argentine Peso	32	2
Australian Dollar	36	2
Austrian Schilling	40	2
Belgian Franc	56	0
Canadian Dollar	124	2
Chilean Peso	152	2
Czech Koruna	203	2
Danish Krone	208	2
Dominican Peso	214	2
Markka	246	2
French Franc	250	2
Deutsche Mark	280	2
Drachma	300	0
Hong Kong Dollar	344	2
Indian Rupee	356	2
Irish Punt	372	2
Shekel	376	2
Italian Lira	380	0
Yen	392	0
Won	410	0
Luxembourg Franc	442	0
Mexican Nuevo Peso	484	2

Netherlands Guilder	528	2
New Zealand Dollar	554	2
Norwegian Frone	578	2
Philippine Peso	608	2
Portuguese Escudo	620	0
Rand	710	2
Spanish Peseta	724	0
Swedish Krona	752	2
Swiss Franc	756	2
Thailand Baht	764	2
Pound Sterling	826	2
Russian Ruble	810	2
U.S Dollar	840	2
Bolivar	862	2
New Taiwan Dollar	901	2
Euro Dollar	978	2
Polish New Zloty	985	2
Brazilian Real	986	2

VeriSign Reporting Parameters

The parameters listed here can be passed for reporting purposes. The Shipping and Billing Report in VeriSign Manager is one place you can take advantage of these parameters. Some of the following parameters may also have other purposes. The STREET and ZIP parameters, for instance, are also used for AVS.

Note For regular credit card transactions, reporting parameters are normally not passed to the processor. See Appendix A, “Processors” for more specific information.

Table C-1 VeriSign Reporting Parameters

Field	Description	Required	Type	Max Length
City	Cardholder's billing city	No	Alpha	20
Comment1	User-defined field for reporting and auditing purposes (VeriSign field only)	No	Alpha-numeric	128
Comment2	User-defined field for reporting and auditing purposes (VeriSign field only)	No	Alpha-numeric	128
CompanyName	Cardholder's company	No	Alpha-numeric	30
Country	Cardholder's billing country code	No	Alpha-numeric	3

Table C-1 VeriSign Reporting Parameters (Continued)

Field	Description	Required	Type	Max Length
CUSTCODE	Customer code	No	Alpha-numeric	30
DUTYAMT	Duty amount	No	Alpha-numeric	10
Email	Cardholder's e-mail address	No	Alpha-numeric	64
FirstName	Cardholder's first name	No	Alpha	15
FREIGHTAMT	Freight amount	No	Currency	10
LastName	Cardholder's last name	No	Alpha	15
Name	Cardholder's name	No	Alpha-numeric	15
PONUM	Purchase Order Number	No	Alpha-numeric	15
ShipToCity	Shipping city	No	Alpha-numeric	30
ShipToFirstName	First name in the shipping address	No	Alpha-numeric	30
ShipToLastName	Last name in the shipping address	No	Alpha-numeric	30
ShipToState	Shipping state. US = 2-letter state code. Outside US, use full name.	No	Alpha-numeric	10
ShipToStreet	Shipping street address	No	Alpha-numeric	30
ShipToZip	Shipping Zip code	No	Alpha-numeric	9
State	Cardholder's billing state code	No	Alpha-numeric	2

Table C-1 VeriSign Reporting Parameters (Continued)

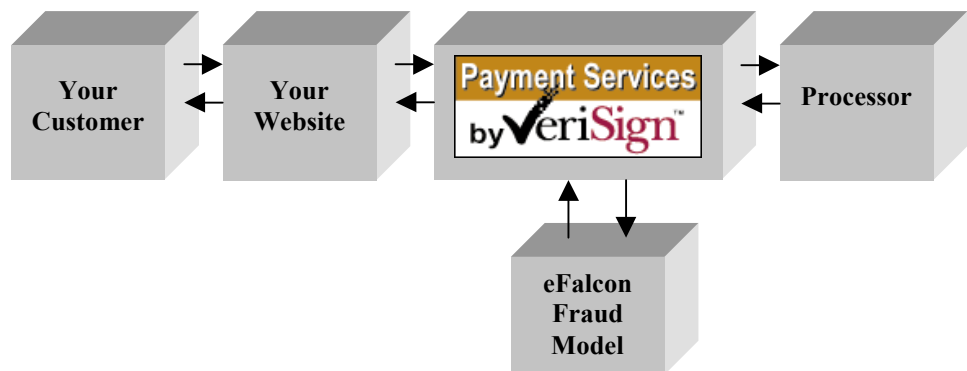
Field	Description	Required	Type	Max Length
Street	Cardholder's billing street address (used for AVS and reporting)	No	Alpha-numeric	30
TAXAMT	Tax amount	No	Currency	10
Zip	Cardholder's billing zip code (used for AVS and reporting). Can be 5 to 9 digits; do not include spaces or non-numeric characters.	No	Numeric	9

Payflow Fraud Screen

The VeriSign Payflow Fraud Screen is an add-on service for Payflow Pro that helps merchants detect fraudulent credit card transactions. This service is based on the eFalcon scoring model from HNC Software, Inc., a leader in credit card fraud protection. HNC's Falcon model currently protects 18 of the top 25 issuing banks and 300 million card holders from general credit card fraud. Using patented modeling technology, HNC created eFalcon, a dedicated model for detecting Internet fraud.

How It Works

After the credit card processor has authorized the transaction, it is sent in real-time to the eFalcon fraud model to be scored. VeriSign then sends the score and the processor transaction results back to you. At that point you can then decide whether or not to accept the transaction.



The eFalcon fraud model compares the transaction to general fraud patterns; it also compares it to individual profiles across all merchants using eFalcon as well as and merchant-specific profiles. Using this method eFalcon can determine whether the transaction is consistent with the individual's typical purchasing behavior as well as typical purchasing behavior at the merchant's store.

eFalcon provides a score between 1 and 999. "1" indicates the *lowest* probability of fraud and "999" indicates the *highest* probability of fraud.

Up to three reason codes and up to seven exception codes are returned to explain the factors that contributed to the score. (You can provide additional transaction information to improve the accuracy of the fraud detection—the more data provided, the more accurate the score.)

eFalcon Advantages

- **Sophisticated fraud-modeling technology.** eFalcon is a dedicated Internet fraud scoring model based on patented modeling techniques. The model is made more powerful by profiling across merchants and service providers in the Internet Fraud Consortium.
- **Real-time performance.** eFalcon scoring adds less than one second on average to the transaction processing time.
- **International.** Unlike AVS checks, eFalcon scoring works for international orders.

Implementation Overview

Implementing Payflow Fraud Screen requires little effort beyond implementing Payflow Pro for credit card processing. Although passing additional fields to the model is not mandatory, it is highly recommended for improved score quality. Your site will need to be able to receive the additional **name=value** pairs, including the fraud score, and act appropriately based on the score and the threshold you choose.

Two-step Transaction Recommended

To best use the scores, VeriSign recommends using the two-step transaction process: 1) authorization and 2) delayed capture. Using the two-step transaction process, a typical transaction process flow follows this order:

- Obtain an authorization and fraud score.
- Based on the score, decide whether or not to accept the order.
- Perform a delayed capture for the order if you decide to accept and settle it.

This two-step transaction process does not have to take any more time from the consumer's perspective than a one-step sale transaction. For example, if you receive an authorization and a score that is acceptable, you can immediately present an order confirmation page to your customer and at the same time (in the background) send the delayed capture transaction to VeriSign.

If you are using a sale transaction and you want to stop an order from being processed because it is above your fraud threshold, you will have to attempt to void the transaction before it is settled.

VeriSign provides several tools to help you select a threshold; see “Selecting a Threshold” on page 106 for more information.

Testing Your Implementation

You can activate Payflow Fraud Screen for test scoring from the VeriSign Manager Web site (<https://manager.verisign.com>). Alternatively, you can contact VeriSign Sales at 888-847-2747 to purchase and activate Payflow Fraud Screen.

To test your implementation, send test transactions to test-payflow.verisign.com. Scores that you receive in response are not production quality scores — they are intended to help you to test your implementation.

To evaluate your threshold, you must use only production/live scores. To process production quality scores, your account must be live.

Activating Live Scoring

When you are ready to receive production quality scores, follow these steps:

- 1 Point your production system to payflow.verisign.com.
- 2 In the **Fraud Setup** area in VeriSign Manager, change the **Fraud Status** setting to **Live**.

General Fraud Parameters

In addition to required credit card parameters, any of the following parameters can be submitted to increase the accuracy of the fraud score. Remember that fraud scoring occurs only for credit card authorizations and sale transactions.

Table D-1 General Fraud Parameters

Field	Description	Type	Max. Length
APT	Billing apartment number	Alphanumeric	6
CARRIER	Shipment carrier: F=Fedex, P=USPS, U=UPS, L=Purolator, G=Greyhound, D=DHL, O=Other	Alpha	1
CITY	Billing city	Alpha	30
CORPCITY	Corporation's city	Alphanumeric	30
CORPCOUNTRY	Corporation's ISO country code. (840=US) See "ISO Country Codes" on page 74.	Numeric	3
CORPFAX	Corporation's fax number	Numeric	12
CORPNAME	Name of corporation	Alphanumeric	30
CORPPHONE	Corporation's phone number	Numeric	12
CORPPURCHASE	Corporate purchase? Y=Yes N=No	Alpha	1
CORPPURCHDESC	Description of corporate purchase	Alphanumeric	160
CORPSTATE	Corporation's state. US=2-letter state code. Outside US, use full name.	Alphanumeric	10
CORPSTREET	Corporation's street address	Alphanumeric	30
CORPSUITE	Corporation's suite number	Alphanumeric	6
CORPZIPCD	Corporation's Zip code	Numeric	9
COUNTRY	Billing ISO country code. (840=US) See "ISO Country Codes" on page 74.	Numeric	3

Table D-1 General Fraud Parameters (Continued)

Field	Description	Type	Max. Length
CUSTAGE	Customer's age. Acceptable values are 0-150.	Numeric	3
CUSTCOOKIES	Are cookies enabled on the customer's PC? Y=Yes N=No	Alphanu- meric	1
CUSTID	Merchant site's ID for this customer	Alphanu- meric	64
CUSTIP	Customer's IP address	Alphanu- meric	15
CUSTMAXAGE	Maximum age of customer, if age range is provided	Numeric	3
CUSTMINAGE	Minimum age of customer, if age range is provided	Numeric	3
CUSTTM	Local time on customer's computer. Time format is HHMMSS: 153123=3:31:23 PM	Numeric	6
DEFFORMFILL	How was web form filled out? E=All fields automatically. M=Some fields filled automatically. N=No fields filled automatically.	Alpha	1
DOB	Date of birth. Format is YYYYMMDD: 19990225=2/25/1999	Numeric	8
EMAIL	Customer's email address	Alphanu- meric	60
FAX	Customer's fax number	Numeric	12
FIRSTNAME	Customer's first name	Alphanu- meric	30
FORGOTPWD	Did customer forget password? Y=Yes N=No	Alpha	1

Table D-1 General Fraud Parameters (Continued)

Field	Description	Type	Max. Length
FRAUDVERBOSITY	Amount of fraud information to be returned. OFF=No fraud detection. LOW=Score only. MEDIUM=Score and reason codes. HIGH=Score, reason codes, exception codes. NOTE: A default fraud verbosity (usually HIGH) is set as part of the merchant's configuration at VeriSign, so this parameter is optional.	String	6
FREIGHT	Shipping charge. A decimal point separates dollars from cents. \$45.79 = 45.79	Numeric	15
GIFTCARDTYPE	Type of gift card: B=Birthday, A=Anniversary, G=Graduation, H=Holiday, C=Congratulations, W=Wedding, S=Baby Shower, U=Other	Alpha	1
GIFTMSG	Message for gift	Alphanumeric	160
LASTNAME	Customer's last name	Alphanumeric	30
MIDNAME	Customer's middle name	Alphanumeric	30
ORDERBIN	Printed numbers under the BIN on the credit card	Numeric	8
ORDERDATE	Date of the order. Format is YYYYMMDD.	Numeric	8
ORDERTIME	Time of the order. Format is HHMMSS.	Numeric	6
ORDERTIMEZONE	Time zone for the order in offset from GMT.	Numeric	3

Table D-1 General Fraud Parameters (Continued)

Field	Description	Type	Max. Length
PASSWORDGIVEN	Did customer give password? Y=Yes N=No	Alpha	1
PONUM	Purchase order number for a corporate purchase	Alphanu- meric	15
PREVIOUSCUST	Returning customer? Y=Yes N=No	Alpha	1
REGLOYALTY	Did customer register for loyalty program? Y=Yes N=No	Alpha	1
REGPROMOS	Did customer register for promotions? Y=Yes N=No	Alpha	1
RETURNALLOWED	Does merchant site allow returns? Y=Yes N=No	Alpha	1
SHIPCOMMENTS	Shipping comments. Free text instructions for shipment.	Alphanu- meric	160
SHIPFIRSTNAME	Shipping first name	Alphanu- meric	30
SHIPINSTRUCTION	Shipping instructions: C=Ship when order complete. A=Ship as items become available. D=Ship on specified date.	Alphanu- meric	1
SHIPLASTNAME	Shipping last name	Alphanu- meric	30
SHIPMENTNO	Shipment number	Alphanu- meric	19

Table D-1 General Fraud Parameters (Continued)

Field	Description	Type	Max. Length
SHIPMETHOD	Shipping method: N=Next Day/Overnight T=Two Day Service W=Three Day Service C=Lowest Cost D=Customer Carrier Designated I=International M=Military P=Store Pickup O=Other	Alpha	1
SHIPMIDNAME	Shipping middle name	Alphanumeric	30
SHIPTITLE	Shipping title (Mr., Mrs., Ms., Dr., Rev., and so on)	Alphanumeric	5
SHIPTOAPT	Shipping apartment number	Alphanumeric	6
SHIPTOCITY	Shipping city	Alphanumeric	30
SHIPTOCOUNTRY	Shipping ISO country code. (840=US) See "ISO Country Codes" on page 74.	Numeric	3
SHIPTOSTATE	Shipping state. US=2-letter state code. Outside US, use full name.	Alphanumeric	10
SHIPTOSTREET	Shipping street address	Alphanumeric	30
SHIPTOZIP	Shipping Zip code	Numeric	9
SSN	Customer's social security number	Numeric	12
STATE	Billing state. US=2-letter state code. Outside US, use full name.	Alphanumeric	10
STREET	Billing street address	Alphanumeric	30

Table D-1 General Fraud Parameters (Continued)

Field	Description	Type	Max. Length
SUBTOTAL	Subtotal (total of products without shipping or tax). A decimal point separates dollars from cents. \$45.79 = 45.79	Numeric	15
TAX	Tax on purchase. A decimal point separates dollars from cents. \$45.79 = 45.79	Numeric	15
TELEPHONE	Customer's home phone	Numeric	12
TITLE	Customer's title (Mr., Mrs., Ms., Dr., Rev., and so on)	Alphanumeric	5
WORKPHONE	Customer's work phone	Numeric	12
WRAPPED	Gift wrapping requested? Y=Yes N=No	Alphanumeric	1
ZIP	Billing Zip code	Numeric	9

Tip If you are already submitting any of the above fields (typically STREET and ZIP) for normal credit card processing, you do not need to resubmit them for fraud scoring.

Line Item Fraud Parameters

eFalcon supports the following line item input parameters. The “n” in the name of the field corresponds to the number of the line item described. For example, if line item #2 is a shirt, “L_TYPE2=P” could be submitted.

Field	Description	Type	Max. Length
L_CATEGORYn	Category of product ordered: S=Standard product offering. P=Promotional offering.	Alphanumeric	1
L_COSTn	Unit price of product ordered. Decimal point separates dollars from cents. \$45.79=45.79	Numeric	15
L_DESCn	Description of product ordered	Alphanumeric	160

L_MANPARTNOn	Manufacturer's part number of product ordered	Alphanumeric	30
L_MANUFACTURERn	Manufacturer of product ordered	Alphanumeric	50
L_PRODCODEn	Product code of product ordered	Alphanumeric	18
L_QTYn	Number of units ordered. Format similar to dollar amounts. 45.79 units =45.79	Numeric	15
L_SKUn	SKU number or product ID of product ordered	Alphanumeric	18
L_TYPEn	Type of product ordered: C=Digital content (for example, images and/or text) D=Digital goods (for example, software) G=Gift certificate or digital cash M=Both digital and physical (for example, software downloaded followed by media shipment) P=Physical goods R=Recurring payment for a subscription S=Shareware	Alphanumeric	1
L_UPCn	Universal Product Code of product ordered	Alphanumeric	12

Creating Fraud Transactions

Minimum Data Example

If you have signed up for the VeriSign Payflow Fraud Screen service, you can receive fraud scores without submitting any additional data (although the accuracy of the score will improve with additional data). The following example shows a normal credit card transaction:

```
Pfpro test-payflow.verisign.com 443
```

```
"TRXTYPE=S&TENDER=C&PARTNER=partner ID or  
verisign&VENDOR=login&USER=login&PWD=password&ACCT=549974000000  
016&EXPDATE=0804&AMT=1.00"
```

Tip To turn fraud scoring off for a particular transaction, add the FRAUDVERBOSITY=OFF parameter to the transaction.

Medium Data Example

The following example shows a transaction where several general fraud parameters have been added to improve the accuracy of the fraud score:

```
Pfpro test-payflow.verisign.com 443

"TRXTYPE=S&TENDER=C&PARTNER=partner ID or
verisign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
016&EXPDATE=0804&AMT=1.00&STREET=121 Park
Street&STATE=CA&ZIP=12345&SHIPTOSTREET=121 Park
Street&SHIPTOCITY=Redwood
Shores&SHIPTOSTATE=CA&SHIPTOZIP=94065&SHIPTOCOUNTRY=840&HOME
PHONE=6506222200&SHIPMETHOD=N&L_TYPE1=P&CUSTIP=123.12.1.1&EM
AIL=customer@customer.com&PASSWORDGIVEN=Y"
```

Note COUNTRY, CUSTIP, STREET, EMAIL, HOMEPHONE, ZIP and L_TYPE1 are especially important to improve fraud scoring. L_TYPE1 is a line-item parameter, but if you aren't including line-item detail, you can simply include a single L_TYPE1 name=value pair. If available: SHIPTOSTREET, SHIPTOAPT, SHIPTOCITY, SHIPTOSTATE, SHIPTOCOUNTRY, SHIPTOZIP, and SHIPMETHOD are also helpful.

High Data Example

The following example shows a transaction where several general fraud parameters and line item parameters have been added to improve the accuracy of the fraud score:

```
Pfpro test-payflow.verisign.com 443

"TRXTYPE=S&TENDER=C&PARTNER=partner ID or
VeriSign&VENDOR=login&USER=login&PWD=password&ACCT=54997400000
0016&EXPDATE=0804&AMT=1.00&STREET=121 Park
Street&STATE=CA&ZIP=12345&SHIPTOSTREET=121 Park
Street&SHIPTOCITY=Redwood
Shores&SHIPTOSTATE=CA&SHIPTOZIP=94065&SHIPTOCOUNTRY=840&HOME
PHONE=6506222200&SHIPMETHOD=N&L_SKU1=12345&L_TYPE1=P&L_QTY1=
2&L_COST1=.25&L_SKU2=1234&L_TYPE2=P&L_QTY2=1&L_COST2=.50"
```

Transaction Fraud Responses

Example Response

The transaction response will contain the authorization as well as the fraud response.

```
RESULT=0&PNREF=VXYZ13179041&RESPCODE=A&ERRCODE=00&AUTHCODE=2  
87PNI&AVSADDR=N&AVSZIP=Y&FRAUDCODE=0&SCORE=236&REASON1=8&REA  
SON2=6&REASON3=1&EXCEPTION1=102&EXCEPTION2=105
```

Response Fields

The following fields are returned for fraud scoring. The transaction score and up to three reason codes and up to seven exception codes can be returned. In addition an error code and error message may be returned.

Field	Description	Type	Max Length
SCORE	Score returned from HNC (0 to 999)	Numeric	3
REASON1	Reason code 1	Numeric	4
REASON2	Reason code 2	Numeric	4
REASON3	Reason code 3	Numeric	4
EXCEPTION1	Exception code 1	Numeric	4
EXCEPTION2	Exception code 2	Numeric	4
EXCEPTION3	Exception code 3	Numeric	4
EXCEPTION4	Exception code 4	Numeric	4
EXCEPTION5	Exception code 5	Numeric	4
EXCEPTION6	Exception code 6	Numeric	4
EXCEPTION7	Exception code 7	Numeric	4
FRAUDCODE	HNC error code	Numeric	2
FRAUDMSG	HNC error message	Numeric	Varies

14	Suspicious payment method
15	Ship-to/bill-to address mismatch
16	High-risk merchant + amount activity
17	Change from historical payment method/card #
18	Address change
19	Email address change
20	IP address change
21	Suspicious telephone #
22	Bad phone #
23	Billing address/phone mismatch
24	Email address/host mismatch
25	Email/billing address mismatch
26	Email/IP host mismatch
27	Billing address/IP host mismatch
28	Email/email address mismatch
29	Suspicious name field
30	Issuer declined
31	Issuer referral
32	Issuer pickup
33	Suspicious goods
34	Invalid card number
35	Card number generator
36	Suspicious authorization velocity (#)
37	Suspicious gift message
100	Duplicate transaction

Exception Codes

Up to seven exception codes can be returned for each transaction. Exception codes are incidental. They describe aspects of the transaction that may or may not be indicative of a fraudulent transaction.

CAUTION The absence of an exception does not guarantee that the exception does not exist for that transaction. For example, the absence of efCardGeneratorBIN does not necessarily mean that a card generator program was not used to create the card number.

Code	Name	Description
101	efMOD10	American Express, Discover, MasterCard, or Visa card failed the MOD-10 check. Invalid card number.
102	efCardGeneratorBIN	BIN number for credit card is made available through one of the hacker programs available from the World Wide Web.
103	efForeignCard	BIN number for credit card is a BIN that eHNC has identified as belonging to a non-U.S. issuing bank.
104	efAnonDomain	E-mail host name used by the customer can provide anonymous e-mail service.
105	efShipToBillTo	Shipping and billing addresses do not match.
106	efForeignShipTo	Shipping address is not a US address.
107	efForeignBillTo	Billing address is not a US address.

FRAUDCODEs/FRAUDMSGs

Error codes and error messages are returned with the fraud score data. A “0” means that the transaction was successfully scored. Any other number means that the transaction was unable to be scored.

FRAUDCODE	FRAUDMSG	Description
0	efNOERROR	No error detected.
1	efCONFIGFILE	Couldn't find specified configuration file.

2	efILLEGALARG	Invalid value passed for an argument.
3	efTIMEOUT	Time-out occurred before the call completed its function.
4	efOTHER	Undetermined error.
5	efCONFIGERR	Error detected in configuration file.
6	efAGAIN	Specified field already initialized for this message.
7	efOUTOFRANGE	Value is out of range.
8	efILLEGALVALUE	Invalid value passed for a field that is a categorical variable or the max length of a character field exceeded.
9	efNOTANUMBER	Non-integer value passed for an integer variable or non-floating point number passed for a floating-point variable.
10	efPRECISION	Illegal precision for a fixed-point field.
11	efINVALIDHANDLE	Handle instance is invalid.
12	efNORESPONSES	No outstanding responses received.
13	efMISSINGFIELD	Required API field not filled.
14	efCONNECT	Connectivity to scoring server problem.
15	efRELAY	Relay server cannot be started.
16	efSERVER	Scoring server temporarily down.
17	efPIPE	Fatal error occurred when attempting to create, read, or write to pipe file.

Using the Fraud Response

You Must Decide

Since VeriSign will not automatically reject transactions based on the fraud score, you must decide how your Web store will act based on the score. If an authorization is approved, you must decide whether or not to capture the transaction. If a sale is approved, that transaction will go through unless it is voided.

A good approach initially is to act conservatively (or even not at all) on the fraud scores you receive until you become more familiar with the distribution of scores you will receive. Once you have decided what scores you will view as risky (either by examining them or by matching them with chargebacks), you can establish actions based on the scores. See “Selecting a Threshold” on page 106 for tips on how to select a threshold and/or use the threshold selection worksheet.

CAUTION Your programming should be based on the fraud score. Using reason codes in your programming rules is not recommended. These codes are only recommended for customer follow up. You may choose to write rules based on exception codes.

Some Suggestions

You may want to pick one or two thresholds. If you pick one threshold, you could accept or reject based on the score. For example, you could decide to reject all orders with scores above 600 and accept all orders with scores of 600 and below.

If you pick two thresholds, you could accept, follow up, or reject based on the score. For example, you could decide to reject all orders with scores above 700, manually follow up on orders with scores between 500 and 700 (to verify phone numbers and other information), and to accept all orders with scores under 500.

You may want to tailor your customer response based on your decisions. For example, if you reject an order, you could display a page that states the order could not be processed. If you want to follow up an order, you could display a page that states that there were difficulties with processing the order and to please call an 800 number or to expect a call.

CAUTION If you do reject an order, your Web store must be able to not send the order and either to not capture the funds or to void the sale.

Selecting a Threshold

Your initial threshold may depend on whether you have a new internet store, or whether you have experience with your score and fraud rate which could help you select a threshold.

If you are a new store or have no fraud data, an initial threshold of 700 may be appropriate. If you want to reject fewer good orders, you might consider 800. If you want to capture more fraud at the risk of rejecting more good orders, you may want to select 600.

If you have some experience with your store and fraud rates, you may want to calculate your “natural” fraud rate and select a threshold based on that rate. To do so, complete the following steps:

- 1 Dig out your old transaction data, at least three to six months old. This ensures that all chargebacks and refund credits due to fraud have been completed.
- 2 Figure your natural fraud rate as a percentage of the total number of chargebacks and refund credits due to fraud plus the total fraud caught using current fraud policies, divided by the total number of transactions over a given period, such as one to two months. Use the following equation, where F = fraud rate.

$$F = \frac{(\text{Total Chargebacks} + \text{Total Refund Credits From Fraud} + \text{Total Fraud Caught})}{\text{Total Transactions}}$$

CAUTION Do not use the dollar amount of fraud to calculate your overall fraud rate. Also, be sure to add the total number of fraudulent orders caught using policies in place before eFalcon.

- 3 Use the following table to classify your overall natural fraud rate as low, medium or high.

Category	Your Present Fraud Rate (F)
Low	$F < .5\%$
Medium	$.5\% < F < 2\%$
High	$F > 2\%$

- 4 Select a threshold* for rejection based on your fraud category, using the following table:

Fraud category	Purpose of threshold	Suggested Threshold
Low	Minimal rejection	800
Medium	Median rejection	700
High	Aggressive rejection	600

- * Recommended thresholds are based on first-guess estimates of the likely percentage of total transactions to be impacted as described in the following table:

Score Threshold	% of Orders Impacted by Threshold
160	6-10%
300	2-4%
490	.5-1.5%
600	.25-1%
700	.125-.75%
800	.05%-.25%

- 5 If desired, select a threshold for manual review based on your fraud category, using the following table:

Fraud category	Purpose of threshold	Suggested Threshold
Low	Minimal review	490
Medium	Median review	300
High	Aggressive review	160

Using "selectscore.xls" to Refine Thresholds

To help you to refine your threshold based on actual score distribution, VeriSign provides the **selectscore.xls** worksheet (downloadable from the VeriSign Manager **Download** page). You must enable macros when opening selectscore.xls. Follow these steps:

- 1 For the scores that you are using for this worksheet (minimum 200 scores, with no test transactions), input the number of transactions that fell into each score category into the cells in the second column.
- 2 Enter your Natural Fraud Rate (see "Selecting a Threshold" on page 106) into the cell near the top left of the worksheet.
- 3 Click **Run Calculations**, and select from the Minimum, Median, or Aggressive Rejection thresholds.
- 4 If desired, select a review score as well by scrolling down.
- 5 Enter the desired **Volume of Transactions to Review**.
- 6 Enter the score threshold you selected in the Rejection section higher in the worksheet.
- 7 Click **Run Calculations** and view the resulting **Review** threshold.

Further Refining Your Score Threshold

The estimated thresholds determined with the processes described here should be considered initial score cutoffs to be used when your e-commerce site first starts using the fraud service.

Over time you will be in a position to fine tune the score to your environment as you determine the actual status (fraudulent vs. non-fraudulent) of the transactions scored by the fraud service.

Reevaluating Your Score Thresholds

The estimation of a score threshold described in this documentation is a “best guess.” After you have been using the fraud service for several months, you should have more confidence that all chargebacks have been received and all refunds due to fraud have been made, and you can then reevaluate your score thresholds.

As you use the fraud service, keep records of your chargebacks, false positives and credit refunds due to fraud. After a few months, you can reevaluate your fraud rate and use the Excel worksheet to develop updated estimates of your score thresholds. You may wish to repeat this process from time to time, adjusting your score thresholds as necessary.

Note Remember that the fraud service provides a *probability* that an order is fraudulent. There may be some transactions below your score threshold that are fraudulent.

Thresholds Disclaimer

Under the terms specified below, VeriSign and/or its licensors are willing to provide the fraud detection score thresholds (the “Thresholds”) described herein to enable end users of VeriSign's Payflow Fraud Screen service to determine the likelihood that a credit card purchase transaction involves fraud. By receiving and/or utilizing these Thresholds, the end user specifically acknowledges and agrees to each of the following conditions:

- 1 The Thresholds may or may not be applicable to the end user’s business or purposes, and the determination whether to utilize such Thresholds lies solely with such end user, and that VeriSign and its licensors have no responsibility, obligation or liability arising therefrom or relating thereto.
- 2 The Thresholds are provided free of charge without any compensation to VeriSign.
- 3 Use of the Thresholds by the end user is strictly voluntary and is not required or necessary to use and benefit from VeriSign's Payflow Fraud Screen service.
- 4 The end user shall only utilize the Thresholds as a tool to determine whether a cardholder's transaction is more likely than not to be fraudulent, and does not affect in any way the creditworthiness of the cardholder.
- 5 The Thresholds are provided “AS-IS” without any warranty whatsoever, including without limitation any warranties of merchantability or fitness for a particular purpose.
- 6 In no event shall VeriSign or its licensors be liable to the end user or any third party for any damages, losses, costs, expenses or liabilities whatsoever, including without limitation loss of profits, arising out of, in connection with, or resulting directly or indirectly from the end user’s use of the thresholds, or by reason of any action or omission on the part of VeriSign or its licensors.
- 7 Under no circumstances shall VeriSign or its licensors be liable for any direct, indirect, incidental, special consequential, exemplary or punitive damages arising out of, in connection with, or resulting directly or indirectly from the end user’s use of the Thresholds, even if VeriSign and/or its licensors are advised of the possibility of such damages.
- 8 Neither VeriSign nor its licensors accept any liability for any collection risk, including if it is due to fraud or fraud losses.
- 9 The Thresholds are the proprietary information of VeriSign, its licensors and/or HNC, and the end user shall not disclose such Thresholds to any third party for any reason or under any circumstances, except as may be required by law. The end user shall disseminate the Thresholds only to those of its employees who have a need-to-know the Thresholds in order to carry out the end user’s business and operations, and which employees are bound by obligations of confidentiality in the use of such Thresholds.

XMLPay

About XMLPay

XMLPay specifies an XML syntax for payment requests and associated responses in a payment-processing network. Instead of using name/value pairs, Payflow Pro Version 3.00 allows for the use of XML documents via XMLPay.

The typical user of XMLPay is an Internet merchant or merchant aggregator who wants to dispatch credit card, corporate purchase card, Automated Clearinghouse (ACH), or other payment requests to a financial processing network.

Using the data type definitions specified by XMLPay, such a user creates a client payment request and dispatches it in the same fashion as using name/value pairs to an associated XMLPay-compliant server component. Responses are also formatted in XML and convey the results of the payment requests to the client.

XMLPay 1.0 Core Specification

VeriSign's *XMLPay 1.0 Core Specification* defines an XML syntax for payment transaction requests, responses, and receipts in a payment processing network.

You may obtain a copy of this document from the Downloads page of VeriSign Manager (<https://manager.verisign.com>).

Note For specific examples of how to submit XML documents using the Payflow Pro client API, see the Payflow Pro SDK download package.

Frequently Asked Questions

- ♦ **How do I download the VeriSign SDK?**

Log in to VeriSign Manager and click **Downloads**. All VeriSign SDKs are listed by server platform and operating system. All SDKs are contained in downloadable WinZip files. You can download WinZip at <http://www.winzip.com>.

- ♦ **Do I need the VeriSign SDK if I already have a shopping cart?**

Refer to your shopping cart documentation to verify its compatibility with VeriSign. Your shopping cart documentation should specify if it is pre-integrated or requires a VeriSign SDK plug-in. Shopping cart SDKs are available on VeriSign's software downloads page.

- ♦ **How do I know my transactions are connecting to VeriSign?**

We send your server a 12-character transaction ID (for example, VX0198765432) for every transaction submitted to our servers. This transaction ID can also be referenced through VeriSign Manager Reports.

- ♦ **How do I process test transactions?**

Once you have registered with VeriSign and have completed the integration/configuration of your storefront use the following information to begin testing transactions:

HostAddress: *test-payflow.verisign.com*

HostPort: *443*

PARTNER: *Your partner ID or VeriSign*

VENDOR: *Your case-sensitive login*

USER: *Your case-sensitive login*

PWD: *Your case-sensitive password*

♦ **How do I process live transactions?**

Once you have successfully processed test transactions, use the following information to reconfigure your storefront:

HostAddress: *payflow.verisign.com*

HostPort: *443*

PARTNER: *Your partner ID or VeriSign*

VENDOR: *Your case-sensitive login*

USER: *Your case-sensitive login*

PWD: *Your case-sensitive password*

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