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VeriSign Payment Services
Recurring Billing Guide for Payflow Pro

USER GUIDE

VeriSign Payment Services Recurring Billing Guide for Payflow Pro

VeriSign, Inc. 00009120/Rev. 3

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Contents

Summary of Revisions

VeriSign, Inc. 00009120/Rev. 3

The following changes were made to this document since the last revision:

Reference	Description
OPTIONALT RXAMT	The OPTIONALTRXAMT recurring profile parameter was misspelled in the previous version of this document as OPTIONTRXAMT. See "Optional Parameters for the ADD Action" on page 47 and "Parameters for the Modify and Reactivate Actions" on page 51.
Mailing customer receipts	You can now e-mail receipts to customers both when a payment is made and when an Optional Payment is made. See "Configuring the Customer's E-mail Notification" on page 31.
Transaction summaries by e-mail	You can now request two types of transaction summary by e-mail: **Daily Transaction Summary** and **Daily Detailed Transaction Summary**. See "Requesting Transaction Summaries by E-mail" on page 35.
Modify action	A note about the Modify action clarifies the fact that it does not alter a profile's status. See page 50.

00009120/Rev. 2

The following changes were made to this document since the last revision:

Reference	Description
Customer E-mail	You can now specify separately whether to send e-mail to each customer each time that their payment succeeds and when a transaction fails. See "Configuring the Customer's E-mail Notification" on page 31.
Mature Profiles	You can now separately manage mature profiles for which all payments have been made and mature profiles for which there are still unmade payments. See "Managing Profiles" on page 20.
Shipping Information	Ship-to fields (Name, Address, and so on) now appear on all pages used to create or modify profiles.

Failed Transactions Report	The **Failed Transactions** report now lists all failed transactions for all profiles with outstanding failed transactions. Previous versions listed only the last failed transaction. See "Generating a Profile Report: Failed Transactions" on page 68.

VeriSign   CHAPTER 1

Introduction

VeriSign's Recurring Billing Service is a scheduled payment solution that enables
you to automatically bill your customers at regular intervals—for example, a
monthly fee of $42 for 36 months with an initial fee of $129.

Note   Information on Automated Clearing House (ACH) transactions has been
removed from this document. For information on performing ACH transactions,
contact your VeriSign Sales Representative at **paymentsales@verisign.com** or
visit **http://www.verisign.com/products/payflow/ach/findoutmore.html**

About the Recurring Billing Service

Note   You must obtain each customer's consent to bill them on an automated
schedule. Appendix A presents the relevant sections from VeriSign's Recurring
Billing Service Agreement.

To configure a customer to be automatically billed on a schedule, you define a
recurring billing *profile* for that customer. The profile specifies the credit card
account to bill, the associated contact information, the amount to charge each time,
the payment period (monthly, weekly, and so on), and the term (the number of
payments) of the agreement.

When you submit the data, VeriSign generates the new profile, activates it, and
automatically performs the billing on the specified schedule. As time goes on, the
profile stores both the configuration information that you supplied and the
transaction and payment history for the account. When the term is complete, the
profile is mature and no further automated transactions occur.

When defining the profile, you have the option to perform an initial transaction that differs from the recurring transaction, for example, to perform a no-charge transaction that validates the account information or to charge an initial fee. In addition, you can specify how to handle declined transactions.

In addition, you can perform the following tasks:

- Search for profiles by profile ID, profile name, credit card number, comment, and amount of payment

- Convert any Sale or Delayed capture transaction into a recurring profile

- Prepare reports

- Send e-mail receipts and notification of failed transactions to customers

- Receive daily e-mail transaction summaries

- Deactivate profiles with payment problems

- Specify criteria for automatic cancellation of profiles with chronic payment problems

- Reactivate profiles

You can perform all recurring billing actions using either VeriSign Manager or the Payflow Pro SDK.

Overview of the Recurring Billing Interface in VeriSign Manager

VeriSign Manager's *Recurring Billing Information* page enables you to create and manage recurring billing profiles, to manage recurring transactions, and to report on recurring billing activity. You can perform the following tasks:

- **Add a profile for a new recurring billing customer** to specify customer contact information, the credit card account to bill, the amount to charge each time, the payment period (monthly, weekly, and so on), and the term (the number of billing periods) of the agreement.

- **Manage Profiles**

    - **View and modify active profiles** in live or test mode. Change any of the profile data. An *active* profile currently bills the customer.

- **View and modify inactive profiles** in live or test mode. *Inactive* profiles do not currently bill the customer. Profiles can be inactive for the following reasons:

  – **Deactivated Profiles**: Profiles that you deactivated from the *Modify Profile* page.

  – **Cancelled Profiles**: Profiles that were automatically cancelled for failing payment for the number of payment periods that you specified.

  – **Mature Profiles**: Profiles for which the term is complete. Mature profiles are further separated into two types: profiles for which the customer either has or has not made all scheduled payments.

- **Configure optional e-mail messages**

  - **Configure the optional receipt and notification of failed transactions** that is sent to your recurring billing customers by e-mail.

  - **Request e-mail transaction summaries** to help you to manage your account.

- **Generate reports**. The *Recurring Billing* report and the *Profile* report are described in Chapter 4, "Generating Reports."

Overview of Recurring Billing Actions in the Payflow Pro SDK

The Payflow Pro SDK supports several *actions* that enable you to manage recurring payment accounts. The following actions are supported:

- **Add** (ACTION=A): Add a new recurring profile either by submitting the required data (card number, payment amount, payment period, and so on) or by converting an existing transaction into a profile. Upon successful creation, VeriSign activates the profile, performs the optional initial transaction if specified, initiates the payment cycle, and returns a Profile ID (a 12-character string that uniquely identifies the profile for searching and reporting).

- **Modify** (ACTION=M) Modify any setting in the profile. You have the option to run an Optional Transaction.

- **Cancel** (ACTION=C) Deactivate the recurring profile. VeriSign records the cancellation date.

- **Reactivate** (ACTION=R) Reactivate the specified inactive profile. You specify a new start date and have the option to alter any other profile parameter.

- **Payment** (ACTION=P) Perform a real-time retry on a previously failed transaction.

- **Inquiry** (ACTION=I) Inquire about the status of a profile and its payment and transaction history.

Recurring Billing Terms

Payment   A payment is the sum that is transacted during each payment period. Payments differ from transactions. Several transactions may be required to successfully perform a payment for a payment period, for example due to a lack of funds during the first transaction attempts. Once a transaction succeeds for a payment period, the **payment** is marked as successful.

Payment Period   There is one payment made per payment period, for example a $42 payment on a monthly basis. In this example, the **payment period** is **Monthly**.

Profile   A *profile* is your definition of a recurring transaction for a single customer. The profile includes all information required to automatically bill the right person the right amount of money at the right time for the right period of time.

Profile ID   A 12-character string (generated by VeriSign) that uniquely identifies a recurring profile. Test profile IDs start with the characters **RT** and live profile IDs with **RP**.

Term   The number of payments to be made over the duration of the agreement. For example, a three-year, monthly payment contract has a **Term** of **36**.

Mature Profile   A profile is considered mature when the term is complete. Remember, however, that even though the number of payment periods specified by the term has occurred, the customer might have not made all scheduled payments. This situation is described fully in "Managing Mature Profiles" on page 25.

Contacting the Customer Support Group

VeriSign is committed to providing you with the most advanced technical support expertise to ensure availability and reliability of your e-commerce applications. For details, please see your Service Level Agreement.

For integration and connectivity issues, VeriSign provides online documentation, direct e-mail support, and phone support. For technical support on shopping carts, please contact the vendor.

Online Info: **http://www.verisign.com/support/payflow**

This site offers a FAQ (frequently asked question) section

E-mail: **vps-support@verisign.com**

Phone: **1-888-883-9770**

About This Document

Intended Audience

This document is intended for merchants who define and manage scheduled (recurring) credit card payments.

Organization of the Document

- Chapter 2, "Managing the Recurring Billing Service Using VeriSign Manager," describes the recurring billing operations available in VeriSign Manager.

- Chapter 4, "Generating Reports," provides instructions on generating and reviewing Recurring Billing reports using VeriSign Manager.

- Chapter 3, "Using the Payflow Pro SDK to Perform Recurring Billing Tasks," describes the Payflow Pro SDK APIs (messages) that perform Recurring Billing Service operations.

- Chapter 5, "Testing Guidelines," describes how to test your implementation.

- Appendix A, "Obtaining Consent to Bill Customers Using Recurring Billing," outlines your responsibilities in obtaining prior authorization from the customer to bill on an automated schedule.

- Appendix B, "Example Administrative Summaries" contains examples of the summary messages.

- Appendix C, "Configuring ASCII Reports to be Saved as Text Files," provides instructions for ensuring that your computer asks whether you would like to open or save ASCII format reports.

Related Documents

VeriSign Manager User's Guide describes the use of VeriSign **Manager**.

VeriSign® CHAPTER 2
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Managing the Recurring Billing Service Using VeriSign Manager

VeriSign Manager provides a Web-based interface that enables you to create and manage recurring billing profiles, to manage recurring transactions, and to report on recurring billing activity. This chapter describes all tasks that you can perform using VeriSign Manager.

Note Before proceeding with the tasks described in this chapter, learn how to get around in VeriSign Manager by reading through Chapter 2, "VeriSign Manager — A Guided Tour," in *VeriSign Manager User's Guide*.

In This Chapter

Recurring Billing Tasks

REMINDER! You must have prior authorization from the customer to bill on an automated schedule. See Appendix A, "Obtaining Consent to Bill Customers Using Recurring Billing," for additional details.

Use the *Recurring Billing Information* page (click the **Recurring Billing** link on the *Welcome* page or use **Account Information** → **Recurring Billing Info**) to perform the following recurring billing tasks:

- **Create a profile for a new recurring billing customer**. See page 9.

- **Convert a Test profile to Live status**. See page 17.

- **Manage Profiles**. Perform the following tasks for either live or test profiles:

  - **View, modify, or deactivate *active* profiles**. An *active* profile currently bills the customer. See page 20.

  - **View, modify, or reactivate any of the following types of inactive profiles**: (An *inactive* profile does not currently bill the customer.)

    – *Cancelled* **profiles**. VeriSign cancels profiles for which the specified number of transaction attempts were declined. See page 23.

    – *Deactivated* **profiles**. You manually deactivated the profile (typically due to problems with customer payment). See page 24.

    – *Mature* **profiles**. The term of the agreement has passed and all payments have been made. See page 25.

- – *Mature* **profiles with outstanding payments**. The term of the agreement has passed, but there are still outstanding payments. See page 25.

- **Generate and review reports.** See Chapter 4, "Generating Reports."

- **Search for profiles**. See "Searching for a Profile" on page 30.

- Use the **E-mail Configuration** page to perform the following tasks:

  - **Configure the optional e-mail receipt or payment failure notice** that you can send to your recurring billing customers. Described on page 31.

  - **Request *Transaction Summary* reports** by e-mail. Described on page 35.

Adding a New Recurring Billing Profile

A *profile* is your definition of a recurring transaction for a single customer. The profile includes all information required to automatically bill the right person the right amount of money at the right time for the right period of time.

There are two ways to add a profile:

- Create a new profile: Specify all account and billing information in the *Add new Profile* page and then submit the page. See "Adding a New Credit Card Profile" on page 10.

- Use an existing transaction as a starting point for the profile. See "Creating a Profile from an Existing Transaction" on page 14.

Adding a New Credit Card Profile

1 On the *Recurring Billing Information* page, select **Add New Profile**. The *Add New Profile* page opens.

Click any field name to view on-line help.

Fields marked with an asterisk (*) are required.

2 **Mode**: Profiles created in **Test** mode are served at **test-payflow.verisign.com** and do not accept or process live credit cards. Testing is described in Chapter 5, "Testing Guidelines." **Live** profiles process real funds. Test Profile IDs begin with the letters **RT** and Live Profile IDs begin with **RP**.

3 **Customer Info** fields: Be sure to use the **Shipping** and **Billing** information that applies to the credit card.

Profile Name: Specify a name (up to 128 characters), for example **Monthly Newsletter - Lisa Marr** or **Standard Account**. You can use this field to search for a profile.

E-mail: You can use this **e-mail** address to search for profiles. This field is required if you wish to send the customer messages each time a payment

succeeds or fails. See "Configuring the Customer's E-mail Notification" on page 31.

4 **Billing Arrangement** fields: Table 2-1 describes the fields.

Table 2-1 Billing Arrangement fields

Field	Description	Type
Recurring Amount	Fixed amount to be charged to the customer's credit card each billing cycle.	number
Start Date	The date that the first payment will be processed. Subsequent payments are processed at the interval that you specify (see **Payment Period**). Use tomorrow's date or a date in the future.	ddmmyyyy
Term	The number of payments to be made over the duration of the agreement. For example, a three-year, monthly payment contract has a **Term** of **36**. A value of **0** (zero) specifies that payments should continue indefinitely.	number
Maximum Fail Payments	The number of **Payment Periods** for which the transaction is allowed to fail before VeriSign cancels a profile. For example, if you bill monthly and specify **3**, VeriSign attempts to bill the account for three months (possibly with multiple retries during each monthly payment period). If the transaction is not approved during the three-month interval, VeriSign cancels the profile and it becomes inactive. The default value of **0** (zero) specifies that retry attempts should occur until the profile expires (until the **Term** is complete). See **Maximum Retry Number of Days**.	number
Maximum Retry Number of Days	The number of consecutive days that VeriSign should attempt to process a failed transaction until **Approved** status is received. For example, if you specify **4**, VeriSign attempts to process the transaction once each day for four consecutive days. If the transaction is not approved during this time, the payment scheduled for that payment period is marked as failed. This increments the number of failed payments used by **Maximum Fail Payments**. VeriSign recommends that you set the value to **4**. Valid values: **1 - 4**. Default: **4**.	number

Table 2-1 Billing Arrangement fields (Continued)

Field	Description	Type
Payment Period	Specifies how often the payment occurs: – Weekly - Every week on the same day of the week as the first payment. – Every Two Weeks - Every other week on the same day of the week as the first payment. – Twice Every Month - The 1st and 15th of the month. Results in 24 payments per year. – Every Four Weeks - Every 28 days from the previous payment date beginning with the first payment date. Results in 13 payments per year. – Monthly - Every month on the same date as the first payment. Results in 12 payments per year. – Quarterly - Every three months on the same date as the first payment. – Twice Every Year - Every six months on the same date as the first payment. – Yearly - Every twelve months on the same date as the first payment.	Selection
Comment1	Use this field for comments (up to 255 characters) on this profile. You can search for profiles by comment and view comments for all profiles.	alpha-numeric

5   Optional Transaction: You have the option to submit an Authorization or Sale transaction when submitting a new profile.

IMPORTANT!   This is a one-time transaction and is not considered a payment. You have the option to send e-mail to the customer confirming this transaction. See "Configuring the Customer's E-mail Notification" on page 31.

– **Authorization**: Submit a one-dollar authorization transaction to validate the customer's account information before creating the profile. If the card is successfully authorized, VeriSign voids the authorization so that it cannot be captured.

– **Sale**: Charge a configurable setup fee or other initial fee when you submit the profile.

Optional Transaction Guidelines

– If you specify an Optional Transaction, then you must specify an amount for the transaction in the **Optional Transaction Amount** field. If you leave the **Optional Transaction Amount** field blank, the profile is created, but no transaction is processed.

      – If the card is successfully authorized or charged, the profile is created and activated.

      – If the card is declined, the profile is not created.

6   Click **Save**.

Upon successfully creating the profile, VeriSign activates the profile, performs the Optional Transaction if specified, initiates the payment cycle, and returns a Profile ID in the *New Profile Created* page. The Profile ID is a 12-character string that uniquely identifies the profile—used for searching and reporting.

If profile creation fails, VeriSign does not generate the profile. Click the **Back** button, correct the data as required, and resubmit.

7   The *New Profile Created* page opens.

The **Last Recurring Billing Date** is the date of the last scheduled payment (calculated using the initial **Payment Date**, the **Payment Period**, and the **Term**).

The following buttons appear on the page:

- **View all Profiles**: View the list of all profiles in the same mode as the current profile (Test or Live). To view the details of a profile, click its **Profile ID**. See "Managing Profiles" on page 20.

- **Create New Profile**: Opens the *Add New Profile* page (described on page 9) to enable you to add another profile.

- **Modify**: Make changes to and resubmit the profile data. See "Modifying Profiles" on page 19.

Creating a Profile from an Existing Transaction

You can use an existing **Sale** or **Delayed Capture** transaction as the starting point for a new profile.

Tip   Using this method, you do not need to know the customer's credit card number to generate a profile.

To convert a transaction, you open the *Transaction Detail* page for the transaction and click the **Create a Recurring Profile** link. You can access the *Transaction Detail* page from any of the following VeriSign Manager pages:

– Search results
– Reports
– Auto Delayed Capture page
– Auto Credits page
– Auto Voids page

1   Identify the transaction on any of the VeriSign Manager pages listed above and click the **Transaction ID**. The *Transaction Detail* page displays the details of the specified transaction.

2 Click the **Create a Recurring Profile** link. The *Add New Profile* page opens. All applicable transaction information (shipping and billing information, e-mail address, and transaction amount) is copied into the page. The credit card number and expiration date are copied but are not displayed.

Note Shipping and Billing information is filled in for Sale transactions and not for Delayed Capture transactions.

---

3 Fill in the following fields:

- Profile Name

- Recurring Amount

- Start date for payments (Use tomorrow's date or a date in the future.)

- Term

- Maximum Fail Payments

- Payment Period

- Optional Transaction information

- Update any other optional fields

4 Click **Save**.

Upon successfully creating the profile, VeriSign activates the profile, performs the Optional Transaction if specified, initiates the payment cycle, and returns a Profile ID in the *New Profile Created* page. The Profile ID is a 12-character string that uniquely identifies the profile—used for searching and reporting.

If profile creation fails, VeriSign does not generate the profile. Click the **Back** button, correct the data as required, and resubmit.

5 The *New Profile Created* page opens.

The **Last Recurring BIlling Date** is the date of the last scheduled payment (calculated using the initial **Payment Date**, the **Payment Period**, and the **Term**).

The following buttons appear on the page:

- **View all Profiles**: View the list of all profiles in the same mode as the current profile (Test or Live). To view the details of a profile, click its **Profile ID**. See "Managing Profiles" on page 20.

- **Create New Profile**: Opens the *Add New Profile* page (described on page 9) to enable you to add another profile.

- **Modify**: Make changes to and resubmit the profile data. See "Modifying Profiles" on page 19.

Converting a Test Profile to Live Status

Follow these steps to convert an existing **test** profile to live status.

1 On the *Recurring Billing Information* page, select **Convert Test Profile**. The *Convert a Test Profile* page opens.

Enter the **Profile ID** or **Profile Name** of the test profile that you want to convert to live operation and click **Submit**.

2 The *Profile Detail* page opens.

Confirm that this is the correct profile and click the **Convert to Live** button.

3 The *Modify Profile* page, partially filled in with identifying data that you supplied while creating the profile, opens.

4 Add the following data:

- Credit card number (if changed)

- Credit card expiration date (if changed)

- Start date for payments

- Optional Transaction information

- Update any other required information

5 Click **Save**. The test profile becomes a live profile.

Modifying Profiles

The **Modify** button appears on the *New Profile Created* and *Profile Detail* pages. The button opens the *Modify Profile* page, which is similar to the *Add New Profile* page with all fields filled in. To modify the profile, change any setting and click **Save**.
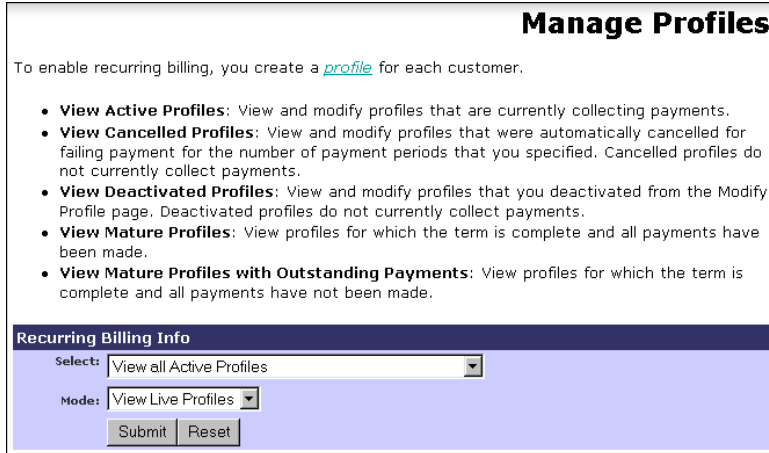
Managing Profiles

You can use the *Manage Profiles* page to work with a list of profiles with a particular status (active, cancelled, mature, and so on). Follow these steps:

1   On the *Recurring Billing Information* page, select **Manage Profiles**. The *Manage Profiles* page opens

2   Specify the profile status to view: **Active**, **Cancelled**, **Deactivated**, **Mature** profiles, or **Mature** profiles for which there are still outstanding payments.

3   In the **Mode** field, select **Live** or **Test**.

4   Click **Submit**. A list of profiles of the appropriate status appears, as discussed in the following sections.

Managing Active Profiles

An *active* profile is one that is currently collecting funds on schedule.

1 When you click the **Profile ID** link, the *Profile Detail* page displays all profile settings.

2 The following buttons appear on the page:

- **View all Profiles**: View the list of all active profiles in the same mode as the selected profile (test or live). To view the details of a profile, click its Profile ID. See "Managing Profiles" on page 20.

- **Create New Profile**: Opens the *Add New Profile* page, as described in "Adding a New Recurring Billing Profile" on page 9.

- **Retry a Failed Payment**: If a transaction fails for the selected profile during a billing period, you can attempt to retry the transaction manually, as described in "To Manually Retry a Failed Payment" on page 37. VeriSign recommends that you regularly generate reports to monitor failed transactions.

    Note This action does not modify the **Maximum Retry Number of Days** that you specified (see Table 2-1 on page 11).

- **Modify**: Make changes to and resubmit the profile. The button opens the *Modify Profile* page, which is similar to the *Add New Profile* page with all fields filled in. See "Modifying Profiles" on page 19.

- **Convert to Live**: This button appears for Test profiles, enabling you to convert Test profiles to Live status, as described in "Converting a Test Profile to Live Status" on page 17.

Managing Cancelled Profiles

When a customer fails a specified number of times to make payments, VeriSign automatically *cancels* the profile. (You specify the number using the **Maximum Fail Payments** value as described in Table 2-1 on page 11.) Cancelled profiles appear in a list that looks like this:

1   Click a **Profile ID** to view the associated *Profile Detail* page.

The following buttons appear on the *Profile Detail* page:

- **View all Profiles**: View the list of all cancelled profiles in the same mode as the selected profile (test or live). To view the details of a profile, click its Profile ID. See "Managing Profiles" on page 20.

- **Create New Profile**: Open the *Add New Profile* page, as described in "Adding a New Recurring Billing Profile" on page 9.

- **Activate**: Reactivate the profile. See "Reactivating a Profile" on page 28.

Managing Deactivated Profiles

Profiles that you manually deactivated (as described in "Deactivating a Profile" on page 27) appear in a list that looks like this:

Click a **Profile ID** to view the associated *Profile Detail* page.

The following buttons appear on the *Profile Detail* page:

- **View all Profiles**: View the list of all deactivated profiles in the same mode as the selected profile (test or live). To view the details of a profile, click its Profile ID. See "Managing Profiles" on page 20.

- **Create New Profile**: Open the *Add New Profile* page, as described in "Adding a New Recurring Billing Profile" on page 9.

- **Activate**: Reactivate the profile, as described in "Reactivating a Profile" on page 28.

Managing Mature Profiles

Profiles are considered mature when the term is complete. When you performed the search, you specified either mature profiles for which all payments have been made or mature profiles for which there are still unmade payments.

To verify completed payment, you can review the payment history in the *Profile* report, as described in "Generating a Profile Report" on page 67.

Mature profiles appear in a list like this:

Matured Recurring Profiles
(live mode)

	Profile Name	Profile ID	Status	Account Number	Exp Date	Amount	Frequency	Start Date	Date Established
1.	Standard Account	RP0000000116	Matured	5105X0500	07/02	$21.00	WEEK	Jul 21, 2002	2002-06-26 16:50:36
2.	Standard Account	RP0000000164	Matured	5105X0500	08/02	$21.00	WEEK	Aug 27, 2002	2002-08-26 03:48:16
3.	Premier Account	RP0000000171	Matured	5105X0500	09/02	$216.00	WEEK	Sep 06, 2002	2002-09-05 14:08:09

Create New Profile

Mature profiles with unpaid balances appear in a list like this:

Matured Recurring Profiles (with outstanding payments)
(live mode)

	Profile Name	Profile ID	Status	Account Number	Exp Date	Amount	Frequency	Start Date	Date Established
1.	test	RP0000000168	Matured (with outstanding payments)	5105X0500	08/04	$4.00	WEEK	Aug 06, 2002	2002-08-05 15:42:41

Create New Profile

Click a **Profile ID** to view the associated *Profile Detail* page.

The following buttons appear on the *Profile Detail* page:

- **View all Profiles**: View the list of all mature profiles in the same mode as the selected profile (test or live). To view the details of a profile, click its Profile ID. See "Managing Profiles" on page 20.

- **Create New Profile**: Open the *Add New Profile* page, as described in "Adding a New Recurring Billing Profile" on page 9.

- **Activate**: Reactivate the profile, as described in "Reactivating a Profile" on page 28.

Deactivating a Profile

When you *deactivate* a profile, the customer is no longer billed, and the profile is stored with a status of **deactivated**. You might choose to deactivate profiles for customers who pay off the full amount early or for customers whose credit card transactions are consistently declined.

At any time, you can reactivate an inactive profile to restart the billing process, as described in "Reactivating a Profile" on page 28.

CAUTION   Payments missed while a profile is inactive are not re-tried if you reactivate the profile after the missed payment periods have passed. To submit the missed payment transactions, you must reactivate the profile and increase the **Term** as described in "Reactivating a Profile" on page 28.

◆   **To deactivate a profile**

1   Click the **Modify** button to open the *Modify Profile* page. (The **Modify** button appears on the *New Profile Created* and *Profile Detail* pages.)

2   Click the **Deactivate** button. The profile is deactivated and marked as inactive and the following page acknowledges the change.

Reactivating a Profile

Follow these steps to reactivate an inactive profile. Reactivating a profile changes its status to **active** and causes it to begin submitting transactions again.

1   Open the *Profile Detail* page for the profile. (You can open the *Profile Detail* page by clicking the **Profile ID** on any list or report page.)

2   Click the **Activate** button. The *Activate Profile* page opens. The fields are filled in with the current profile settings.

3   Specify a new **Start Date** (tomorrow's date or a date in the future). You have the option to alter any other profile setting.

CAUTION   If payments were missed during the time that the profile was inactive, then you must increase the **Term** by the number of missed payments to ensure that those payments are made in the future.

---

4   Click **Save**. The profile is reactivated and the payment cycle begins on the specified date.

Searching for a Profile

Use the *Recurring Billing Search* page to search for particular profiles. The data for profiles that match your search criteria are displayed in table format.

1 Click **Search Utilities → Recurring Billing Search**. The *Search for Profiles* page opens.

2 Select and specify a value for the search criterion:

– Select **Profile ID** and enter the Profile ID to view the *Profile Detail* page for a particular profile.

– Select **Profile Name** and enter the exact Profile Name to view the profile or list of profiles with that name.

– Select **Credit Card Number** and type the credit card number to view the profile or list of profiles that use that credit card number.

– Select **Comment** and type the exact comment to view the list of all profiles that use that comment text.

– Select **Amount** and type an amount to view the list of profiles that charge that amount for each payment period.

3 In the **Mode** field, specify either **Live** or **Test** profiles.

4 Click **Submit**. If your search is successful, the appropriate page opens. Many pages include links to the *Profile Detail* page or to the *Transaction Detail* page.

Configuring the Customer's E-mail Notification

You can specify that customers receive an e-mail receipt each time that their accounts are billed and a notice when a transaction fails. The examples display the information contained in the messages.

Note VeriSign Payment Services generates these e-mail messages on behalf of the merchant, so the message does not appear in your e-mail folder as a sent item.

Example E-mail Messages

E-mail Message for Successful Payment

When a payment succeeds, the customer receives a message like the following:

```
From: Support@acme.com [mailto: Support@acme.com]
Sent: Thursday, Dec 12, 2002 6:01 PM
To: lmarr@accompany.com
Subject: Initial payment notification
```
Receipt Sender

```
Your payment has been processed.
Thank you for your subscription.
```
Header

```
----------------------------------------
Order Number: VCNM44273443
Authorization Code: 459PNI
Transaction Date: 12-Dec-02  06:00 PM
Transaction Amount: $42.00
Response: Approved
----------------------------------------

If you have any questions, please call Acme
Customer Support at 800-555-1212.
```
Footer
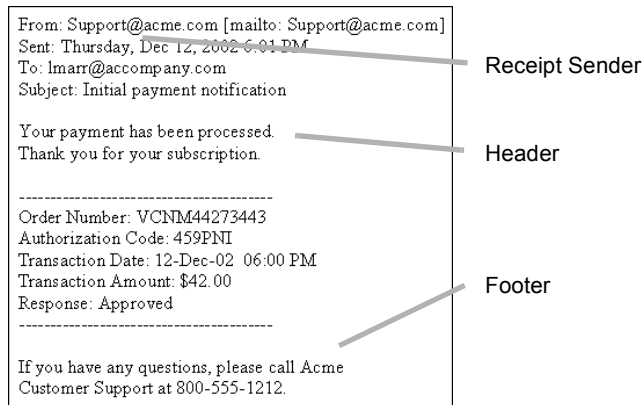
E-mail Message for Successful Optional Transaction

When an Optional Transaction succeeds, the customer receives a message like the following. This message differs from the successful payment message only in the text that appears in the **Subject** line.

```
From: Support@acme.com [mailto: Support@acme.com]
Sent: Thursday, Dec 12, 2002 6:01 PM
To: lmarr@accompany.com
Subject: Initial payment notification

Your payment has been processed.
Thank you for your subscription.

----------------------------------------
Order Number: VCNM44273443
Authorization Code: 459PNI
Transaction Date: 12-Dec-02  06:00 PM
Transaction Amount: $42.00
Response: Approved
----------------------------------------

If you have any questions, please call Acme
Customer Support at 800-555-1212.
```

Receipt Sender

Subject line

Header

Footer

E-mail Message for Declined Transactions

If a transaction fails, the customer receives a message like the following. The message is sent only once per payment period, regardless of how many transactions failed in attempting to collect payment.

```
From: AcctRcv@acme.com [mailto:AcctRcv@acme.com]
Sent: Thursday, Dec 12, 2002 6:01 PM
To: lmarr@accompany.com
Subject: Recurring payment notification

Your payment has been declined.
To update your account information,
please call Acme's accounting department
at 800-555-1212.

----------------------------------------
Order Number: VC0002259051
Authorization Code:
Transaction Date: 12-Dec-02  06:00 PM
Transaction Amount: $42.00
Response: Declined
----------------------------------------

Thank you for subscribing with Acme.
```

Payment Failure Sender

Header

Footer

◆ **To send each customer automatic e-mail messages**

1 On the *Recurring Billing Information* page, select **Configure E-mail Options**. The *Configure E-mail Options* page opens.

Configure E-mail Options

The Recurring Billing Service provides the following automated e-mail options:

- **Configure Customer Email** Configure automated customer e-mail receipts and notices of failed transactions. These messages are sent whenever a transaction occurs.
- **Configure Merchant Email** Request e-mail summaries help you to manage recurring billing transactions. These messages are sent every day on which a recurring transaction occurred.

2 Click **Configure Customer E-mail**. The *Customer E-mail Configuration* page displays your current e-mail configuration. You can modify any item at any time.

☑ **E-mail Receipts to Customers**
☑ **E-mail Optional Transaction Receipts to Customers**
Receipt Sender: Support@acme.com
Header Text: Your payment has been processed.</br>
Thank you for your subscription.
Footer Text: If you have any questions, please call Acme</br>
Customer Support at 800-555-1212.
☑ **E-mail Payment Failure Notifications to Customers**
Payment Failure Sender: AcctRcv@acme.com
Header Text: Your payment has been declined.</br>
To update your account information, please call Acme's accounting
Footer Text: Thank you for subscribing with Acme.
Submit   Reset

3 Specify whether to send e-mail in any or all of the following situations:

– To send an e-mail message for successful payments, select **E-mail Receipts to Customers**.

– To send an e-mail message for successful Optional Transactions, select **E-mail Optional Transaction Receipts to Customers**.

– To send an e-mail message for declined transactions, select **E-mail Payment Failure Notifications to Customers**.

4   For each e-mail option that you selected, enter the e-mail address from which messages about the transactions should originate (the **Sender**) and enter text that should appear above (**Header**) and below (**Footer**) the body of the message. To enter a line break, add the characters **</br>** at end of the line of text.

5   Click **Submit**.

Requesting Transaction Summaries by E-mail

You can request the following recurring transaction summaries by e-mail (example text appears in Appendix B, "Example Administrative Summaries."):

- The **Daily Transaction Summary** lists the total number of approved and declined transactions during the 24-hour period prior to the e-mail date.

- The **Daily Detailed Transaction Summary** presents profile and transaction details for all approved and declined transactions during the 24-hour period prior to the e-mail date.

The data in the message covers the 24-hour period ending at midnight PST on the previous day. For example, Tuesday's e-mail message presents data for Sunday at midnight to Monday at midnight.

Tip If you encounter declined transactions, run the *Failed Transactions* report. From the report, you can select transactions to retry manually. See "Generating a Profile Report: Failed Transactions" on page 68.

◆ **To configure daily e-mail summaries**

1 On the *Recurring Billing Information* page, select **Configure E-mail Options**. The *Configure E-mail Options* page opens.

Configure E-mail Options

The Recurring Billing Service provides the following automated e-mail options:

- **Configure Customer Email** Configure automated customer e-mail receipts and notices of failed transactions. These messages are sent whenever a transaction occurs.
- **Configure Merchant Email** Request e-mail summaries help you to manage recurring billing transactions. These messages are sent every day on which a recurring transaction occurred.

Click **Configure Merchant E-mail**.

2 The *Summary Report E-mail Configuration* page displays your current e-mail configuration. At any time, you can change the e-mail address to which the summaries are sent.

3 Select **Daily Transaction Summary E-mail** and/or
Daily Detailed Transaction Summary E-mail and enter your e-mail address.

4 Click **Submit**.

Retrying Failed Payments

Sometimes transactions fail during a recurring billing period. You can view the list of failed transactions using the *Profile Report: Failed Transactions* (described in "Generating a Profile Report: Failed Transactions" on page 68). You have the option to retry the transaction manually.

Note   Remember that failed transactions are automatically retried several times each day for the number of days that you specified in **Maximum Retry Number of Days** (described in Table 2-1 on page 11).

If the transaction being retried is part of the current payment period, a successful retry causes the profile to mark the current payment as successful and to advance to the next payment at the scheduled time.

If the profile had been previously cancelled due to too many failed transactions, a successful retry decrements the failed payment count and reactivates the profile (thus re-starting the recurring payment cycle).

◆   **To Manually Retry a Failed Payment**

1   The **Retry a failed Payment** button appears on the *New Profile Created* page (see "Adding a New Recurring Billing Profile" on page 9) and *Profile Detail* page (shown below). Click the button to view the list of transactions associated with the profile.

All Recurring Transactions for profile RP0000000001

Payment Number	Retry Number	Trans Time	Retry Reason	TransID	Result
3	0	2002-07-26 17:20:28	n/a	n/a	26
3	1	2002-08-01 18:24:16	Internal transient error	VTHA55583730	0
1	0	2002-06-25 00:25:52	n/a	n/a	26
1	1	2002-06-25 04:45:03	Internal transient error	VTHA55583284	0
2	0	2002-07-22 12:28:41	n/a	VTHA55583643	0

2   The **Result** code indicates the reason that the transaction failed. A result code of **0** (zero) represents a successful transaction, all other values represent failed transactions. See *Payflow Pro Developer's Guide* for code descriptions.

The **Retry Reason** indicates the reason that the transaction had been retried in the past:

– **Internal transient errors** (typically communications errors or processor server downtimes) are automatically retried every two hours.

– **N/A** indicates a successful payment, so no retry is required.

– **Decline** The transaction was declined, so you can retry now or let the system retry automatically as you specified using **Maximum Retry Number of Days** (described in Table 2-1 on page 11).

– **Force payment** indicates that you had previously performed a manual retry that had failed.

3 Determine which transaction to retry and click its **TransID**. The *Transaction Detail* page opens.

VeriSign populates the **Comment2** field with information about the profile.

In this example, **Comment2** shows the following value:

205327:188 Payment 1 Name: Standard Account

– **205327** is your Vendor ID code

– **188** is the Profile ID (actually **RP0000000188**)

– **Payment 1** indicates that this transaction is for the first payment for this profile

– **Standard Account** is the Profile Name

4 Click the **Retry this Payment** button to resubmit the transaction. The results of the transaction are displayed.

Reviewing Recurring Transactions and Settings

You can review recurring billing transactions and settings using the *Recurring Billing* report, the *Profile* report, and the *Failed Transaction* report. Reports are described in Chapter 4, "Generating Reports."

You also have the option to have transaction summary information e-mailed to you daily. See "Requesting Transaction Summaries by E-mail" on page 35.

CHAPTER 3

Using the Payflow Pro SDK to Perform Recurring Billing Tasks

Note You should be familiar with the use of the Payflow Pro SDK to use the information in this chapter. See *Payflow Pro Developer's Guide* for full documentation.

The Payflow Pro SDK operations described in this chapter are available only to merchants with the Recurring Billing service.

This chapter describes the use of the Payflow Pro SDK to perform recurring credit card transactions. You have the option of performing most recurring billing tasks either from VeriSign Manager or from your code using the Payflow Pro SDK.

IMPORTANT! You must have prior authorization from the customer to bill on a schedule. See Appendix A, "Obtaining Consent to Bill Customers Using Recurring Billing," for additional details.

In This Chapter

About Recurring Profile Actions

ACTION operations in the Payflow Pro SDK manipulate profiles (create, modify, deactivate, activate, cancel, and request status) and perform manual transaction requests (in the case of a failed transaction).

Example Action

Note   The examples in this chapter use the syntax of the **`pfpro`** executable client. Your application might differ in where and how the parameter values are set, but parameter usage is identical.

Using the Payflow Pro client (**`pfpro`**), a **Modify** action to change the **Amount** of payment to **$42.00** for **profile ID** number **RP0000001234** has the following format:

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&PWD=
a1b2c3d4&ACTION=M&AMT=42.00&ORIGPROFILEID=RP0000001234" 30
```

Action and Parameter Definitions

Actions and their associated parameters are defined in the sections of this document, as listed here:

- **Add**. Create a new profile, defined on page 43.
- **Modify**. Make changes to an existing profile, defined on page 50.
- **Cancel**. Deactivate an existing profile, defined on page 55.
- **Reactivate**. Reactivate an existing profile, defined on page 50.
- **Inquiry**. Inquire on the status of a profile, defined on page 57.

  Note   Appendix D, "VeriSign Reporting Parameters," provides a list of optional parameters that you can pass for reporting purposes.

- **Payment**. Retry a previously failed transaction, defined in "Payment Action Definition" on page 56.

> **Note** You must configure the e-mail settings using VeriSign Manager, as described in "Configuring the Customer's E-mail Notification" on page 31 and "Requesting Transaction Summaries by E-mail" on page 35.

Result String Definitions

The result strings for actions are described in "Response Strings for Actions" on page 58.

Add Action Definition

ACTION=A: Add a new recurring profile either by sending all data required to define the profile or by converting an existing transaction into a profile. Upon successful creation, VeriSign activates the profile, performs the Optional Transaction if specified, initiates the payment cycle, and returns a Profile ID (a 12-character string that uniquely identifies the profile for searching and reporting). Upon failure, VeriSign does not generate the profile and returns an error message.

◆ **To Add a new profile**

– To create a new profile: Provide all required data and specify whether to perform an Optional Transaction.

The Optional Transaction is either:

– A sale transaction for an amount that you specify (typically an account start-up fee) or

– A one-dollar Authorization transaction to validate the customer's account information before creating the profile. If the card is successfully authorized, VeriSign voids the authorization so that it cannot be captured. to validate the account information. VeriSign does not treat the Optional Transaction as a recurring payment, but as an additional payment.

The recurring profile record also keeps track of the total amount collected as a result of these optional transactions in addition to the normal recurring transactions.

–   To convert an existing transaction into a profile: Specify the **PNREF** of the transaction to use as a template, and optionally supply additional payment data.

Note   You can use only a Sale or Delayed Capture transaction as a template for a profile.

Example Add Commands

Adding a New Profile

This example creates a profile specifying a payment amount of `$42`.

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&P
WD=a1b2c3d4&ACTION=A&PROFILENAME=RegularSubscription&AMT=42.
00&ACCT=4012888888881881&EXPDATE=0203&START=12012003&PAYPERI
OD=WEEK&TERM=12&OPTIONALTRX=S&OPTIONALTRXAMT=2.00&COMMENT1=F
ist-time customer" 30
```

Converting an Existing Transaction into a Profile

This example creates a profile for an original transaction that had PNREF `xyz123` and specifies a payment amount of `$42`.

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&P
WD=a1b2c3d4&ACTION=A&PROFILENAME=RegularSubscription&ORIGID=
XYZ123&START=12012002&PAYPERIOD=WEEK&TERM=12&OPTIONALTRX=S&O
PTIONALTRXAMT=2.00&COMMENT1=Fist-time customer&AMT=42.00" 30
```

Required Parameters for the ADD Action

Table 3-1 Required recurring profile parameters for **Add** action

Parameter	Description	Type	Length
TRXTYPE	Specifies a recurring profile request. Must be **R**.	Must be R	
TENDER	Specifies credit card tender type. Must be **C** or **CC**	Alpha uppercase	2
ACTION	Specifies Add, Modify, Cancel, Reactivate, Inquiry, or Payment	Must be A	1
PROFILENAME	Name for the profile (you specify the name). Can be used to search for a profile.	Non-unique identifying text name.	
ACCT	The credit card or purchase card number may not contain spaces, non-numeric characters, or dashes. For example, ACCT= 5555555555554444 Can be used to search for a profile.	Numeric	19
NAME or FIRSTNAME	Account holder's name. This single field holds all of the person's name information.	Alpha-numeric uppercase	30
EXPDATE	Expiration date of the credit card in **mmyy** format. For example, 0308 represents March 2008.	Alpha-numeric	4
AMT	Dollar amount (US dollars) to be billed. Can be used to search for a profile. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95. Your processor and/or Internet merchant account provider may stipulate a maximum amount.	Numeric	10 with decimal point

Table 3-1 Required recurring profile parameters for **Add** action (Continued)

START	Beginning (or restarting) date for the recurring billing cycle used to calculate when payments should be made. Use tomorrow's date or a date in the future. Format: **MMDDYYYY** For ACTION=Modify, this is used to speed up or delay only the next payment date. If a new PAYPERIOD is specified, then this is also the time that the next payment is made.	Numeric
TERM	Number of payments to be made over the life of the agreement. A value of 0 means that payments should continue until the profile is deactivated.	Numeric
PAYPERIOD	Specifies how often the payment occurs: – WEEK: Weekly - Every week on the same day of the week as the first payment. – BIWK: Every Two Weeks - Every other week on the same day of the week as the first payment. – SMMO: Twice Every Month - The 1st and 15th of the month. Results in 24 payments per year. SMMO can start on 1st to 15th of the month, second payment 15 days later or on the last day of the month. – FRWK: Every Four Weeks - Every 28 days from the previous payment date beginning with the first payment date. Results in 13 payments per year. – MONT: Monthly - Every month on the same date as the first payment. Results in 12 payments per year. – QTER: Quarterly - Every three months on the same date as the first payment. – SMYR: Twice Every Year - Every six months on the same date as the first payment. – YEAR: Yearly - Every twelve months on the same date as the first payment. **Note:** For ACTION=Modify, if START is not specified, then the next payment is calculated based on last payment date.	

Optional Parameters for the ADD Action

Table 3-2   Optional recurring profile parameters for **Add** action

Parameter	Description	Usage	Length
ORIGID	PNREF value of the original transaction to use to create a new profile.		
RETRYNUMDAYS	The number of consecutive days that VeriSign should attempt to process a failed transaction until Approved status is received. VeriSign will retry a failed transaction in the event that the required processing information is not sent (RESULT = 7) with a transaction, or you exceed you daily sales limit (RESULT=113). You can avoid receiving a decline that results from the required information not being sent by running an optional transaction when you set up a profile. To avoid receiving a decline as a result of the required information not being sent, we recommend that you run an optional transaction. If you submitted the transaction only to validate the account, then immediately void the Optional Transaction. For example, if you specify **4**, VeriSign attempts to process the transaction once each day for four consecutive days. If the transaction is not approved during this time, the payment scheduled for that payment period is marked as failed. This increments the number of failed payments used to by **MAXFAILPAYMENTS**.	Valid values: 1 - 4. VeriSign recommends that you set the value to 4.	

Table 3-2   Optional recurring profile parameters for **Add** action (Continued)

MAXFAIL-PAYMENTS	The number of payment periods (specified by PAYPERIOD) for which the transaction is allowed to fail before VeriSign cancels a profile.	Default = **0**, which means there is no limit—retry attempts will occur until the term is complete.
	For example, if you specify **3**, VeriSign attempts to process the card for three payment periods (possibly with multiple retries during each payment period). If the transaction is not approved during that three month interval, VeriSign deactivates the profile.	
	IMPORTANT: Even though this parameter is optional, if you do not specify a value, the default value of **0** (zero) specifies that retry attempts should occur until the term is complete.	
	See RETRYNUMDAYS.	
RETRYNUMDAYS	The number of consecutive days that VeriSign should attempt to process a failed transaction until **Approved** status is received.	Valid values: **0** - **4**. The default value is **2**. VeriSign recommends that you set the value to **4**.
	For example, if you specify **4**, VeriSign attempts to process the transaction once each day for four consecutive days.	
	If the transaction is not approved during this time, the payment scheduled for that recurring billing period is marked as failed. This increments the number of failed payments used to by MAXFAILPAYMENTS.	

Table 3-2   Optional recurring profile parameters for **Add** action (Continued)

EMAIL	Customer e-mail address. This value is used when sending e-mail receipts to customers. **IMPORTANT:** You must specify additional text for the message using VeriSign Manager, as described in "Configuring the Customer's E-mail Notification" on page 31.	The presence of E-mail address is the indicator that an e-mail should be sent.	
DESC	Optional description of the goods or services being purchased. This parameter applies only for CCD accounts.	Alpha-numeric	
COMPANYNAME	Company name for this profile.	Alpha-numeric	
OPTIONALTRX	Defines an optional Authorization for validating the account information or for charging an initial fee. If this transaction fails, then the profile is not generated. **A** represents an optional Authorization transaction ($1 by default). OPTIONALTRX=A only applies to credit card transactions. **S** represents an initial fee.	Alpha-numeric	1
OPTIONALTRXAMT	Amount of the Optional Transaction. Required only when OPTIONALTRX=S. Optional when OPTIONALTRX=A ($1 Authorization by default)		
STREET	Billing address. Sent for AVS check on OPTIONALTRX. Otherwise for reporting only		
ZIP	Billing address. Sent for AVS check on OPTIONALTRX. Otherwise for reporting only.		

Modify and Reactivate Action Definitions

ACTION=M: Modify any profile value by sending any subset of the profile parameters, including an Optional Transaction.

Note The Modify action does not affect the profile's STATUS (essentially whether the profile is active or inactive). Modifying an inactive profile does not change its STATUS to active. In the case that you have new information to apply to a profile of unknown STATUS and wish for the profile to become active, use the Modify action followed by the Payment action, described on page 56. The Payment action is useful, for example, when an inactive customer wishes to restart payments using a new valid credit card.

Profile STATUS is described in Table 3-6 on page 59.

ACTION=R: Reactivate a profile with inactive STATUS. (Profiles can be deactivated for the following reasons: the term has completed, the profile reached maximum allowable payment failures, or you canceled the profile.) You have the option to alter any profile parameter, and you must specify a new start date.

Example Modify Action

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&PWD=
a1b2c3d4&ACTION=M&AMT=43.00&ORIGPROFILEID=RP000000001234" 30
```

Example Reactivate Action

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&PWD=
a1b2c3d4&ACTION=R&ACCT=4012888888881881" 30
```

Parameters for the Modify and Reactivate Actions

Table 3-3   Recurring profile fields for **Modify** and **Reactivate** actions

Parameter	Description	Required?	Type	Length
TRXTYPE	Specifies a recurring profile request. Must be **R**.	Yes		
ACTION	Specifies Action type. Must be **M** or **R**.	Yes		
PROFILENAME	Non-unique identifying text name for the profile (you specify the name). Can be used to search for a profile.	No		
ACCT	The credit card or purchase card number may not contain spaces, non-numeric characters, or dashes. For example, ACCT= 5555555555554444 Can be used to search for a profile.		Numeric	19
EXPDATE	Expiration date of the credit card in **mmyy** format. For example, 0308 represents March 2008.		Alpha-numeric	4
ORIGPROFILEID	Required for Modify action. Profile ID of the profile that gets the action. Profile IDs for test profiles start with **RT**. Profile IDs for live profiles start with **RP**.	Yes		
AMT	Dollar amount (US dollars) to be billed. Can be used to search for a profile. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95. Your processor and/or Internet merchant account provider may stipulate a maximum amount.		Numeric	10 with decimal point
TERM	Number of payments to be made over the life of the agreement. A value of 0 means that payments should continue until the profile is deactivated.	No		

Table 3-3   Recurring profile fields for **Modify** and **Reactivate** actions (Continued)

PAYPERIOD	Payment period (weekly, monthly, and so on).	No
	For ACTION=Modify, if START is not specified, then the next payment is calculated based on last payment date.	
	SMMO can start on from 1st to 15th of the month, second payment 15 days later or on the last day of the month.	
	WEEK: Weekly BIWK: Every two weeks SMMO: Twice every month FRWK: Every four weeks MONT: Monthly QTER: Quarterly SMYR: Twice every year YEAR: Yearly	
MAXFAILPAYMEN TS	The number of payment periods (specified by PAYPERIOD) for which the transaction is allowed to fail before VeriSign cancels a profile.	No
	For example, if you specify **3**, VeriSign attempts to process the card for three payment periods (possibly with multiple retries during each payment period). If the transaction is not approved during that time, VeriSign deactivates the profile.	
	The default value of **0** (zero) specifies that retry attempts should occur until the term is complete.	
	IMPORTANT: Even though this parameter is optional, if you do not specify a value, the default value of **0** (zero) specifies that retry attempts should occur until the term is complete.	
	See RETRYNUMDAYS.	

Table 3-3   Recurring profile fields for **Modify** and **Reactivate** actions (Continued)

RETRYNUMDAYS	The number of consecutive days that VeriSign should attempt to process a failed transaction until **Approved** status is received.	No
	Valid values: [0-4]. The default is 2.	
	For example, if you specify **5**, VeriSign attempts to process the transaction once each day for five consecutive days. If the transaction is not approved during this time, the payment scheduled for that recurring billing period is marked as failed. This increments the number of failed payments used to by MAXFAILPAYMENTS.	
EMAIL	Customer e-mail address. This value is used when sending e-mail receipts to customers.	No
	The presence of E-mail address is the indicator that an e-mail should be sent.	
	IMPORTANT: You must specify additional text for the message using VeriSign Manager, as described in "Configuring the Customer's E-mail Notification" on page 31.	
COMPANYNAME	Company name for this profile.	No
OPTIONALTRX	Defines an optional authorization for validating the account information or for charging an initial fee. If this transaction fails, then the profile is not generated.	No
	A for optional Authorization transaction ($1 by default)	
	S for initial fee (Sales transaction).	
OPTIONALTRXAMT	Amount of the OPTIONALTRX	No
	Required only when OPTIONALTRX=S.	
	Optional when OPTIONALTRX=A ($1 Authorization by default)	
STREET	Billing address.	No
	Sent for AVS check on OPTIONALTRX. Otherwise for reporting only	

Table 3-3   Recurring profile fields for **Modify** and **Reactivate** actions (Continued)

ZIP	Billing address.	No
	Not required. Sent for AVS check on OPTIONALTRX. Otherwise for reporting only	

Cancel Action Definition

ACTION=C: Cancel (deactivate) the recurring profile. The profile is marked as cancelled and the customer is no longer billed. The profile can be reactivated. VeriSign records the cancellation date.

Example Cancel Action

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&PWD=
a1b2c3d4&ACTION=C&ORIGPROFILEID=RP000000001234" 30
```

Parameters for the Cancel Action

Parameter	Description	Required?	Type	Length
TRXTYPE	Specifies a recurring profile request. Must be **R**.	Yes		
ACTION	Specifies action to take. Must be **C**.	Yes		
ORIGPROFILEID	Profile ID of the profile to cancel. Profile IDs for test profiles start with **RT**. Profile IDs for live profiles start with **RP**.	Yes		

Payment Action Definition

ACTION=P: The Payment action performs a real-time retry on a previously failed transaction. The response string is similar to the string for Optional Transactions, except that, upon approval, the profile is updated to reflect the successful retry.

If the transaction being retried is part of the current payment period, a successful Payment action causes the profile to flag the current payment as successful and to advance to the next payment at the scheduled time. If the profile had been previously deactivated due to too many failed transactions, then a successful Payment action decrements the failed payment count and re-activates the profile (thus re-starting the recurring payment cycle).

Example Payment Action

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&PWD=
a1b2c3d4&ACTION=P&ORIGPROFILEID=RP000000001234&AMT=85.00&PAYMEN
TNUM=13" 30
```

Parameters for the Payment Action

Parameter	Description	Required?	Type	Length
TRXTYPE	Specifies a recurring profile request. Must be **R**.	Yes		
ACTION	Specifies action to take. Must be **P**.	Yes		
ORIGPROFILEID	Profile ID of the profile for which to retry the transaction. Profile IDs for test profiles start with **RT**. Profile IDs for live profiles start with **RP**.	Yes		
PAYMENTNUM	Payment number identifying the failed payment to be retried.	Yes		
AMT	If specified, overwrites the original payment amount. Not required if retrying for the original amount.	No		

Inquiry Action Definition

ACTION=I: Inquire about the status of a profile. A profile stores both the configuration information that you supplied with the Add or Modify action and the transaction and payment history for the account.

Example Inquiry Action

```
pfpro payflow.verisign.com 443
"TRXTYPE=R&TENDER=C&PARTNER=VeriSign&VENDOR=Acme&USER=Acme&PWD=
a1b2c3d4&ACTION=I&ORIGPROFILEID=RP000000001234" 30
```

Parameters for the Inquiry Action

Parameter	Description	Required?	Type	Length
TRXTYPE	Specifies a recurring profile request. Must be **R**.	Yes		
ACTION	Specifies whether add, modify, cancel. Must be **I**.	Yes		
ORIGPROFILEID	Profile ID of the profile to inquire about. Profile IDs for test profiles start with **RT**. Profile IDs for live profiles start with **RP**.	Yes		

Response Strings for Actions

Example Response

```
RESULT=0&RPREF=RWY504915344&PROFILEID=RP000000001234&RESPMSG=Ap
proved&TRXRESULT=0&TRXPNREF=VWYA04915345&TRXRESPMSG=Approved&AU
THCODE=489PNI
```

Response Fields for A, M, C, R, and P Actions

Table 3-4 lists Response fields for **A**, **M**, **C**, **R**, and **P** actions.

Table 3-4   Response fields for A, M, C, F, and R

Field	Description
RESULT	Result code for the action
PROFILEID	For ACTION=A if result = 0, the Profile ID.
	If this an action other than Add, then the Profile ID of the original profile.
	Profile IDs for test profiles start with the characters **RT**.
	Profile IDs for live profiles start with **RP**.
RESPMSG	Optional response message.
RPREF	Reference number to this particular action request.

Response Fields Returned if OPTIONALTRX is Used

You can specify OPTIONALTRX for actions **A**, **M**, and **R**. Table 3-5 lists response fields returned if OPTIONALTRX is used. Other payment-related fields could also be returned, depending on individual vendor settings (for example, verbosity level).

Table 3-5   Response fields returned if OPTIONALTRX is turned on

Field	Description
TRXPNREF	PNREF of the optional transaction
TRXRESULT	RESULT of the optional transaction
TRXRESPMSG	RESPMSG of the optional transaction
AUTHCODE	Authorization code of the optional transaction

Table 3-5   Response fields returned if OPTIONALTRX is turned on

AVSADDR	Returned only when AVS data is supplied
AVSZIP	Returned only when AVS data is supplied
CVV2MATCH	Returned only when CVV2 data is supplied

Response Fields for Inquiry Actions

An Inquiry action can return any of the values listed in Table 3-6. Inquiries echo only those name-value pairs sent to the recurring billing server. For example, if, when adding or modifying a profile, you do not assign a value to PHONENUM, inquiries about the profile do not return a value for PHONENUM.

Table 3-6   Response fields for Inquiry actions

Field	Description
RESULT	Result code of the profile request. This value represents the success or failure of the Inquiry transaction, not of the financial transaction.
PROFILEID	Request profile reference number. Profile IDs for test profiles start with the characters **RT**. Profile IDs for live profiles start with **RP**.
RESPMSG	Response message if result code is non-zero
STATUS	Current status of the profile. One of the following: VENDOR INACTIVE DEACTIVATED BY MERCHANT EXPIRED TOO MANY FAILURES: VeriSign deactivated the profile because it has too many failed transactions (for example, as would result with a bad credit card) ACTIVE RETRYING CURRENT PAYMENT
PROFILENAME	Name of the profile
TENDER	Tender Type
PAYPERIOD	Payment period
PAYEMENTSLEFT	Number of payments left to be billed
NEXTPAYMENT	Date that the next payment is due

Table 3-6   Response fields for Inquiry actions

Field	Description
END	Date that the last payment is due. Present only if this is not an unlimited-term subscription.
AGGREGATEAMT	Amount collected so far for scheduled payments
AGGREGATEOPTIONALAMT	Amount collected through sending optional transactions
AMT	Base dollar amount to be billed
ACCT	Masked credit card number.
EXPDATE	Expiration date
START	Date of beginning recurring billing cycle.
TERM	Total number of payments
PAYPERIOD	Period of payment recurrence (weekly, monthly, and so on).
MAXFAILPAYMENTS	The number of payment periods (specified by PAYPERIOD) for which the transaction is allowed to fail before VeriSign cancels a profile. For example, if you specify **3**, VeriSign attempts to process the card for three payment periods (possibly with multiple retries during each payment period). If the transaction is not approved during that time, VeriSign cancels (deactivates) the profile. The default value of **0** (zero) specifies that retry attempts should occur until the term is complete. See RETRYNUMDAYS.
NUMFAILPAYMENTS	Number of payments that failed.
RETRYNUMDAYS	The number of consecutive days that VeriSign should attempt to process a failed transaction until **Approved** status is received. For example, if you specify **5**, VeriSign attempts to process the transaction once each day for five consecutive days. If the transaction is not approved during this time, the payment scheduled for that recurring billing period is marked as failed. This increments the number of failed payments used to by MAXFAILPAYMENTS.

Table 3-6   Response fields for Inquiry actions

EMAIL	Customer e-mail address e-mail receipts as described in "Configuring the Customer's E-mail Notification" on page 31.
COMPANYNAME	Recurring Profile Company Name
NAME	Name of account holder
FIRSTNAME	First name of card holder
MIDDLENAME	Middle name of card holder
LASTNAME	Last name of card holder
STREET	Billing address
CITY	Billing address
STATE	Billing address
ZIP	Billing address
COUNTRY	Billing address
PHONENUM	Telephone number
SHIPTOFIRSTNAME	First name of the ship-to person
SHIPTOMIDDLENAME	Middle name of the ship-to person
SHIPTOLASTNAME	Last name of the ship-to person
SHIPTOSTREET	Shipping address
SHIPTOCITY	Shipping address
SHIPTOSTATE	Shipping address
SHIPTOZIP	Shipping address
SHIPTOCOUNTRY	Shipping address

CHAPTER 4

Generating Reports

Use the *Reports* page to generate the following types of reports:

- The **Recurring Billing** report displays all profiles for which transactions have occurred during a specified time period. Use this report to view all transactions submitted by profiles during a specified time period. Links on the report enable you to view details of the profile and of any transaction associated with the profile. See "Generating a Recurring Billing Report" on page 65.

- The **Profile** report displays all transactions that have occurred for a specified profile. Links on the report enable you to view details of the profile and of any transaction associated with the profile. See "Generating a Profile Report" on page 67.

- The **Profile Report: Failed Transactions** lists all failed transactions for all profiles with outstanding failed transactions. See "Generating a Profile Report: Failed Transactions" on page 68.

Tip To view the *Transaction Detail* page for a transaction, click the **TransID** link in any report. To view the *Profile Detail* page for a profile, click a **Profile ID**.

Report Formats

You can generate reports in the following formats:

- **HTML**: Good for online viewing. Includes links that provide profile and transaction details.

- **ASCII Text**: Tab-delimited text format. Use this format to export the data to another application. See "Exporting Data" on page 64.

Exporting Data

You typically view reports in the browser in HTML format. Alternatively, you can download reports as ASCII format text files. This enables you to export data to a spreadsheet or to an accounting or reconciliation application. Follow these steps:

1   In the **Display as** text box, specify **ASCII**.

2   A dialog prompts you to save the data to a text file or to open it on the browser page. Save the file.

Note   Some operating systems do not automatically display the dialog box that asks whether you would like to open or save the report. Appendix C, "Configuring ASCII Reports to be Saved as Text Files," provides instructions for solving this issue.

3   Place the data into the application:

–   Some applications allow you to import the file directly (consult the application documentation for instructions on importing data).

–   Alternatively, you can open the file, select the text, copy it (Ctrl-C), then paste it (Ctrl-V) into the target application.

Generating a Recurring Billing Report

1 Click **Reports** → **Recurring Billing Report**. The *Recurring Billing Report* page opens.

2 Specify the date range of transactions.

3 Specify the **Report Filters** (the criteria used to select which transactions to include in the report—Approved and/or Declined transactions). In the example, only **approved** transactions will appear in the report.

4 Specify the display format (HTML or ASCII).

5 Specify either **Live** or **Test** transactions and click **Submit**. The *Recurring Transactions* page displays all recurring transactions (in this example, approved transactions) that occurred during the specified time period.

6 The following links appear on the page:

– Click a **Profile ID** to view the *Profile Detail* page for the profile.

– In the **Trans ID** column, click a Transaction ID number to view the *Transaction Detail* page for the transaction.

Generating a Profile Report

1   Click **Reports** → **Profile Report**. The *Profile Report* page opens.

2   Specify the Profile ID. You can copy and paste the Profile ID from any of the pages that displays the value.

3   Specify the date range of transactions.

4   Specify the display format (HTML or ASCII).

5   Specify either **Live** or **Test** transactions and click **Submit**. The *Recurring Transactions for Profile* page displays all recurring transactions that occurred during the specified time period for the specified profile.

–   Click a **Profile ID** to view the *Profile Detail* page for the profile.

–   In the **Trans ID** column, click a Transaction ID number to view the *Transaction Detail* page for the transaction.

Generating a Profile Report: Failed Transactions

To quickly isolate profiles that are having trouble with failed transactions, use the *Profile Report: Failed Transaction*s.

1 Click **Reports → Profile Report: Failed Transactions**. The *Profile Report: Failed Transactions* page opens.

2 In the **Date From** boxes, specify the date at which the report should begin.

3 In the **Mode** box, specify **Live** or **Test** profiles.

4 Click **Submit**. The *Profile Report: Failed Transactions* report opens.

Example Failed Transaction Report

■ Click a Profile ID to view the **Profile Detail** page.

■ In the **Payment Number** column, click **Retry this payment** to re-submit the transaction, as described in "To Manually Retry a Failed Payment" on page 37.

■ In the **Trans ID** column, click a Transaction ID number to view the *Transaction Detail* page for the transaction.

	Profile Name	Profile ID	Status	Payment Number	Retry Number	Trans Time	Retry Reason	TransID	Result
1.	qaliverecurr0709a	RP0000000011	Active	14 RETRY THIS PAYMENT	0	2002-10-09 04:52:09	n/a	VTHA55714207	117
2.	qaliverecurr0709a	RP0000000011	Active	15 RETRY THIS PAYMENT	0	2002-10-18 04:50:57	n/a	VTHA55732665	117
3.	qaliverecurr0709b	RP0000000012	Active	8 RETRY THIS PAYMENT	0	2002-08-28 04:49:13	n/a	VTHA55646353	117

Profile Report: Failed Transactions

Testing Guidelines

To test your application, direct all actions to **test-payflow.verisign.com**. Actions directed to this URL are processed through VeriSign's simulated payment network, enabling you to test the configuration and operation of your application or storefront — no money changes hands. (You must activate your account and configure your application for live transactions before accepting real orders.)

For detailed testing information, see the README file included with the Payflow Pro SDK. The SDK also includes example applications with suggestions on including the client within your application.

Tip   Additional details on testing appear in *Payflow Pro Developer's Guide* and at **http://www.verisign.com/support/payflow/main.html**.

In This Chapter

Testing Guidelines

- VeriSign provides test card numbers. Other numbers produce an error.

- **Expiration Date** must be a valid date in the future (use the **mm/yy** format).

- To view the credit card processor that you have selected for testing, see **Account Info** → **Processor Info** in VeriSign Manager.

Credit Card Numbers Used for Testing

Use the following card numbers for testing. Any other card number produces a general failure.

Visa	4111111111111111
Visa	4012888888881881
Visa	4222222222222
MasterCard	5555555555554444
MasterCard	5105105105105100
American Express	378282246310005
American Express	371449635398431
Amex Corporate	378734493671000
Discover	6011111111111117
Discover	6011000990139424
JCB	3530111333300000
JCB	3566002020360505
Diners Club	38520000023237
Diners Club	30569309025904

Testing Result Codes Responses

You can use the amount of the transaction to generate a particular Result code. This table lists the general guidelines for specifying amounts.

Amount	Result (RESPMSG)
$0 – $1000	0 (Approved)
$2001+	12 – Decline

Obtaining Consent to Bill Customers Using Recurring Billing

You must obtain each customer's consent to bill them on an automated schedule.

Here are the relevant sections from VeriSign's Recurring Billing Service Agreement:

"Merchant shall be solely responsible for:

a   Obtaining all necessary approvals required from each customer authorizing Merchant to bill such customer's credit card account. Merchant hereby represents and warrants that Merchant has the authorization to bill its customers' credit card accounts in the manner, for the amounts and for the period of time indicated by Merchant at the time Merchant enrolls for VeriSign's Recurring Billing Service.

b   Complying with all applicable bank and credit card rules with respect to recurring billing of consumers' credit cards. Merchant hereby represents and warrants that Merchant has complied with all applicable bank and credit card rules in billing its customers' credit card and in its use of the VeriSign Recurring Billing Service.

c   Providing accurate information regarding the credit cards to be billed, the amounts, the billing cycles, billing period and any other information requested by VeriSign that is necessary to properly process such Transactions."

Example Administrative Summaries

Example Detailed Daily Transaction Summary Message

From: admin@Verisign.com [mailto:admin@Verisign.com]
Sent: Monday, Mar 10, 2003 6:01 PM
To: AdminUser@acme.com
Subject: Payflow Test Recurring Billing Daily Transaction Summary
for <vendor name>

This is a summary of your test recurring billing transactions for the
24 hours prior to the time of this e-mail.

Credit card transaction summary:
Total Number of Approved Transactions: 8
Total Approved Amount: $8.00

Total of Number of Declined Transactions: 0
Total Declined Amount: $0.00

To view the details of all credit card profiles with current failed
payments, login to VeriSign Manager, click Reports, and run a Failed
Payment Report.

If necessary, please discuss the reason for the decline with your
customer.

ACH transaction summary:
Total Number of Transactions: 0
Total Amount: $0.00
Total Number of Returns: 2
Total Return Amount: $2.00

To view ACH transactions that have been returned, login to VeriSign
Manager, click Reports, and run a Detailed Return Activity report.

We thank you for your business.

Sincerely,

VeriSign Payment Services

Example Detailed Daily Transaction Summary Message

From: admin@Verisign.com [mailto:admin@Verisign.com]
Sent: Monday, Mar 10, 2003 6:01 PM
To: AdminUser@acme.com
Subject: Payflow Test Recurring Billing
Daily Detailed Transaction Summary

This is a detailed summary of your test recurring billing
transactions for the 24 hours prior to the time of this e-mail.

Successful Recurring Billing Transactions:

Credit Card transactions
The following profiles have successfully charged customer credit

cards:

Profile ID: 27
Profile Name: test
Payment Number: 3
Retry Number: 0
PNRef: VWYA05650842
Transaction Time: 02-Feb-03 11:47 PM
Amount: 1.00

Profile ID: 28
Profile Name: test
Payment Number: 4
Retry Number: 0
PNRef: VWYA05652806
Transaction Time: 09-Feb-03 11:53 PM
Amount: 1.00

Profile ID: 29

```
Profile Name: test
Payment Number: 5
Retry Number: 0
PNRef: VWYA05652887
Transaction Time: 16-Feb-03 11:52 PM
Amount: 1.00



Total Number of Approved Transactions: 3
Total Approved Amount: $3.00


ACH transactions
The following profiles have successfully initiated an Automated


Clearing House (ACH) debit for bill payment:

Profile ID: 17
Profile Name: test
Payment Number: 4
Retry Number: 0
PNRef: VWYD05652804
Transaction Time: 09-Feb-03 11:53 PM
Amount: 1.00
Status Code: P15

Profile ID: 18
Profile Name: test
Payment Number: 5
Retry Number: 0
PNRef: VWYD05652889
Transaction Time: 16-Feb-03 11:52 PM
Amount: 1.00
Status Code: P15

Total Number of Transactions: 2
Total Amount: $2.00


Declined Recurring Billing Transactions

Credit Card transactions
The following profiles have failed to charge customer credit cards
```

```
for the current payment period:


Profile ID: 12
Profile Name: test
Payment Number: 8
Retry Number: 1
Retry Reason: Internal Error encountered
PNRef: VWYA05683695
Transaction Time: 09-Mar-03 06:48 PM
Amount: 1.00

Profile ID: 22
Profile Name: test
Payment Number: 8
Retry Number: 2
Retry Reason: Internal Error encountered
PNRef: VWYA05683697
Transaction Time: 09-Mar-03 08:48 PM
Amount: 1.00

Total of Number of Declined Transactions: 2
Total Declined Amount: $2.00


ACH transactions
The following profiles have received a return for a previously


initiated ACH debit:

Profile ID: 15
Profile Name: test
Payment Number: 1
Retry Number: 0
PNRef: VW0005650795
Transaction Time: 23-Jan-03  10:29 PM
Amount: 1.00
Status Code: R01

Profile ID: 16
Profile Name: test
Payment Number: 8
Retry Number: 0
PNRef: VWYD05683693
```

```
Transaction Time: 09-Mar-03 04:48 PM
Amount: 1.00
Status Code: R01

Total number of returns: 2
Total return amount: $2.00



We thank you for your business.

Sincerely,

VeriSign Payment Services
```

Configuring ASCII Reports to be Saved as Text Files

When you submit a request for an ASCII format report, your computer should ask whether you would like to open or save the report. Some operating systems do not automatically display this dialog box because the operating system has not been configured to associate the file's `.cfm` filename extension with a text editor. This appendix provides instructions for associating the `.cfm` files with the Notepad text editor for several operating systems.

Windows 98

1   Double-click the **My Computer** icon.

2   In the **View** menu, select **Options**.

3   Select the **File Types** tab and click the **New Type** button.

4   Enter the following values:

  Description of Type field**: `Cold Fusion`**

  Associate Extension field**: `.cfm`**

  Content Type field**:** (leave blank)

5   Click the **New** button. The **New Action** dialog box opens.

6   Enter the following values:

  Action field**: `open`**

  Open With (or Application used) field: Browse for
  `C:/windows/notepad.exe`

7   Click **OK**.

Windows NT

1   Double-click the **My Computer** icon.

2   In the **View** menu, select **Options**.

3   Select the **File Types** tab and click the **New Type** button.

4   Enter the following values:

Description of Type field**: `Cold Fusion`**

Associate Extension field**: `.cfm`**

Content Type field**:** (leave blank)

5   Click the **New** button. The **New Action** dialog box opens.

6   Enter the following values:

Action field**: `open`**

Open With (or Application used) field: Browse for
`C:/winnt/notepad.exe`

7   Click **OK**.

Windows 2000 and Windows XP

1   Double-click the **My Computer** icon.

2   In the **Tools** menu, select **Folder Options**.

3   Select the **File Types** tab and click the **New** button.

In the **File Extension** field, type **`.cfm`**

4   Click the **Advanced** button

5   In the **Associated File Type** field, select **Text Document**.

6   Click **OK**.

7   Click **OK** to close the **Folder Options** dialog box.

Windows Millennium Edition

1. Double-click the **My Computer** icon.

2. In the **Tools** menu, select **Folder Options**.

3. Select the **File Types** tab and click the **New** button.

    In the **File Extension** field, type **.cfm**

4. Click the **Advanced** button

5. In the Associated File Type field, select **<new>**.

6. From **Registered file types** select the **CFM** extension.

7. Click **Changed**.

8. Select **Notepad**.

9. Click **OK**.

10. Click **Close**.

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