

Merchant Web Services API

Automated Recurring Billing (ARB) XML Guide

November 2012



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Revision History

This table lists the changes made in the last five releases of this document:

Release	Changes
November 2012	Added list of payment processors and currencies, along with associated required fields.
November 2011	Added TEL as a valid value for eCheckType
February 2011	Clarified end-of-month billing cycles
August 2010	Added ARBGetSubscriptionStatus and ARBGetSubscriptionStatusResponse
July 2010	Changed error codes to response codes, and added two informational messages

Developer Introduction

This guide describes the Web development required to submit Automated Recurring Billing™ (ARB), or subscription-based payments to the Authorize.Net Payment Gateway directly from a Web site or other application using extensible markup language (XML).

Specifically, the Authorize.Net ARB Application Programming Interface (API) provides a mechanism for developers and value-added resellers (VARs) to create, update and cancel ARB subscriptions by means of direct integration between client software or applications and the Authorize.Net Payment Gateway.

A subscription is a set of multiple transactions, or payments, created for the purchase of a subscription-based product or service or for an installment-based payment plan. Payments for the subscription are then generated by the payment gateway at later dates based on a specified payment schedule and subscription duration.

ARB subscriptions **do not** process transactions in real time. Successful creation of an ARB subscription transaction does not indicate that the subscription payments that process through your account will be successful. ARB subscription transactions process at approximately 2:00 a.m. PST on their scheduled payment dates. Therefore the first scheduled transaction will not be sent to the customer's bank for authorization until approximately 2:00 a.m. PST on the start date that you specified when you created the subscription in your account. If you create a subscription with a start date that equals the creation date, the first scheduled payment will not process until after 2:00 a.m. the following day. If you wish to validate your customer's payment information before creating their subscription in your account, please use one of the real-time transaction processing methods, such as the Advanced Integration Method (AIM).

The ARB API behaves the same as when a merchant creates, updates, and cancels ARB subscriptions in the Merchant Interface. When a merchant creates a subscription in the Merchant Interface, they enter all required information (customer payment information, subscription interval and duration, etc.) into the Create New ARB Subscription form. When the merchant submits the information, the Subscription Confirmation page returns a message to the merchant indicating whether or not the subscription was created successfully. The subscription ID assigned for a successfully created subscription is also displayed.

The ARB API accomplishes these same functions through an XML call and subsequent XML response. Whether a subscription is created in the Merchant Interface or through the ARB API, the results are the same.

**Note**

Log on to the Merchant Interface to step through the manual ARB process. If you do not have a live production account to use for this purpose, you can request a [developer test account](#) from our [Developer Center](#). Be sure to include in the comments section that you need the ARB feature enabled for your test account. ARB subscription transactions never process through our test environment, so if you use a test environment account, you never see an ARB subscription transaction process. If you wish to see an ARB subscription transaction process, you **MUST** use your live production account.

Minimum Requirements

Before you begin ARB integration for an Authorize.Net Payment Gateway account, please check with the merchant to make sure that the following minimum requirements have already been met.

- The merchant must have a merchant bank account that allows Internet transactions.
- The merchant must have an active Authorize.Net Card Not Present Payment Gateway account.
- The merchant must be registered for the Authorize.Net ARB service.
- Test Mode must be disabled.
- The merchant must store account authentication data such as API login ID and transaction key securely .

**Note**

Merchants should avoid storing any type of sensitive cardholder information. However, if a merchant or third party must store sensitive customer business or payment information, they must comply with industry standard storage requirements. See the [Developer Security Best Practices White Paper](#) for guidelines.

Payment Processors

The currencies that a merchant can accept through Authorize.Net are determined by their payment processor. The following table contains the list of payment processors and currencies that are supported by Authorize.Net.

Table 1 Payment Processors and Currencies

Payment Processor	Supported Currency
Chase Paymentech Tampa Processing Platform	United States Dollar (USD)

Table 1 Payment Processors and Currencies

Payment Processor (Continued)	Supported Currency
Elavon	United States Dollar (USD)
First Data Merchant Services (FDMS) Omaha, Nashville, and EFSNet Processing Platform	United States Dollar (USD)
Global Payments	United States Dollar (USD)
GPN Canada	Canadian Dollar (CAD)
Heartland Payment Systems	United States Dollar (USD)
TSYS Acquiring Solutions	United States Dollar (USD)
WorldPay Atlanta Processing Platform	United States Dollar (USD)
WorldPay Streamline Processing	British Pounds (GBP)

Developer Support

Several resources are available to help you successfully integrate a merchant Web site or other application with the Authorize.Net Payment Gateway.

- The [Developer Center](#) provides test accounts, [sample code](#), FAQs, and troubleshooting tools.
- The [Developer Security Best Practices White Paper](#) describes how to maximize the security and reliability of your merchant integration solutions.
- If you have questions about the information you find in the Developer Center, you can contact Integration Services by email at integration@authorize.net.

If you have any suggestions about improving or correcting this guide, please email documentation@authorize.net.

Software Development Kits

Authorize.Net offers Software Development Kits (SDKs) that present an alternate object-oriented model, in several popular languages. The SDK performs the core payment activities (such as error handling and parsing, network communication, and data encoding) behind the scenes.

The SDK provides utility methods to help developers build payment flows for each of the integration methods. You can download the SDKs at <http://developer.authorize.net/downloads/>.

Executing an API Call

The following sections describe the minimum requirements for executing an API call for an ARB subscription request using XML.

You can develop the subscription request script in one of two ways:

- by yourself, using the API field information in this section
- using Authorize.Net sample code in C#, Java, PHP, Ruby, and VBNet, available for free from our [Developer Center](#). Unfortunately, we cannot offer all programming languages requested. If you do not wish to use the ARB sample code, use your knowledge of your chosen language, along with this guide, to create your own.



Note

If you choose to use Authorize.Net sample code, be aware that in order to achieve a successful implementation, you must modify it with the merchant's specific payment gateway account information.

Note for .NET programmers

When you use serialization with optional parameters, then the .NET language you are using automatically creates Boolean properties that indicate whether or not non-nullable parameters are specified. For example, if there is a parameter named `validationMode` that is an Enumeration type, a parameter called `validationModeSpecified` is automatically created. By default, these properties are set to false. If a request passes a value for an optional parameter, be sure to set these properties to true so that the value is not ignored.

ARB API URLs

ITEM	LOCATION
Production	https://api.authorize.net/xml/v1/request.api
Developer Test	https://apitest.authorize.net/xml/v1/request.api
XML Schema	https://api.authorize.net/xml/v1/schema/AnetApiSchema.xsd

In order to be processed successfully, API requests and responses must conform to the ARB API XML schema.



Note

The Developer Test URL requires the use of a developer test payment gateway account. Production accounts cannot be used to test against the developer test URL, and vice versa.

ARB Subscription Functions

The ARB API includes the following functions:

- ARBCreateSubscriptionRequest
- ARBUpdateSubscriptionRequest
- ARBCancelSubscriptionRequest

Each API submission can contain only one ARB request. Including more than one request per submission will result in an error.

The following sections describe the input parameters required for executing the functions listed above. Indentations in the Parameter column indicate grouping hierarchy. All parameters are case-sensitive and must be submitted in the order listed here. Parameters are required unless otherwise indicated. Optional parameters should not be submitted unless they contain valid values.



Note

Parameters required for individual API calls are in addition to the authentication parameters required for all API calls.

Authentication

ALL calls to the ARB API require merchant authentication. The following table shows the required XML elements. **All XML elements are case-sensitive and must be submitted in the order listed here. Do not submit optional elements unless they contain valid values.**

Table 2 Authentication parameters

Element	Description
merchantAuthentication	Contains the merchant's payment gateway account authentication information
<ul style="list-style-type: none"> • name 	<p>Value: The merchant's valid API login ID</p> <p>Format: Up to 25 characters</p> <p>Notes: Submit the API login ID used to submit transactions.</p>

Table 2 Authentication parameters (Continued)

Element	Description
<ul style="list-style-type: none"> transactionKey 	<p>Value: The merchant's valid transaction key</p> <p>Format: 16 characters</p> <p>Notes: Submit the transaction key obtained by the merchant from the Merchant Interface.</p>

Example Authentication with the API Login ID and Transaction Key

```
<?xml version="1.0" encoding="utf-8"?>
<ARBCreateSubscriptionRequest xmlns= "AnetApi/xml/v1/schema/
AnetApiSchema.xsd">
  <merchantAuthentication>
    <name>mytestacct</name>
    <transactionKey>112223344</transactionKey>
  </merchantAuthentication>
```

**Note**

The sample code included in this document uses generic field values. When using or testing sample code, be sure to enter valid field values. Additional sample code is available for download from the Authorize.Net [Developer Center](#).

Input Elements for ARBCreateSubscriptionRequest

The following table represents the input elements for executing an API call to the ARBCreateSubscriptionRequest function, in addition to the authentication elements. Indentations in the Element column indicate grouping hierarchy. **Elements are required unless otherwise indicated. All XML elements are case sensitive and must be submitted in the order listed here. Optional elements should not be submitted unless they contain valid values.**

**Note**

For subscriptions with a monthly interval, whose payments begin on the 31st of a month, payments for months with less than 31 days will occur on the last day of the month.

Table 3 Input elements for ARBCreateSubscriptionRequest

Element	Description
refId	<p>Value: Merchant-assigned reference ID for the request</p> <p>Required: no</p> <p>Format: Up to 20 characters</p> <p>Notes: If included in the request, this value is included in the response. This feature might be especially useful for multi-threaded applications.</p>
subscription	Contains information about the subscription
<ul style="list-style-type: none"> name 	<p>Value: Merchant-assigned name for the subscription</p> <p>Required: no</p> <p>Format: Up to 50 characters</p>
<ul style="list-style-type: none"> paymentSchedule 	Contains information about the payment schedule
<ul style="list-style-type: none"> <ul style="list-style-type: none"> interval 	Contains information about the interval of time between payments
<ul style="list-style-type: none"> <ul style="list-style-type: none"> length 	<p>Value: The measurement of time, in association with the Interval Unit, that is used to define the frequency of the billing occurrences</p> <p>Format: Up to 3 digits</p> <p>Notes: If the Interval Unit is "months," can be any number between one (1) and 12. If the Interval Unit is "days," can be any number between seven (7) and 365.</p>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> unit 	<p>Value: The unit of time, in association with the Interval Length, between each billing occurrence</p> <p>Format: days, months</p>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> startDate 	<p>Value: The date the subscription begins (also the date the initial billing occurs)</p> <p>Format: YYYY-MM-DD</p> <p>Notes: The date entered must be greater than or equal to the date the subscription was created.</p> <p>The validation checks against local server date, which is Mountain Time. An error might possibly occur if you try to submit a subscription from a time zone where the resulting date is different; for example, if you are in the Pacific time zone and try to submit a subscription between 11:00 PM and midnight, with a start date set for today.</p> <p>If the start date is the 31st, and the interval is monthly, the billing date is the last day of each month (even when the month does not have 31 days).</p>
<ul style="list-style-type: none"> totalOccurrences 	<p>Value: Number of billing occurrences or payments for the subscription</p> <p>Format: Up to 4 digits</p> <p>Notes: To submit a subscription with no end date (an ongoing subscription), this field must be submitted with a value of "9999."</p> <p>If a trial period is specified, this number should include the Trial Occurrences.</p>

Table 3 Input elements for ARBCreateSubscriptionRequest (Continued)

Element	Description
<ul style="list-style-type: none"> • trialOccurrences 	<p>Value: Number of billing occurrences or payments in the trial period</p> <p>Required: no</p> <p>Format: Up to 2 digits</p> <p>Notes: If a trial period is specified, this number must be included in the Total Occurrences.</p>
<ul style="list-style-type: none"> • amount 	<p>Value: The amount to be billed to the customer for each payment in the subscription</p> <p>Format: Up to 15 digits</p> <p>Notes: If a trial period is specified, this is the amount that will be charged after the trial payments are completed.</p>
<ul style="list-style-type: none"> • trialAmount 	<p>Value: The amount to be charged for each payment during a trial period</p> <p>Required: Conditional</p> <p>Format: Up to 15 digits</p> <p>Notes: Required when trial occurrences is specified.</p> <p>Once the number of trial occurrences for the subscription is complete, the regular amount will be charged for each remaining payment.</p>
<ul style="list-style-type: none"> • payment 	Contains either the customer's credit card or bank account payment information
<ul style="list-style-type: none"> • • creditCard 	<p>Value: Contains the customer's credit card information</p> <p>Notes: Include this element only when the payment method is credit card.</p>
<ul style="list-style-type: none"> • • • cardNumber 	<p>Value: The credit card number used for payment of the subscription</p> <p>Format: 13 to 16 digits</p>
<ul style="list-style-type: none"> • • • expirationDate 	<p>Value: The expiration date of the credit card used for the subscription</p> <p>Format: YYYY-MM</p>
<ul style="list-style-type: none"> • • • cardCode 	<p>Value: The three- or four-digit card code on the back of most credit cards, on the front for American Express</p> <p>Required: no</p> <p>Format: 3 or 4 digits</p> <p>Notes: include this element only when the merchant has set the card code value field to required in the account settings. The value itself is never validated.</p>
<ul style="list-style-type: none"> • • bankAccount 	<p>Value: Contains the customer's bank account information</p> <p>Notes: Include this element only when the payment method is bank account.</p>
<ul style="list-style-type: none"> • • • accountType 	<p>Value: The type of bank account used for payment of the subscription</p> <p>Format: checking, business Checking, savings</p>
<ul style="list-style-type: none"> • • • routingNumber 	<p>Value: The routing number of the customer's bank</p> <p>Format: 9 digits</p>
<ul style="list-style-type: none"> • • • accountNumber 	<p>Value: The bank account number used for payment of the subscription</p> <p>Format: 5 to 17 digits</p>

Table 3 Input elements for ARBCreateSubscriptionRequest (Continued)

Element	Description
• • • nameOnAccount	Value: The full name of the individual associated with the bank account number Format: Up to 22 characters
• • • echeckType	Value: The type of electronic check transaction used for the subscription Format: For checking or savings accounts, PPD, TEL, or WEB For business checking accounts, CCD
• • • bankName	Value: The name of the bank associated with the bank account number Required: no Format: Up to 50 characters
• order	Value: Contains optional order information Required: no
• • invoiceNumber	Value: Merchant-assigned invoice number for the subscription Required: no Format: Up to 20 characters Notes: The invoice number will be associated with each payment in the subscription.
• • description	Value: Description of the subscription Required: no Format: Up to 255 characters Notes: The description will be associated with each payment in the subscription.
• customer	Value: Contains information about the customer
• • id	Value: Merchant-assigned identifier for the customer Required: no Format: Up to 20 characters
• • email	Value: The customer's email address Format: Up to 255 characters Notes: Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • phoneNumber	Value: The customer's phone number Required: no Format: Up to 25 digits
• • faxNumber	Value: The customer's fax number Required: no Format: Up to 25 digits
• billTo	Value: Contains the customer's billing address information

Table 3 Input elements for ARBCreateSubscriptionRequest (Continued)

Element	Description
• • firstName	Value: The first name associated with the customer's billing address Format: Up to 50 characters Notes: Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • lastName	Value: The last name associated with the customer's billing address Format: Up to 50 characters Notes: Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • company	Value: The company associated with the customer's billing address Format: Up to 50 characters
• • address	Value: The customer's billing address Format: Up to 60 characters Notes: Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • city	Value: The city of the customer's billing address Format: Up to 40 characters Notes: Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • state	Value: The state of the customer's billing address Format: 2 characters Notes: Must be a valid state code Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • zip	Value: The ZIP code of the customer's billing address Format: Up to 20 characters Notes: Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• • country	Value: The country of the customer's billing address Format: Up to 60 characters Notes: Must be a valid two-character country code or full country name (spelled in English). Required only when using GPN Canada or WorldPay Streamline Processing Platform.
• shipTo	Value: Contains the customer's shipping address information Required: no
• • firstName	Value: The first name associated with the customer's shipping address Format: Up to 50 characters
• • lastName	Value: The last name associated with the customer's shipping address Format: Up to 50 characters

Table 3 Input elements for ARBCreateSubscriptionRequest (Continued)

Element	Description
• • company	Value: The company associated with the customer's shipping address Format: Up to 50 characters
• • address	Value: The customer's shipping address Format: Up to 60 characters
• • city	Value: The city of the customer's shipping address Format: Up to 40 characters
• • state	Value: The state of the customer's shipping address Format: Up to 40 characters
• • zip	Value: The ZIP code of the customer's shipping address Format: Up to 20 characters
• • country	Value: The country of the customer's shipping address Format: Up to 60 characters Notes: Must be a valid two-character country code or full country name (spelled in English).

Example ARBCreateSubscriptionRequest

```
<?xml version="1.0" encoding="utf-8"?>
<ARBCreateSubscriptionRequest xmlns="AnetApi/xml/v1/schema/
AnetApiSchema.xsd">
  <merchantAuthentication>
    <name>mytestacct</name>
    <transactionKey>112223344</transactionKey>
  </merchantAuthentication>
  <refId>Sample</refId>
  <subscription>
    <name>Sample subscription</name>
    <paymentSchedule>
      <interval>
        <length>1</length>
        <unit>months</unit>
      </interval>
      <startDate>2007-03-15</startDate>
      <totalOccurrences>12</totalOccurrences>
      <trialOccurrences>1</trialOccurrences>
    </paymentSchedule>
    <amount>10.29</amount>
    <trialAmount>0.00</trialAmount>
    <payment>
      <creditCard>
        <cardNumber>4111111111111111</cardNumber>
        <expirationDate>2008-08</expirationDate>
      </creditCard>
    </payment>
    <billTo>
```



```

    <firstName>John</firstName>
    <lastName>Smith</lastName>
  </billTo>
</subscription>
</ARBCreateSubscriptionRequest>

```

**Note**

The sample code included in this document uses generic field values. When using or testing sample code, be sure to enter valid field values. Additional sample code is available for download from the Authorize.Net [Developer Center](#).

Input Elements for ARBUpdateSubscriptionRequest

The input elements for a request to update an ARB subscription are the same as the create an ARB subscription function with the following addition and exceptions. **All XML elements are case sensitive and must be submitted in the order listed here. Optional elements should not be submitted unless they contain valid values.**

You must submit the subscriptionID of the subscription to be updated.

Table 4 Input elements for ARBUpdateSubscriptionRequest

ELEMENT	DESCRIPTION
subscriptionId	Value: The payment gateway-assigned identification number for the subscription Format: Up to 13 digits

- The subscription start date (subscription.paymentSchedule.startDate) may only be updated if no successful payments have been completed.
- The subscription interval information (subscription.paymentSchedule.interval.length and subscription.paymentSchedule.interval.unit) may not be updated.
- The number of trial occurrences (subscription.paymentSchedule.trialOccurrences) may only be updated if the subscription has not yet begun or is still in the trial period.
- If the start date is the 31st, and the interval is monthly, the billing date is the last day of each month (even when the month does not have 31 days).

All other fields are optional.

**Note**

The sample code included in this document uses generic field values. When using or testing sample code, be sure to enter valid field values. Additional sample code is available for download from the Authorize.Net [Developer Center](#).

Example ARBUpdateSubscriptionRequest

```
<?xml version="1.0" encoding="utf-8"?>
<ARBUpdateSubscriptionRequest xmlns="AnetApi/xml/v1/schema/
AnetApiSchema.xsd">
  <merchantAuthentication>
    <name>mytestacct</name>
    <transactionKey>112223344</transactionKey>
  </merchantAuthentication>
  <refId>Sample</refId>
  <subscriptionId>100748</subscriptionId>
  <subscription>
    <payment>
      <creditCard>
        <cardNumber>4111111111111111</cardNumber>
        <expirationDate>2010-08</expirationDate>
      </creditCard>
    </payment>
  </subscription>
</ARBUpdateSubscriptionRequest>
```

Input Elements for ARBCancelSubscriptionRequest

The following table represents the input elements for executing an API call to the ARBCancelSubscriptionRequest function. **Elements are required unless otherwise indicated. All XML elements are case sensitive and must be submitted in the order listed here. Optional elements should not be submitted unless they contain valid values.**

Table 5 Input elements for ARBCancelSubscriptionRequest

ELEMENT	DESCRIPTION
refId	Value: Merchant-assigned reference ID for the request Required: no Notes: If included in the request, this value will be included in the response. This feature might be especially useful for multi-threaded applications.
subscriptionId	Value: The payment gateway-assigned identification number for the subscription Format: Up to 13 digits

Example ARBCancelSubscriptionRequest

```
<ARBCancelSubscriptionRequest xmlns="AnetApi/xml/v1/schema/
AnetApiSchema.xsd">
  <merchantAuthentication>
    <name>mytestacct</name>
    <transactionKey>112223344</transactionKey>
  </merchantAuthentication>
```

```
<refId>Sample</refId>
<subscriptionId>100748</subscriptionId>
</ARBCancelSubscriptionRequest>
```

**Note**

The sample code included in this document uses generic field values. When using or testing sample code, be sure to enter valid field values. Additional sample code is available for download from the Authorize.Net [Developer Center](#).

Input Elements for ARBGetSubscriptionStatusRequest

The following table represents the input elements for executing an API call to the ARBGetSubscriptionStatusRequest function, in addition to the authentication elements. **Elements are required unless otherwise indicated. All XML elements are case sensitive and must be submitted in the order listed here. Optional elements should not be submitted unless they contain valid values.**

Table 6 Input elements for ARBGetSubscriptionStatusRequest

ELEMENT	DESCRIPTION
refId	Value: Merchant-assigned reference ID for the request. Optional. Notes: If included in the request, this value will be included in the response. This feature might be especially useful for multi-threaded applications.
subscriptionId	Value: The payment gateway-assigned identification number for the subscription Format: Up to 13 digits

Example ARBGetSubscriptionStatusRequest

```
<?xml version="1.0" encoding="utf-8"?>
<ARBGetSubscriptionStatusRequest xmlns="AnetApi/xml/v1/schema/
AnetApiSchema.xsd">
  <merchantAuthentication>
    <name>mytestacct</name>
    <transactionKey>112223344</transactionKey>
  </merchantAuthentication>
  <refId>Sample</refId>
  <subscriptionId>100748</subscriptionId>
</ARBGetSubscriptionStatusRequest>
```

**Note**

The sample code included in this document uses generic field values. When using or testing sample code, be sure to enter valid field values. Additional sample code is available for download from the Authorize.Net [Developer Center](#).

XML Responses

The transaction response from the payment gateway is a set of fields that provides information about the status of a request. The following sections describe the output elements that are returned for successful API calls.

Output Elements for ARBCreateSubscriptionResponse

The following table represents the output elements for a successful API call to the ARBCreateSubscriptionRequest function. Indentations in the Element column indicate grouping hierarchy.

Table 7 Output elements for ARBCreateSubscriptionResponse

ELEMENT	DESCRIPTION
refID	Value: Merchant-assigned reference ID for the request Format: Up to 20 characters Notes: This element is included in the response only if it was included in the request.
messages	Value: Contains information about the results of the request
• resultCode	Value: Contains additional information about the results of the request Format: Ok Notes: An “Ok” result code indicates that the request was processed and accepted without error.
• message	Value: Contains the result code and text Notes: Any messages present are informational only.
• • code	Value: I00001
• • text	Value: Successful
subscriptionId	Value: The payment gateway assigned identification number for the subscription Format: Up to 13 digits

Example ARBCreateSubscriptionResponse

```
<?xml version="1.0" encoding="utf-8"?>
<ARBCreateSubscriptionResponse xmlns="AnetApi/xml/v1/schema/
AnetApiSchema.xsd">
  <refId>Sample</refId>
  <messages>
    <resultCode>Ok</resultCode>
    <message>
      <code>I00001</code>
      <text>Successful.</text>
    </message>
  </messages>
  <subscriptionId>100748</subscriptionId>
</ARBCreateSubscriptionResponse>
```

After you receive a response from the payment gateway with an “Ok” result code, your subscription has been successfully created. The response will include the subscription ID assigned to that particular subscription. Individual transactions, or payments, for a subscription are generated automatically after 2 a.m. PST by the payment gateway according to the designated payment schedule and subscription duration. Each payment will only be viewable in the merchant’s payment gateway account when it is actually generated.

For example, if a new subscription is created with a start date of June 6, with a monthly payment interval, the first payment for the subscription will not be viewable in the merchant’s payment gateway account until June 6. All subsequent payments will be visible on their scheduled date (July 6 payment will be visible on July 6, August 6 on August 6, etc.).

**Note**

If you create a new subscription with the first payment scheduled for that same day, the initial payment for the subscription will actually be submitted the next business day.

Once each scheduled transaction in a subscription has been submitted, which is usually at 2 AM PST for ARB transactions, the merchant will receive an email from the payment gateway indicating the transaction status.

The merchant can also configure their account in the Merchant Interface to receive the following ARB emails:

- Daily Transaction Summary.
- Failed Transaction Notice – sent when a payment in a subscription declines or receives an error response from the processor.
- Subscription Due for Expiration – sent after the second to last payment in a subscription is submitted, to notify the merchant that the next payment is the final one in the subscription.

- Credit Card Expiration – sent immediately after the last possible successful payment in a subscription, to notify the merchant that the credit card expiration date will expire before the next scheduled payment in the subscription.
- Subscription Suspension – sent to notify the merchant that a subscription has been suspended. A subscription will be suspended if the first payment in the subscription is declined, rejected or receives an error response. Additionally, if a subscription is edited, for example payment or shipping information is changed, the subscription will be suspended if the first payment after the edits is declined, rejected or receives an error response.
- Subscription Termination – sent when a subscription is terminated. If a suspended subscription is not edited to fix the problem that caused the suspension, it will terminate on the next scheduled payment.
- Subscription Expiration – sent after a subscription has expired. Once expired, a subscription cannot be reactivated. Instead, a new subscription would have to be created.

**Note**

The Daily Transaction Summary email returns an Excel file in comma separated value (.csv) format. The merchant will receive Successful.csv, Failed.csv or both files.

To select which ARB emails to receive:

- Step 1** Log on to the Merchant Interface at <https://secure.authorize.net>
- Step 2** Click **User Administration** under Account in the main menu on the left
- Step 3** Select the user you would like to edit and click **Edit User**
- Step 4** Click **Edit Profile Information** under Profile and Security Settings
- Step 5** Under the Automated Recurring Billing (ARB) Emails section, click to select or deselect which emails the user should receive
- Step 6** Click **Submit** to save the changes

**Note**

Test environment accounts do not process ARB subscription transactions. If you are using a test environment account, you will not receive these email notifications in any form. You will also not be able to receive an ARB subscription transaction Silent Post while using a test environment account.

For more information on viewing subscriptions in the Merchant Interface or on the types of ARB emails the merchant can opt to receive, please see the Merchant Interface Online Help Files.

Transaction Response for Individual Payments in a Subscription

The payment gateway sends an email to the merchant for each transaction submitted in a subscription indicating the transaction's status. If you would like to receive a transaction response for each payment in a subscription, you must enable the Silent Post feature in the Merchant Interface. When this feature is enabled, the payment gateway will post a transaction response in name/value pair format to the URL specified in the Silent Post field of the Merchant Interface. The name/value pair response uses the syntax of `x_name_of_field=value of field&`. You can find a list of these fields in the [SIM Implementation Guide](#) in the section entitled "Fields in the Payment Gateway Response."

When the Silent Post URL feature is enabled, name/value pair responses for both ARB transactions *and* all other non-ARB transactions will post to the specified URL. To determine which transaction responses are for ARB payments, you can parse the response for the `x_subscription_id` (Subscription ID) and the `x_subscription_paynum` (Subscription Payment Number) fields. These fields are only returned in ARB subscription transaction responses.



Note

The Silent Post feature only returns responses for scheduled ARB transactions that are approved or declined. The payment gateway will not return a response to the specified Silent Post URL if the scheduled transaction results in a general error due to expired or invalid payment information. For more information see the "General Errors for Individual Payments in a Subscription" section of this guide.

Configuring a Silent Post URL In Your Live Production Account.

A Silent Post request must be accepted within 2 seconds, otherwise it will be aborted. If you decide to use Silent Post, it is important that your Silent Post URL is simply used as a method of collecting and dumping response data into a database or file for your use separately at a later time. Otherwise, the likelihood of your Silent Post URL failing to accept the responses we send will be much higher. A Silent Post is sent only once and it is not possible to have them re-sent to you at any time.

ARB subscriptions only generate Silent Post responses if and when a transaction processes. If a transaction does not process, for example, if the credit card has expired, a Silent Post does not occur (see ["General Errors for Individual Payments in a Subscription," page 31](#) for more information). It is recommended that you configure the ARB specific email notifications within your account as well as using Silent Post for the purposes of identifying ARB subscription activity.

Silent Post responses are returned in real-time, meaning as soon as the transaction processes we send out the Silent Post to your specified URL. We do not necessarily

update the subscription in real-time, however. This means that you should not use the Silent Post response to immediately update or cancel an ARB subscription. If you update or cancel a subscription before we have updated the subscription in our system, our update will overwrite any changes you may have made. You should instead simply collect the response data and submit any changes necessary in your subscription(s) later that day.

For information on how to configure the Silent Post URL in the Merchant Interface, see the [Merchant Integration Guide](#).

An ARB subscription transaction Silent Post will occur when ARB transactions are processed in your live production account. ARB subscriptions begin processing at approximately 2:00 a.m. PST. Because the POST does not occur while an SSL connection is established, ARB transactions use an MD5 Hash calculation to validate each transaction response. If you do not have the Silent Post feature enabled, the MD5 Hash information below is not applicable.

Using the MD5 Hash Feature for ARB Transactions

The MD5 Hash feature enables you to authenticate that a transaction response is securely received from Authorize.Net. The payment gateway creates the MD5 Hash using the following pieces of account and transaction information as input:

- MD5 Hash value
- Transaction ID (*x_trans_id*)
- Amount (*x_amount*)

The MD5 Hash value is a random value configured by the merchant in the Merchant Interface. It should be stored securely separately from the merchant's Web server. For more information on how to configure this value, see the [Merchant Integration Guide](#).

For example, if the MD5 Hash value configured by the merchant in the Merchant Interface is "wilson," and the transaction ID is "9876543210" with an amount of \$1.00, then the field order used by the payment gateway to generate the MD5 Hash would be as follows:

```
wilson98765432101.00
```



Note

The value passed back for *x_amount* is formatted with the correct number of decimal places used in the transaction. For transaction types that do not include a transaction amount, mainly Voids, the amount used by the payment gateway to calculate the MD5 Hash is "0.00."

To authenticate the MD5 Hash returned by the payment gateway in the transaction response, you need to create a script that can receive and parse the transaction response, call the merchant's MD5 Hash value, and run the MD5 algorithm on the same fields listed above. If the result matches the MD5 Hash returned by the payment gateway, the transaction response is successfully authenticated.

The fields listed above are only applicable when using the MD5 Hash for ARB transactions. If you are using the MD5 Hash to authenticate non-ARB transactions, the fields used are different. For information on using the MD5Hash for non-ARB transactions, see the *Merchant Integration Guide* at <http://www.authorize.net/support/merchant/>.

Example Silent Post Response

```
x_response_code=1&x_response_subcode=1&x_response_reason_code=1&
x_response_reason_text=This+transaction+has+been+approved%2E&
x_auth_code=QbJHm4&x_avs_code=Y&x_trans_id=2147490176&
x_invoice_num=INV12345&x_description=My+test+description&
x_amount=0%2E44&x_method=CC&x_type=auth%5Fcapture&
x_cust_id=CustId&x_first_name=Firstname&
x_last_name=LastNamenardkkwhczdp&x_company=&x_address=&x_city=&
x_state=&x_zip=&x_country=&x_phone=&x_fax=&x_email=&
x_ship_to_first_name=&x_ship_to_last_name=&x_ship_to_company=&
x_ship_to_address=&x_ship_to_city=&x_ship_to_state=&x_ship_to_zip=&
x_ship_to_country=&x_tax=0%2E0000&
x_duty=0%2E0000&x_freight=0%2E0000&x_tax_exempt=FALSE&x_po_num=&
x_MD5_Hash=B9B3D19AEFD7BECC86C5FB3DB717D565&
x_cavv_response=2&x_test_request=false&x_subscription_id=101635&
x_subscription_paynum=1
```

Output Elements for ARBUpdateSubscriptionResponse and ARBCancelSubscriptionResponse

The output elements in for ARBUpdateSubscriptionResponse and ARBCancelSubscriptionResponse are the same as "Output Elements for ARBCreateSubscriptionResponse" with the following exception: the subscriptionID of the updated subscription is not included in the response.

Output Elements for ARBGetSubscriptionStatusResponse

Table 8 Output elements for ARBGetSubscriptionStatusResponse

ELEMENT	DESCRIPTION
refID	<p>Value: Merchant-assigned reference ID for the request.</p> <p>Format: Up to 20 characters.</p> <p>Notes: This element is included in the response only if it was included in the request.</p>
messages	<p>Value: Contains information about the results of the request.</p>
• resultCode	<p>Value: Contains additional information about the results of the request.</p> <p>Format: Ok</p> <p>Notes: An “Ok” result code indicates that the request was processed and accepted without error.</p>
• message	<p>Value: Contains the result code and text.</p> <p>Notes: Any messages present are informational only.</p>
• • code	<p>Value: The response code that represents the status.</p>
• • text	<p>Value: The text description of the status.</p>
status	<p>Value: Contains information about the subscription status.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> • active • expired • suspended • cancelled • terminated

Example ARBGetSubscriptionStatusResponse

```

<ARBGetSubscriptionStatusResponse xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="AnetApi/xml/v1/schema/AnetApiSchema.xsd">
  <refId>Sample</refId>
  <messages>
    <resultCode>Ok</resultCode>
    <message>
      <code>I00001</code>
      <text>Successful</text>
    </message>
  </messages>
  <Status>active</Status>
</ARBGetSubscriptionStatusResponse>

```

Error Response

The following table describes the output elements for an error response to any of the requested API methods.

Table 9 Output elements for an error response

ELEMENT	DESCRIPTION
refId	Value: Merchant-assigned reference ID for the request Format: Up to 20 characters Notes: This element is included in the response only if it was included in the request.
messages	Value: Contains information about the results of the request
• resultCode	Value: Contains additional information about the results of the request Format: Error Notes: The request resulted in one or more errors.
• message	Value: Contains the result code and text Notes: Messages provide more details about the error(s).
• • code	Value: The code that represents the reason for the error
• • text	Value: A text description of the error

Example Error Response

```
<?xml version="1.0" encoding="utf-8"?>
<ErrorResponse xmlns="AnetApi/xml/v1/schema/AnetApiSchema.xsd">
  <messages>
    <resultCode>Error</resultCode>
    <message>
      <code>E00003</code>
      <text> An error occurred while parsing the XML request.
    </text>
    </message>
  </messages>
</ErrorResponse>
```

Error Codes

The following table lists the common error codes and texts.

Table 10 Error codes

CODE	TEXT	DESCRIPTION
E00001	An error occurred during processing. Please try again.	An unexpected system error occurred while processing this request.
E00002	The content-type specified is not supported.	The only supported content-types are text/xml and application/xml.
E00003	An error occurred while parsing the XML request.	This is the result of an XML parser error.
E00004	The name of the requested API method is invalid.	The name of the root node of the XML request is the API method being called. It is not valid.
E00005	The merchantAuthentication.transactionKey is invalid or not present.	Merchant authentication requires a valid value for transaction key.
E00006	The merchantAuthentication.name is invalid or not present.	Merchant authentication requires a valid value for name.
E00007	User authentication failed due to invalid authentication values.	The name/and or transaction key is invalid.
E00008	User authentication failed. The payment gateway account or user is inactive.	The payment gateway or user account is not currently active.
E00009	The payment gateway account is in Test Mode. The request cannot be processed.	The requested API method cannot be executed while the payment gateway account is in Test Mode.
E00010	User authentication failed. You do not have the appropriate permissions.	The user does not have permission to call the API.
E00011	Access denied. You do not have the appropriate permissions.	The user does not have permission to call the API method.

Table 10 Error codes (Continued)

CODE	TEXT	DESCRIPTION
E00012	A duplicate subscription already exists.	A duplicate of the subscription was already submitted. The duplicate check looks at several fields including payment information, billing information and, specifically for subscriptions, Start Date, Interval and Unit.
E00013	The field is invalid.	One of the field values is not valid.
E00014	A required field is not present.	One of the required fields was not present.
E00015	The field length is invalid.	One of the fields has an invalid length.
E00016	The field type is invalid.	The field type is not valid.
E00017	The startDate cannot occur in the past.	The subscription start date cannot occur before the subscription submission date. (Note: validation is performed against local server date, which is Mountain Time.)
E00018	The credit card expires before the subscription startDate.	The credit card is not valid as of the start date of the subscription.
E00019	The customer taxId or driversLicense information is required.	The customer tax ID or driver's license information (driver's license number, driver's license state, driver's license DOB) is required for the subscription.
E00020	The payment gateway account is not enabled for eCheck.Net subscriptions.	This payment gateway account is not set up to process eCheck.Net subscriptions.
E00021	The payment gateway account is not enabled for credit card subscriptions.	This payment gateway account is not set up to process credit card subscriptions.
E00022	The interval length cannot exceed 365 days or 12 months.	The interval length must be 7 to 365 days or 1 to 12 months.
E00024	The trialOccurrences is required when trialAmount is specified.	The number of trial occurrences cannot be zero if a valid trial amount is submitted.
E00025	Automated Recurring Billing is not enabled.	The payment gateway account is not enabled for Automated Recurring Billing.
E00026	Both trialAmount and trialOccurrences are required.	If either a trial amount or number of trial occurrences is specified then values for both must be submitted.
E00027	The test transaction was unsuccessful.	An approval was not returned for the test transaction.
E00028	The trialOccurrences must be less than totalOccurrences.	The number of trial occurrences specified must be less than the number of total occurrences specified.
E00029	Payment information is required.	Payment information is required when creating a subscription.
E00030	A paymentSchedule is required.	A payment schedule is required when creating a subscription.

Table 10 Error codes (Continued)

CODE	TEXT	DESCRIPTION
E00031	The amount is required.	The subscription amount is required when creating a subscription.
E00032	The startDate is required.	The subscription start date is required to create a subscription.
E00033	The subscription Start Date cannot be changed.	Once a subscription is created the Start Date cannot be changed.
E00034	The interval information cannot be changed.	Once a subscription is created the subscription interval cannot be changed.
E00035	The subscription cannot be found.	The subscription ID for this request is not valid for this merchant.
E00036	The payment type cannot be changed.	Changing the subscription payment type between credit card and eCheck.Net is not currently supported.
E00037	The subscription cannot be updated.	Subscriptions that are expired, canceled or terminated cannot be updated.
E00038	The subscription cannot be canceled.	Subscriptions that are expired or terminated cannot be canceled.
E00045	The root node does not reference a valid XML namespace.	An error exists in the XML namespace. This error is similar to E00003.

Duplicate Subscription Verification

A duplicate check occurs against every ARB subscription created in an account in order to prevent duplicate subscriptions from inadvertently being created. The following is a list of the fields that are verified. If ALL of the verified fields are the same, an E00012 will occur and the subscription is not successfully created in the account. The duplicate check verifies for an indefinite amount of time.

- subscription.Article.MerchantID
- subscription.Article.CustomerInfo.Payment.CreditCard.CardNumber
- subscription.Article.CustomerInfo.Payment.eCheck.RoutingNumber
- subscription.Article.CustomerInfo.Payment.eCheck.AccountNumber
- subscription.Article.CustomerInfo.CustomerID
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.FirstName
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.LastName
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.Company
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.StreetAddress
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.City
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.StateProv
- subscription.Article.CustomerInfo.BillingInfo.BillToAddress.Zip
- subscription.OrderInfo.Amount

- subscription.OrderInfo.Invoice
- subscription.Recurrence.StartDate
- subscription.Recurrence.Interval
- subscription.Recurrence.Unit

General Errors for Individual Payments in a Subscription

Anytime an error occurs that prevents the payment gateway from processing a scheduled payment in a subscription, the payment will result in a general error. For example, if the credit card expiration date on file for a subscription is not updated before it expires, the next scheduled payment will not be processed and the transaction will result in a general error. These subscriptions will not be suspended or be automatically terminated unless the general error occurs on the first scheduled payment in the subscription.



Note

If the Silent Post feature of the Merchant Interface is enabled, transactions that receive a general error will NOT post a response to the specified Silent Post URL. See the “Transaction Response for Individual Payments in a Subscription” section of this guide for more information on using the Silent Post feature.

Some of the most common reasons for a payment to receive a general error are:

- The credit card number or expiration date on file has expired.
- The payment gateway account was in test mode at the time of the scheduled payment.
- eCheck.Net has been disabled for the payment gateway account or the specific eCheck.Net type has been disabled.
- A notice of change (NOC) has been received for the eCheck.Net subscription.

Payments with general errors can be identified on the completed transactions page of the Merchant Interface. They will display “N/A” in the Transaction ID field and “General Error” in the Transaction Status field.

Transactions that result in general errors can also be found in the Failed.csv Excel file that comes when you are enabled to receive the Daily Transaction Summary email.