Apple Pay

Simple Order API

Elavon Americas

Developer Guide





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Recent Revisions to This Document

This revision contains only editorial changes and no technical updates. 21.04 Changed the name of the merchantURL field to merchantDomainName. See the API Field Reference for the Simple Order API. 21.03 Added the tokenSource_networkTokenOption field. See the API Field Reference for the Simple Order API. 21.02 Updated the **card_type** field. See the API Field Reference for the Simple Order API. 21.01 Added the **merchantUrl** field. See the API Field Reference for the Simple Order API. 20.03 Updated information about recurring payments. See Supported Processors.

20.01

20.02

21.05

This revision contains only editorial changes and no technical updates.

This revision contains only editorial changes and no technical updates.

About This Guide

This section provides you with information about the structure and content within this guide.

Audience and Purpose

This document is written for merchants who want to use Apple Pay in an iOS application and use information from Apple to process payments through Cybersource. This document provides an overview for integrating Apple and Cybersource services into an order management system.

Conventions

The following special statements are used in this document:

! Important: An *Important* statement contains information essential to successfully completing a task or learning a concept.

Warning: A *Warning* contains information or instructions, which, if not heeded, can result in a security risk, irreversible loss of data, or significant cost in time or revenue or both.

Related Documentation

For further technical documentation, visit the Cybersource Technical Documentation Portal:

https://docs.cybersource.com/en/index.html

Customer Support

For support information about any service, visit the Support Center:

http://www.cybersource.com/support

Getting Started

Requirements for Using Apple Pay

In order to use the Cybersource platform to process Apple Pay transactions, you must have:

• A Cybersource account.

If you do not already have a Cybersource account, contact your local Cybersource sales representative.

- A merchant account with a supported processor. See Supported Processors.
- An *Admin* or *Team Agent* user of the Apple Pay Developer account.

(I) Important:

Apple Pay relies on authorizations with payment network tokens. You can sign up for Apple Pay only when both of the following statements are true:

- Your processor supports payment network tokens.
- Cybersource supports payment network tokens with your processor.

If one or both of the preceding statements are not true, you must take one of the following actions before you can sign up for Apple Pay:

- Obtain a new merchant account with a processor that supports payment network tokens.
- Wait until your processor supports payment network tokens.

Related information

Supported Processors

Supported Processors

Merchant-initiated transactions, multiple partial captures, and subsequent authorizations are described in the *Authorizations with Payment Network Tokens* guide. Recurring payments and split shipments are described in the *Credit Card Services* guide.

Processor	Card Types	Optional Features
Elavon Americas	American Express Discover	Merchant-initiated transactionsMultiple partial captures
	• JCB	
	• Mastercard	• Recurring payments
	• Visa	

Related information

Authorizations with Payment Network Tokens Developer and Credit Card Services guides (available on the Payment Services > Credit Card Services page)

Enrolling in Apple Pay

- 1. Log in to the Business Center:
 - Test: https://ebctest.cybersource.com/ebc2
 - Production: https://ebc.cybersource.com/ebc2
- 2. On the left navigation panel, click the **Payment Configuration** icon.
- 3. Click **Digital Payment Solution**. The Digital Payments page appears.
- 4. Click **Configure**. The Apple Pay Registration panel opens.
- 5. Enter your Apple Merchant ID.
- 6. Click Generate New CSR.
- 7. To download your CSR, click the **Download** icon next to the key.
- 8. Follow your browser's instructions to save and open the file.
- 9. Complete the enrollment process by submitting your CSR to Apple.

- 10. For information about adding certificates to your Apple Merchant ID, refer to the Apple Pay PassKit: https://developer.apple.com/documentation/passkit.
- 11. Test your software by following the steps in Requesting the Authorization Service.
 - (I) Important: If you are using a Cybersource test account, you must connect to the Apple developer system and not to the Apple production system.

After you complete your testing, you must create a new CSR for the Cybersource production system, and you must use that CSR for the Apple production system. Until you perform these steps, you cannot enable payments in your iOS application.

12. Repeat Steps 1 through 11 with your Cybersource production account and the Apple production account.

Generating a New CSR

- 1. Log in to the Business Center:
 - Test: https://ebctest.cybersource.com/ebc2
 - Production: https://ebc.cybersource.com/ebc2
- 2. On the left navigation panel, click the **Payment Configuration** icon.
- 3. Click **Digital Payment Solution**. The Digital Payments page appears.
- 4. Click **Configure**. The Apple Pay Registration panel opens.
- 5. To download your CSR, click the **Download** icon next to the key.
- 6. Follow your browser's instructions to save and open the file.
- 7. To edit your Apple Merchant ID, click the **Edit** icon. The Edit CSR panel opens.
- 8. Modify your merchant ID as necessary, and click **Update**.

Transaction Request Report

Through the Business Center, you can use the Transaction Request Report to obtain information about your transactions:

• Use the Transaction Search page to identify Apple transactions. You can search for transactions by date, application type, customer name, and other transaction identifiers.

• For information about the Transaction Request Report, see the Business Center Reporting User Guide.

Apple Pay Integrations

In-App Transactions Using the Cybersource API

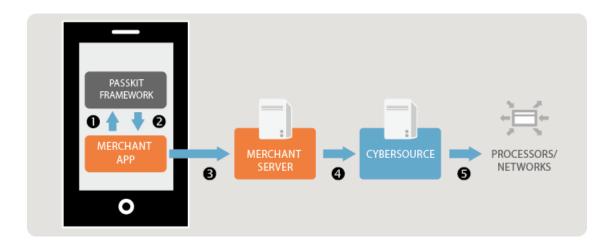
This section describes how in-app transactions are processed using the Cybersource API:

- Cybersource Decryption (In-App Transactions)
- Merchant Decryption (In-App Transactions)

For information about processing web transactions, refer to:

- Cybersource Decryption (Web Transactions)
- Merchant Decryption (Web Transactions)

Cybersource Decryption (In-App Transactions)



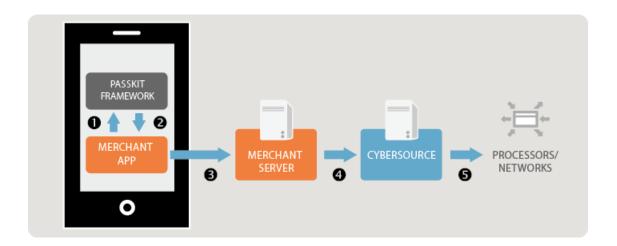
- 1. When the customer chooses to pay with Apple Pay, you use the Apple PassKit Framework to request the encrypted payment data from Apple.
- 2. Apple uses the Secure Element to create a payment token (the **PKPaymentToken** structure) and encrypt the token's payment data (the **paymentData** field of the **PKPaymentToken** structure) before it sends your application.
- 3. You forward the encrypted payment data to your order management system.
- 4. Using the Cybersource API, you submit the authorization request. In the **encryptedPayment_data** field, include the Base64-encoded value obtained from the **paymentData** field of the **PKPaymentToken** structure.
- 5. Cybersource decrypts the payment data and forwards the information to the payment network, which includes your processor and the relevant payment card company.

① Important: You must use the Business Center or one of the Cybersource API services to capture, credit, or void the authorization. Refer to the *Credit Card Services* guide (see Related information below) for information.

Related information

Requesting the Authorization Service for American Express Transactions (Cybersource Decryption)
Requesting the Authorization Service for Discover Transactions (Cybersource Decryption)
Requesting the Authorization Service for JCB Transactions (Cybersource Decryption)
Requesting the Authorization Service for Mastercard Transactions (Cybersource Decryption)
Requesting the Authorization Service for Visa Transactions (Cybersource Decryption)
Credit Card Services guide on Payment Services > Credit Card Services page

Merchant Decryption (In-App Transactions)



- 1. When the customer chooses to pay with Apple Pay, you use the Apple PassKit Framework to request the encrypted payment data from Apple.
- 2. Apple uses the Secure Element to create a payment token (the **PKPaymentToken** structure) and encrypt the token's payment data (the paymentData field of the PKPaymentToken structure) before it sends your application.
- 3. You forward the encrypted payment data to your order management system to decrypt. For information on decryption, see: https://developer.apple.com/library/archive/documentation/ PassKit/Reference/PaymentTokenJSON/PaymentTokenJSON.html#//apple_ref/doc/uid/ TP40014929-CH8-SW1
- 4. Using the Cybersource API, you submit the authorization request and include the decrypted payment data.
- 5. Cybersource forwards the information to the payment network, which includes your processor and the relevant payment card company.

(I) Important: You must use the Business Center or one of the Cybersource API services to capture, credit, or void the authorization. Refer to the Credit Card Services guide (see Related information below) for information.

Related information

Requesting the Authorization Service for American Express Transactions (Merchant Decryption) Requesting the Authorization Service for Discover Transactions (Merchant Decryption) Requesting the Authorization Service for JCB Transactions (Merchant Decryption) Requesting the Authorization Service for Mastercard Transactions (Merchant Decryption) Requesting the Authorization Service for Visa Transactions (Merchant Decryption)

Credit Card Services guide on Payment Services > Credit Card Services page

Web Transactions

This section describes how web transactions are processed using the Cybersource API:

- Cybersource Decryption (Web Transactions)
- Merchant Decryption (Web Transactions)

For information about processing in-app transactions, refer to:

- Cybersource Decryption (In-App Transactions)
- Merchant Decryption (In-App Transactions)

Cybersource Decryption (Web Transactions)

- 1. When the customer chooses to pay with Apple Pay, you use the Apple Pay JavaScript to request the encrypted payment data from Apple.
- 2. Apple uses the Secure Element to create a payment token (the **PKPaymentToken** structure) and encrypt the token's payment data (the **paymentData** field of the **PKPaymentToken** structure) before it sends your application using the **onpaymentauthorized** callback function.
- 3. You forward the encrypted payment data to your order management system.
- 4. Using the Cybersource API, you submit the authorization request. In the encryptedPayment_data field, include the Base64-encoded value obtained from the paymentData field of the PKPaymentToken structure.
- 5. Cybersource decrypts the payment data and forwards the information to the payment network, which includes your processor and the relevant payment card company.

(I) Important: You must use the Business Center or one of the Cybersource API services to capture, credit, or void the authorization. Refer to the Credit Card Services guide (see Related information below) for information.

Related information

Credit Card Services guide on the Payment Services > Credit Card Services page

Merchant Decryption (Web Transactions)

- 1. When the customer chooses to pay with Apple Pay, you use the Apple Pay JavaScript to request the encrypted payment data from Apple.
- 2. Apple uses the Secure Element to create a payment token (the **PKPaymentToken** structure) and encrypt the token's payment data (the **paymentData** field of the **PKPaymentToken** structure) before it sends your application using the **onpaymentauthorized** callback function.
- 3. You forward the encrypted payment data to your order management system to decrypt. For information on decryption, see: https://developer.apple.com/library/archive/documentation/ PassKit/Reference/PaymentTokenJSON/PaymentTokenJSON.html#//apple ref/doc/uid/ TP40014929-CH8-SW1
- 4. Using the Cybersource API, you submit the authorization request and include the decrypted payment data.
- 5. Cybersource forwards the information to the payment network, which includes your processor and the relevant payment card company.
 - (I) Important: You must use the Business Center or one of the Cybersource API services to capture, credit, or void the authorization. Refer to the *Credit Card Services* guide (see Related information below) for information.

Related information

Credit Card Services guide on the Payment Services > Credit Card Services page

Configuring Your Apple Pay Requirements

Refer to https://developer.apple.com/develop for details about configuring your requirements.

- 1. Register your merchant ID.
 - If you are currently processing In-App transactions, you can use the same merchant ID for processing web transactions.
- 2. Create or upload a Certificate Signing Request (CSR), which is used to encrypt the payment information during the payment process.

If you are using the merchant decryption method, generate a new CSR.

If you are using the Cybersource decryption method, upload the CSR that you created in the Business Center when you enrolled in Apple Pay.

If you are currently processing In-App transactions, you can use the same CSR for processing web transactions.

- 3. Register your domain. Registration is required in order to use Apple Pay on your website.
- 4. Create a Merchant Identity Certificate. This certificate is required in order to connect to the Apple servers.

After configuring your Apple Pay requirements, you can set up any optional features (refer to the *Authorizations with Payment Network Tokens* guides).

Related information

Authorizations with Payment Network Tokens guides (available on the Payment Services > Credit Card Services page)

Enrolling in Apple Pay

Generating a New CSR

Setting Up Apple Pay JavaScript

Preparing to use Apple Pay JavaScript to accept payments on your website involves several stages of development. This section is an overview of those stages. For detailed instructions, follow the references to the Apple developer site.

• Enabling the Apple Pay JavaScript API:

Before you can display an Apple Pay button on your website or create an Apple Pay session, you need to ensure that the Apple Pay JavaScript API is enabled on your device. See Enabling the Apple Pay JavaScript API.

Displaying the Apple Pay button:

Use the CSS templates provided by Apple to display the Apple Pay button on your website. See the Apple developer documentation on Displaying Apple Pay Buttons Using CSS for more information.

Creating the ApplePaySession class and object:

The **ApplePaySession** class manages the payment process on your website. The **ApplePaySession** object is the entry point for Apple Pay on your website. See Apple's Developer article: For information about creating the **ApplePaySession** object, see the Apple developer reference on the ApplePaySession class.

To create the **ApplePaySession** object:

- Use the **Version number** and **Payment request** arguments. The API version is 1. See the Apple developer reference on the ApplePayPaymentRequest structure for information on how to display the payment form.
- After creating the **ApplePaySession**, call its **begin** method to display the payment form. You can call this method only when invoked by a user request. See the Apple developer reference on the begin method for details.

Getting merchant validation:

When the payment form is displayed, the **onvalidatemerchant** callback function is called and provides a URL to pass to your server for validating the merchant session. See the Apple developer reference on onvalidatemerchant. Also, refer to the Merchant Validation section of the Apple developer reference on the ApplePaySession class.

Handling payment confirmation:

When the customer confirms the payment by clicking or tapping the Apple Pay button, the **onpaymentauthorized** callback function is invoked and provides the payment token. See the Apple developer reference on the onpaymentauthorized instance.

Handling encrypted payment data:

The following two methods are available for handling encrypted payment data for Apple Pay transactions:

Merchant Decryption:

This method forwards the encrypted payment data to your order management system to decrypt. For information on decryption, see the Apple Payment Token Format Reference for details. You use the Cybersource API to submit the authorization request and include the decrypted payment data.

Cybersource Decryption:

This method forwards the encrypted payment data to your order management system. You use the Cybersource API to submit the authorization request and include the Base64-encoded value obtained from the **paymentData** object in the **encryptedPayment_data** field.

For example:

```
session.onpaymentauthorized = function (event) {
   var paymentDataString =
   JSON.stringify(event.payment.token.paymentData);
   var paymentDataBase64 = btoa(paymentDataString);
}
```

Enabling the Apple Pay JavaScript API

- 1. Verify that the **window.ApplePaySession** class exists.
- 2. Calls one of the following methods:
 - canMakePayments—verifies that the device is enabled for Apple Pay.
 - canMakePaymentsWithActiveCard—verifies that the device is enabled for Apple Pay and the customer has a card stored on the device. You can call this method only if Apple Pay is the default payment method during your checkout flow, or if you want to add the Apple Pay button to your product detail page.

Requesting Services

Requesting the Authorization Service

You can request the authorization service using the Cybersource decryption method or the merchant decryption method.

Related information

Requesting the Authorization Service for Discover Transactions (Cybersource Decryption)

Requesting the Authorization Service for JCB Transactions (Cybersource Decryption)

Requesting the Authorization Service for Mastercard Transactions (Cybersource Decryption)

Requesting the Authorization Service for American Express Transactions (Cybersource Decryption)

Requesting the Authorization Service for Visa Transactions (Cybersource Decryption)

Requesting the Authorization Service for American Express Transactions (Merchant Decryption)

Requesting the Authorization Service for Discover Transactions (Merchant Decryption)

Requesting the Authorization Service for JCB Transactions (Merchant Decryption)

Requesting the Authorization Service for Mastercard Transactions (Merchant Decryption)

Requesting the Authorization Service for Visa Transactions (Merchant Decryption)

Using Our Decryption Method

Requesting the Authorization Service for American Express Transactions (Cybersource Decryption)

- 1. Set the **encryptedPayment_data** field to the Base64-encoded value obtained from the **paymentData** property of the **PKPaymentToken** object.
- 2. Set the **encryptedPayment_descriptor** field to Rklepunptu1pti5bufbmrS5JTkFQuC5QQV1NRU5U.
- 3. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Cybersource Decryption (In-App Transactions)
Cybersource Decryption (Web Transactions)
Relaxed Requirements for Address Data and Expiration Date

Example (Cybersource Decryption)

Authorization Request (American Express Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
       <firstName>Jane</firstName>
       <lastName>Smith</lastName>
       <street1>123 Main Street
       <city>Small Town</city>
       <state>CA</state>
       <postalCode>98765</postalCode>
       <country>US</country>
       <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
       <currency>USD</currency>
       <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <encryptedPayment>
       <descriptor>RklEPUNPTU1PTi5BUFBMRS5JTkFQUC5QQV1NRU5U</descriptor>
       <data>ABCDEFabcdefABCDEFabcdef0987654321234567</data>
       <encoding>Base64
   </encryptedPayment>
   <card>
       <cardType>003</cardType>
   </card>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (American Express Transactions)

Requesting the Authorization Service for Discover Transactions (Cybersource Decryption)

- 1. Set the encryptedPayment_data field to the Base64-encoded value obtained from the paymentData property of the PKPaymentToken object.
- 2. Set the **encryptedPayment_descriptor** field to Rklepunptu1pti5bufbmrS5JTkFQuC5QQVlnRu5u.
- 3. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Cybersource Decryption (In-App Transactions)

Cybersource Decryption (Web Transactions)

Relaxed Requirements for Address Data and Expiration Date

Example (Cybersource Decryption)

Authorization Request (Discover Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
       <firstName>Jane</firstName>
       <lastName>Smith</lastName>
       <street1>123 Main Street
       <city>Small Town</city>
       <state>CA</state>
       <postalCode>98765</postalCode>
       <country>US</country>
       <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
       <currency>USD</currency>
       <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <encryptedPayment>
       <descriptor>RklEPUNPTU1PTi5BUFBMRS5JTkFQUC5QQV1NRU5U</descriptor>
       <data>ABCDEFabcdefABCDEFabcdef0987654321234567</data>
       <encoding>Base64
   </encryptedPayment>
   <card>
       <cardType>004</cardType>
   </card>
   <paymentSolution>001</paymentSolution>
   <ccAuthService run="true"/>
</requestMessage>
```

Authorization Response (Discover Transactions)

Requesting the Authorization Service for JCB Transactions (Cybersource Decryption)

- 1. Set the **encryptedPayment_data** field to the Base64-encoded value obtained from the paymentData property of the PKPaymentToken object.
- 2. Set the **encryptedPayment_descriptor** field to Rklepunptu1pti5bufbmrS5JTkFQuC5QQVlnRu5u.
- 3. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Cybersource Decryption (In-App Transactions)

Cybersource Decryption (Web Transactions)

Relaxed Requirements for Address Data and Expiration Date

Example (Cybersource Decryption)

Authorization Request (JCB Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum</merchantReferenceCode>
  <billTo>
     <firstName>Jane</firstName>
     <lastName>Smith</lastName>
     <street1>123 Main Street
     <city>Small Town</city>
     <state>CA</state>
     <postalCode>98765</postalCode>
     <country>US</country>
      <email>jsmith@example.com</email>
  </billTo>
   <purchaseTotals>
     <currency>USD</currency>
      <grandTotalAmount>5.00/grandTotalAmount>
  </purchaseTotals>
   <encryptedPayment>
     <descriptor>RklEPUNPTU1PTi5BUFBMRS5JTkFQUC5QQV1NRU5U</descriptor>
     <data>ABCDEFabcdefABCDEFabcdef0987654321234567</data>
     <encoding>Base64
  </encryptedPayment>
  <card>
     <cardType>001</cardType>
  </card>
  <ccAuthService run="true"/>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (JCB Transactions)

```
<c:replyMessage>
  <c:merchantReferenceCode>demorefnum</c:merchantReferenceCode>
  <c:requestID>4465840340765000001541</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:requestToken>
    Ahj/7wSR5C/4Icd2fdAKakGLadfg5535r/ghx3Z90AoBj3u
  </c:requestToken>
  <c:token>
    <c:expirationMonth>07</c:expirationMonth>
    <c:expirationYear>2025</c:expirationYear>
```

```
<c:prefix>239845</c:prefix>
      <c:suffix>2947</c:suffix>
   </c:token>
   <c:purchaseTotals>
      <c:currency>USD</c:currency>
  </c:purchaseTotals>
   <c:ccAuthReply>
      <c:reasonCode>100</c:reasonCode>
      <c:amount>5.00</c:amount>
      <c:authorizationCode>888888</c:authorizationCode>
      <c:avsCode>X</c:avsCode>
      <c:avsCodeRaw>I1</c:avsCodeRaw>
      <c:processorResponse>100</c:processorResponse>
      <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
   </c:ccAuthReply>
</c:replyMessage>
```

Requesting the Authorization Service for Mastercard Transactions (Cybersource Decryption)

- 1. Set the **encryptedPayment_data** field to the Base64-encoded value obtained from the paymentData property of the PKPaymentToken object.
- 2. Set the **encryptedPayment_descriptor** field to Rklepunptu1pti5bufbmrS5JTkFQuC5QQVlnRu5u.
- 3. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Cybersource Decryption (In-App Transactions)

Cybersource Decryption (Web Transactions)

Relaxed Requirements for Address Data and Expiration Date

Example(Cybersource Decryption)

Authorization Request (Mastercard Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
       <firstName>Jane</firstName>
       <lastName>Smith</lastName>
       <street1>123 Main Street
       <city>Small Town</city>
       <state>CA</state>
       <postalCode>98765</postalCode>
       <country>US</country>
       <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
       <currency>USD</currency>
       <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <encryptedPayment>
       <descriptor>RklEPUNPTU1PTi5BUFBMRS5JTkFQUC5QQV1NRU5U</descriptor>
       <data>ABCDEFabcdefABCDEFabcdef0987654321234567</data>
       <encoding>Base64
   </encryptedPayment>
   <card>
       <cardType>002</cardType>
   </card>
   <ccAuthService run="true"/>
   <paymentNetworkToken>
       <requestorID>987654321plokijuhygtfrdeswa/requestorID> <!-- Required for GPX</pre>
and Visa Platform Connect. -->
   </paymentNetworkToken>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (Mastercard Transactions)

```
<c:expirationMonth>07</c:expirationMonth>
        <c:expirationYear>2025</c:expirationYear>
        <c:prefix>239845</c:prefix>
        <c:suffix>2947</c:suffix>
    </c:token>
    <c:purchaseTotals>
        <c:currency>USD</c:currency>
    </c:purchaseTotals>
    <c:ccAuthReply>
        <c:reasonCode>100</c:reasonCode>
        <c:amount>5.00</c:amount>
        <c:authorizationCode>888888</c:authorizationCode>
        <c:avsCode>X</c:avsCode>
        <c:avsCodeRaw>I1</c:avsCodeRaw>
        <c:authorizedDateTime>2015-11-03T20:53:54Z</c:authorizedDateTime>
        <c:processorResponse>100</c:processorResponse>
        <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
    </c:ccAuthReply>
</c:replyMessage>
```

Requesting the Authorization Service for Visa Transactions (Cybersource Decryption)

- 1. Set the **encryptedPayment_data** field to the Base64-encoded value obtained from the paymentData property of the PKPaymentToken object.
- 2. Set the **encryptedPayment_descriptor** field to Rklepunptu1pti5bufbmrS5JTkFQuC5QQVlnRu5u.
- 3. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Cybersource Decryption (In-App Transactions)

Cybersource Decryption (Web Transactions)

Relaxed Requirements for Address Data and Expiration Date

Example (Cybersource Decryption)

Authorization Request (Visa Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
       <firstName>Jane</firstName>
       <lastName>Smith</lastName>
       <street1>123 Main Street
       <city>Small Town</city>
       <state>CA</state>
       <postalCode>98765</postalCode>
       <country>US</country>
       <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
       <currency>USD</currency>
       <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <encryptedPayment>
       <descriptor>RklEPUNPTU1PTi5BUFBMRS5JTkFQUC5QQV1NRU5U</descriptor>
       <data>ABCDEFabcdefABCDEFabcdef0987654321234567</data>
       <encoding>Base64
   </encryptedPayment>
   <card>
       <cardType>001</cardType>
   </card>
   <ccAuthService run="true"/>
   <paymentNetworkToken>
       <requestorID>987654321plokijuhygtfrdeswa/requestorID> <!-- Required for GPX</pre>
and Visa Platform Connect. -->
   </paymentNetworkToken>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (Visa Transactions)

```
<c:expirationMonth>07</c:expirationMonth>
        <c:expirationYear>2025</c:expirationYear>
        <c:prefix>239845</c:prefix>
        <c:suffix>2947</c:suffix>
    </c:token>
    </c:purchaseTotals>
    <c:purchaseTotals>
        <c:currency>USD</c:currency>
    </c:purchaseTotals>
    <c:ccAuthReply>
        <c:reasonCode>100</c:reasonCode>
        <c:amount>5.00</c:amount>
        <c:authorizationCode>888888</c:authorizationCode>
        <c:avsCode>X</c:avsCode>
        <c:avsCodeRaw>I1</c:avsCodeRaw>
        <c:authorizedDateTime>2015-11-03T20:53:54Z</c:authorizedDateTime>
        <c:processorResponse>100</c:processorResponse>
        <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
    </c:ccAuthReply>
</c:replyMessage>
```

Using the Merchant Decryption Method

Requesting the Authorization Service for American Express Transactions (Merchant Decryption)

- 1. Set the **card_accountNumber** field to the payment network token value.
- 2. Set the **card_expirationMonth** and **card_expirationYear** fields to the values from the payment network token expiration date.
- 3. Set the **ccAuthService_cavv** field to the 3D Secure cryptogram of the payment network token.
 - Important: Include the whole 20-byte cryptogram in the ccAuthService_cavv field. For a 40-byte cryptogram, split the cryptogram into two 20-byte binary values (block A and block B). Set the **ccAuthService_cavv** field to the block A value and set the **ccAuthService xid** field to the block B value.
- 4. Set the **ccAuthService_commerceIndicator** field to to the ECI value contained in the Apple Pay response payload.
- 5. Set the **ccAuthService_networkTokenCryptogram** field to the network token cryptogram.
- 6. Set the **paymentNetworkToken_transactionType** field to **1**.
- 7. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Merchant Decryption (In-App Transactions)

Merchant Decryption (Web Transactions)

Relaxed Requirements for Address Data and Expiration Date

Authorization Request (American Express Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
       <firstName>Jane</firstName>
       <lastName>Smith</lastName>
       <street1>123 Main Street
       <city>Small Town</city>
       <state>CA</state>
       <postalCode>98765</postalCode>
       <country>US</country>
       <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
       <currency>USD</currency>
       <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <card>
       <accountNumber>37828224631xxxx</accountNumber>
       <expirationMonth>12</expirationMonth>
       <expirationYear>2020</expirationYear>
       <cvNumber>123</cvNumber>
       <cardType>003</cardType>
   </card>
   <ccAuthService run="true">
       <cavv>ABCDEFabcdefABCDEFabcdef0987654321234567</cavv>
       <commerceIndicator>aesk</commerceIndicator>
   </ccAuthService>
   <paymentNetworkToken>
       <transactionType>1</transactionType>
   </paymentNetworkToken>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (American Express Transactions)

Requesting the Authorization Service for Discover Transactions (Merchant Decryption)

- 1. Set the **card_accountNumber** field to the payment network token value.
- 2. Set the **card_expirationMonth** and **card_expirationYear** fields to the values from the payment network token expiration date.
- 3. Set the **ccAuthService_cavv** field to the 3D Secure cryptogram of the payment network token.
 - **Important:** Include the whole 20-byte cryptogram in the ccAuthService_cavv field. For a 40-byte cryptogram, split the cryptogram into two 20-byte binary values (block A and block B). Set the ccAuthService_cavv field to the block A value and set the ccAuthService_xid field to the block B value.
- 4. Set the **ccAuthService_commerceIndicator** field to the to ECI value contained in the Apple Pay response payload.
- 5. Set the **ccAuthService_networkTokenCryptogram** field to the network token cryptogram.
- 6. Set the **paymentNetworkToken_transactionType** field to **1**.
- 7. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Merchant Decryption (In-App Transactions)

Merchant Decryption (Web Transactions)

Authorization Request (Discover Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
    <merchantID>demomerchant/merchantID>
    <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
        <firstName>Jane</firstName>
        <lastName>Smith</lastName>
        <street1>123 Main Street
        <city>Small Town</city>
        <state>CA</state>
        <postalCode>98765</postalCode>
        <country>US</country>
   <email>jsmith@example.com</email>
   </billTo>
   <purchaseTotals>
        <currency>USD</currency>
        <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <card>
        <accountNumber>60111111111111xxxx</accountNumber>
        <expirationMonth>12</expirationMonth>
        <expirationYear>2020</expirationYear>
        <cvNumber>123</cvNumber>
        <cardType>004</cardType>
   </card>
    <ccAuthService run="true">
        <cavv>ABCDEFabcdefABCDEFabcdef0987654321234567</cavv>
        <commerceIndicator>dipb</commerceIndicator>
   </ccAuthService>
   <paymentNetworkToken>
        <transactionType>1</transactionType>
   </paymentNetworkToken>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (Discover Transactions)

Requesting the Authorization Service for JCB Transactions (Merchant Decryption)

- 1. Set the **card_accountNumber** field to the payment network token value.
- 2. Set the **card_expirationMonth** and **card_expirationYear** fields to the values from the payment network token expiration date.
- 3. Set the **ccAuthService_cavv** field to the 3D Secure cryptogram of the payment network token.
 - **Important:** Include the whole 20-byte cryptogram in the ccAuthService_cavv field. For a 40-byte cryptogram, split the cryptogram into two 20-byte binary values (block A and block B). Set the ccAuthService_cavv field to the block A value and set the ccAuthService_xid field to the block B value.
- 4. Set the **ccAuthService_eciRaw** field to the ECI value contained in the Apple Pay response payload.
- 5. Set the **paymentNetworkToken_transactionType** field to **1**.
- 6. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Merchant Decryption (In-App Transactions)

Merchant Decryption (Web Transactions)

Authorization Request (JCB Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
  <billTo>
     <firstName>Jane</firstName>
     <lastName>Smith</lastName>
     <street1>123 Main Street
     <city>Small Town</city>
     <state>CA</state>
     <postalCode>98765</postalCode>
     <country>US</country>
      <email>jsmith@example.com</email>
  </billTo>
   <purchaseTotals>
     <currency>USD</currency>
      <grandTotalAmount>5.00/grandTotalAmount>
  </purchaseTotals>
  <card>
     <accountNumber>3566111111111xxxx</accountNumber>
     <expirationMonth>12</expirationMonth>
     <expirationYear>2020</expirationYear>
     <cvNumber>123</cvNumber>
     <cardType>001</cardType>
  </card>
   <ccAuthService run="true">
     <cavv>ABCDEFabcdefABCDEFabcdef0987654321234567</cavv>
     <eciRaw>5</eciRaw>
  </ccAuthService>
   <paymentNetworkToken>
     <transactionType>1</transactionType>
  </paymentNetworkToken>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (JCB Transactions)

```
Ahj/7wSR5C/4Icd2fdAKakGLadfg5535r/ghx3Z90AoBj3u
   </c:requestToken>
   <c:purchaseTotals>
      <c:currency>USD</c:currency>
   </c:purchaseTotals>
   <c:ccAuthReply>
      <c:reasonCode>100</c:reasonCode>
      <c:amount>5.00</c:amount>
      <c:authorizationCode>888888</c:authorizationCode>
      <c:avsCode>X</c:avsCode>
      <c:avsCodeRaw>I1</c:avsCodeRaw>
      <c:authorizedDateTime>2015-11-03T20:53:54Z
      <c:authorizedDateTime>
      <c:processorResponse>100</c:processorResponse>
      <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
   </c:ccAuthReply>
</c:replyMessage>
```

NVP Request for JCB Transactions

```
merchantID=demomerchant
merchantReferenceCode=demorefnum
billTo firstName=Jane
billTo_lastName=Smith
billTo_street1=123 Main Street
billTo_city=Small Town
billTo state=CA
billTo postalCode=98765
billTo_country=US
billTo_email=jsmith@example.com
purchaseTotals currency=USD
purchastTotals_grandTotalAmount=5.00
card accountNumber=3566111111111xxxx
card_expirationYear=2020
card_cvnNumber=123
cardType=001
ccAuthService_cavv=ABCDEFabcdefABCDEFabcdef0987654321234567
ccAuthService cavv=5
paymentNetworkToken_requestorID=987654321plokijuhygtfrdeswa
paymentNetworkToken_transactionType=1
paymentSolution=001
```

NVP Response (JCB Transactions)

```
merchantReferenceCode=demorefnum
requestID=4465840340765000001541
```

decision=accept
reasonCode=100
requestToken=Ahj/7wSR5C/4Icd2fdAKakGLadfg5535r/ghx3Z90AoBj3u
purchaseTotals_currency=USD
ccAuthReply_reasonCode=100
ccAuthReply_amount=5.00
ccAuthReply_authorizationCode=888888
ccAuthReply_authorizationCode=888888
ccAuthReply_avsCode=X
ccAuthReply_avsCode=X
ccAuthReply_avsCodeRaw=I1
ccAuthReply_authorizedDateTime=2015-11-03T20:53:54Z
ccAuthReply_processorResponse=100
ccAuthReply_reconciliationID=11267051CGJSMQDC

Requesting the Authorization Service for Mastercard Transactions (Merchant Decryption)

- 1. Set the **card_accountNumber** field to the payment network token value.
- 2. Set the **card_expirationMonth** and **card_expirationYear** fields to the values from the payment network token expiration date.
- 3. Set the **ucaf_authenticationData** field to the 3D Secure cryptogram of the payment network token.
- 4. Set the **ccAuthService_networkTokenCryptogram** field to the network token cryptogram.
- 5. Set the **ucaf_collectionIndicator** field to **2**.
- 6. Set the paymentNetworkToken_transactionType field to 1.
- 7. Set the **ccAuthService_commerceIndicator** field to the ECI value contained in the Apple Pay response payload.
- 8. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Merchant Decryption (In-App Transactions)

Merchant Decryption (Web Transactions)

Authorization Request (Mastercard Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
    <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
        <firstName>Jane</firstName>
        <lastName>Smith</lastName>
        <street1>123 Main Street
        <city>Small Town</city>
        <state>CA</state>
        <postalCode>98765</postalCode>
        <country>US</country>
        <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
        <currency>USD</currency>
        <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <card>
        <accountNumber>55555555555555xxxx</accountNumber>
        <expirationMonth>12</expirationMonth>
        <expirationYear>2020</expirationYear>
        <cvNumber>123</cvNumber>
        <cardType>002</cardType>
   </card>
   <ucaf>
        <authenticationData>ABCDEFabcdefABCDscdef0987654321234567/authenticationData>
        <collectionIndicator>2</collectionIndicator>
   </ucaf>
   <ccAuthService run="true">
        <commerceIndicator>spa</commerceIndicator>
   </ccAuthService>
   <paymentNetworkToken>
        <requestorID>987654321plokijuhygtfrdeswa/requestorID> <!-- Required only for GPX</pre>
and Visa Platform Connect. -->
        <transactionType>1</transactionType>
    </paymentNetworkToken>
    <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (Mastercard Transactions)

```
<c:replyMessage>
```

```
<c:merchantReferenceCode>demorefnum</c:merchantReferenceCode>
    <c:requestID>4465840340765000001541</c:requestID>
    <c:decision>ACCEPT</c:decision>
    <c:reasonCode>100</c:reasonCode>
    <c:requestToken>Ahj/7wSR5C/4Icd2fdAKakGLadfg5535r/ghx3Z90AoBj3u</c:requestToken>
    <c:purchaseTotals>
        <c:currency>USD</c:currency>
    </c:purchaseTotals>
    <c:ccAuthReply>
        <c:reasonCode>100</c:reasonCode>
        <c:amount>5.00</c:amount>
        <c:authorizationCode>888888</c:authorizationCode>
        <c:avsCode>X</c:avsCode>
        <c:avsCodeRaw>I1</c:avsCodeRaw>
        <c:authorizedDateTime>2015-11-03T20:53:54Z</c:authorizedDateTime>
        <c:processorResponse>100</c:processorResponse>
        <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
    </c:ccAuthReply>
</c:replyMessage>
```

Requesting the Authorization Service for Visa Transactions (Merchant Decryption)

- 1. Set the **card_accountNumber** field to the payment network token value.
- 2. Set the **card_expirationMonth** and **card_expirationYear** fields to the values from the payment network token expiration date.
- 3. Set the **ccAuthService_cavv** field to the 3D Secure cryptogram of the payment network token.
 - **Important:** Include the whole 20-byte cryptogram in the ccAuthService_cavv field. For a 40-byte cryptogram, split the cryptogram into two 20-byte binary values (block A and block B). Set the ccAuthService_cavv field to the block A value and set the ccAuthService_xid field to the block B value.
- 4. Set the **ccAuthService_commerceIndicator** field to the ECI value contained in the Apple Pay response payload (5=vbv and 7=internet).
- 5. Set the **ccAuthService_networkTokenCryptogram** field to the network token cryptogram.
- 6. Set the **paymentNetworkToken_transactionType** field to **1**.
- 7. Set the **paymentSolution** field to **001**.

Related information

API Field Reference for the Simple Order API

Merchant Decryption (In-App Transactions)

Merchant Decryption (Web Transactions)

Authorization Request (Visa Transactions)

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.121">
   <merchantID>demomerchant/merchantID>
   <merchantReferenceCode>demorefnum/merchantReferenceCode>
   <billTo>
       <firstName>Jane</firstName>
       <lastName>Smith</lastName>
       <street1>123 Main Street
       <city>Small Town</city>
       <state>CA</state>
       <postalCode>98765</postalCode>
       <country>US</country>
       <email>jsmith@example.com
   </billTo>
   <purchaseTotals>
       <currency>USD</currency>
       <grandTotalAmount>5.00/grandTotalAmount>
   </purchaseTotals>
   <card>
       <accountNumber>4111111111111111</accountNumber>
       <expirationMonth>12</expirationMonth>
       <expirationYear>2020</expirationYear>
       <cvNumber>123</cvNumber>
       <cardType>001</cardType>
   </card>
   <ccAuthService run="true">
       <cavv>ABCDEFabcdefABCDEFabcdef0987654321234567</cavv>
       <commerceIndicator>internet</commerceIndicator>
   </ccAuthService>
   <paymentNetworkToken>
       <requestorID>987654321plokijuhygtfrdeswa/requestorID> <!-- Required only for GPX</pre>
and Visa Platform Connect. -->
       <transactionType>1</transactionType>
   </paymentNetworkToken>
   <paymentSolution>001</paymentSolution>
</requestMessage>
```

Authorization Response (Visa Transactions)

```
<c:reasonCode>100</c:reasonCode>
    <c:requestToken>Ahj/7wSR5C/4Icd2fdAKakGLadfg5535r/ghx3Z90AoBj3u</c:requestToken>
    <c:purchaseTotals>
        <c:currency>USD</c:currency>
    </c:purchaseTotals>
    <c:ccAuthReply>
        <c:reasonCode>100</c:reasonCode>
        <c:amount>5.00</c:amount>
        <c:authorizationCode>888888</c:authorizationCode>
        <c:avsCode>X</c:avsCode>
        <c:avsCodeRaw>I1</c:avsCodeRaw>
        <c:authorizedDateTime>2015-11-03T20:53:54Z</c:authorizedDateTime>
        <c:processorResponse>100</c:processorResponse>
        <c:reconciliationID>11267051CGJSMQDC</c:reconciliationID>
    </c:ccAuthReply>
</c:replyMessage>
```

Requesting Additional Services

To request the following additional services, refer to the *Credit Card Services* guide (see Related information below):

- **Capture:** A follow-on service that uses the request ID returned from the previous authorization. The request ID links the capture to the authorization. This service transfers funds from the customer's account to your bank and usually takes two to four days to complete.
- **Sale:** A sale is a bundled authorization and capture. Request the authorization and capture services at the same time. Cybersource processes the capture immediately.
- **Authorization Reversal:** A follow-on service that uses the request ID returned from the previous authorization. An authorization reversal releases the hold that the authorization placed on the customer's credit card funds. Use this service to reverse an unnecessary or undesired authorization.

Related information

Credit Card Services guide on the Payment Services > Credit Card Services page Authorizations with Payment Network Tokens guide > Digital Payment Solutions page

API Fields

See the API Field Reference guide for your API type.