The SpeedChex Web Service API for Merchants
ECheck Transaction Commands
Version 1.0

Introduction

The ECheck Transaction Commands detailed in this API give merchants a comprehensive platform for authorizing, modifying, voiding and processing electronic check payments through their own software.

The purpose of this document is not only to explain how to submit an ACH payment for authorization and processing, but also to present the concepts necessary for understanding what data is required, why, and what the response data should mean to your software application and your customers. Please read each section carefully

The SpeedChex Gateway and the Command/Response System

Our SpeedChex Gateway supports processing for multiple payment methods including credit cards, ATM pin-debit cards, electronic checks (ACH), and remote deposit of scanned checks (Check 21).

Software applications can communicate with the SpeedChex Gateway through any one of the following established Internet protocols:

- SOAP 1.1 Web Services
- SOAP 1.2 Web Services w/MTOM attachment support
- Traditional HTTP POST

Although each of these communication protocols require API documentation that is specific to the functionality of that protocol, each API shares a common command/response method for interacting with the gateway.

Simply put, your software issues a command to the SpeedChex Gateway to accomplish any specific task and the gateway will send back a formatted response to your command.

The Command/Response system is quite extensive and supports the ability to perform a variety of transaction management tasks including:

- Creating/Authorizing new payment transactions
- Uploading batches of transactions
- Modifying/Cancelling existing transactions or batches
- Retrieving reports
- Querying payment data

This document, like all other API documents for the SpeedChex Gateway, is targeted toward a specific subset of commands that are grouped according to either payment method, the task(s) to be performed, or both.

Available ECheck Transaction Commands

The following is a list and brief explanation of the ECheck Transaction Commands that can be issued through the ***SpeedChex Web Service API:***

- **ECheck.Authorize** – Validates the transaction data packet for errors, performs basic routing and account number validation and optionally verifies the bank account using the *Express Verify* service. Does not process the electronic check through the Federal Reserve, or verify or lock funds.
- **ECheck.Capture** – Schedules a previously authorized ECheck payment for processing through the Federal Reserve at the next End-of-Day Batch Settlement date/time.
- **ECheck.ProcessPayment** – Processes payments from or payments to a bank account. Performs an *ECheck.Authorize* and *ECheck.Capture* in a single command. Payment is only processed to the Federal Reserve if it passes the authorization process.
- **ECheck.VerifyBankAccount** – Performs basic algorithm verification on a routing number and account number and optionally verifies the bank account using the *Express Verify* service.
- **ECheck.Update** – Modifies a transaction if it has not yet been sent to the Federal Reserve for processing at the daily cut-off time.
- **ECheck.Refund** – Reverses a previous debit that has settled (Cleared) and refunds the same amount (or less if specified) to the same bank account as the original referenced debit. Refunds are automatically captured for settlement.
- **ECheck.Void** – Cancels (stops) an ECheck payment from processing if it has not yet been sent to the Federal Reserve for processing.
- **ECheck.Hold** – Places a Scheduled transaction on indefinite 'Merchant Hold' status if it has not yet been sent to the Federal Reserve for processing. Authorized transactions cannot be placed on hold.
- **ECheck.RemoveHold** – Removes the 'Merchant Hold' status on a transaction and reschedules the transaction for processing on the date specified in the command.

An Overview of Electronic Check Processing

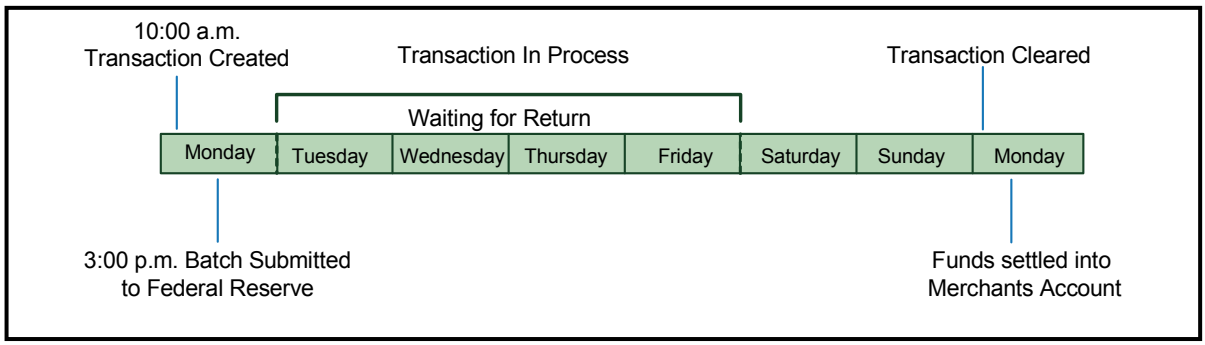
Electronic checks, also referred to as ACH (Automated Clearing House) transactions, are check transactions processed electronically through the Federal Reserve. Just as with paper checks, merchants may utilize the ACH system both to send and to receive check payments between the merchant and their customers, employees, vendors, etc.

Unlike credit cards, electronic check transactions cannot be instantly verified and approved. This is due to the rules that govern the United States Federal Reserve and the fragmented structure of the current banking system. The banking industry is working to make all forms of check processing and authorization occur in real-time, but due to political, economic, and consumer protection issues, that technology is still years away from widespread implementation.

What has been implemented instead is a system that still provides authorization, but over a period of days instead of seconds. There are several reasons for the slowness of the process, but the bottom line is that the process has been made logistically slow on purpose to protect bank account owners from fraud and error.

The following chart shows a step-by-step breakdown of the authorization process for an electronic check transaction:

Steps of an Electronic Check Authorization



Instead of being sent between banks in real-time, all electronic check transactions are batched and sent between banks overnight through the Federal Reserve (on banking business days only). A bank can take up to four business days to indicate if a transaction is rejected (Returned) and why. If no response is received within that timeframe, the transaction is considered approved (Cleared).

Please note that although banks are expected to respond with any Returns within the four business day timeframe, there are some exceptions to this rule because of laws that protect the customer. If a Return is received after a check payment has been Cleared and funds have been settled to the merchant's account, the Return transaction is classified as a Charged Back because funds will need to be "charged back" from the merchant's account and returned to the customer's bank.

Data Security and Protection

Protecting the financial transaction data processed through the SpeedChex Gateway is of utmost priority. This means not only implementing the highest levels of security standards in data encryption and system security, but also setting strict controls that limit authorized access to sensitive information.

Every merchants is assigned a unique Merchant ID, GateID, and GateKey that must be kept confidential and will be required as part of each data packet sent to the SpeedChex Gateway. In addition, an IP filtering scheme may be implemented to ensure that command packets are only accepted from IP addresses registered by the merchant.

Verification Using *Express Verify*

Merchants may choose to sign up for an optional bank account verification service called *Express Verify*. This service can report in real-time whether an account exists, or whether it is currently overdrawn, frozen or closed thus ascertaining whether a check is likely to be returned.

The service returns a 3-letter verification status which can be "POS" (positive) indicating the bank account is found and in good standing, "NEG" (negative) indicating the account does not exist or is not in good standing, and "UNK" (unknown) indicating the bank account does not belong to a participating bank. The code "ERR" (error) can also result if technical problems occurred verifying the account.

Please see ***Appendix B – Express Verify Response Codes*** for a complete list of possible responses from the *Express Verify* system and their meanings.

Application Testing

Merchants can test the ***SpeedChex Web Service API*** by simply including an optional field called *TestMode* and setting the value of that field to "*On*". Test commands sent with "*TestMode=On*" will receive valid responses from the Payment Gateway but the command will not actually be processed by the system.

The following information may be helpful when testing your application:

Test Merchant Gateway Credentials
MerchantID: 2001
Merchant_GateID: test
Merchant_GateKey: test

Test Bank Account that Passes *Express Verify*
Routing Number: 123123123
Account Number: <any number>

Test Bank Account that Fails *Express Verify*
Routing Number: 123123123
Account Number: 987654321

Please Note: Merchant ID 2001 is a demo account. Any information you transmit may be viewed by users running the demo. This includes payment accounts, names, addresses, phone numbers, and email addressees. Please always use fabricated test information.

Unique Payment Transaction Identification

Proper communication between two separate transaction management applications (like this gateway and your software application) requires that both applications share a common, unique reference for each transaction in order for the two applications to communicate intelligently.

The SpeedChex Gateway supports the following methods for uniquely referencing transactions:

Transact_ReferenceID

At the completion of each successful *Echeck.Authorization, ECheck.ProcessPayment* or *ECheck.Refund* command, the *Transact_ReferenceID* value returned by the gateway is the value that must be used to capture, update or void a pending transaction. The *Transact_ReferenceID* value is also included in all transaction reports as a tool for cross-referencing your internal transactions with the report results. Your software will need to store this value and associate it internally with your own payment transaction record for later transaction cross-reference.

Provider_TransactionID

The SpeedChex Gateway also supports the ability for merchants to assign their own unique internal ID's to each payment transaction. Although this value cannot be used to capture, update, or void pending transactions, the *Provider_TransactionID* value will be included in all transaction reports as an alternative (and easier) method of cross-referencing your internal transactions with the report results. It will also be possible to query transactions using *Provider_TransactionID* values. And finally, during batch uploads, the *Provider_TransactionID* is actually required in order to facilitate deferred response processing.

Standard Entry Class (SEC) Codes and Payment Authorization

NACHA regulations require that a transaction submitted to the Federal Reserve for processing must include something called a Standard Entry Class (SEC) Code to communicate exactly how the customer gave the merchant authorization to debit/credit their bank account.

The following table shows the proper SEC Codes to use depending on how the merchant obtained authorization to debit/credit an individual or company's bank account:

Available Standard Entry Class (SEC) Codes

Authorization Method	SEC Code
Document Signed by Individual	PPD
Document Signed by Company	CCD
Via the Internet	WEB
Recorded Telephone Call	TEL
Non-Recorded Telephone Call with Notification Sent via First Class Mail	TEL
*Paper Check Scanned and Converted to Electronic Check at Point-of-Sale	POP
*Paper Check Received via Mail/Courier Scanned and Converted to Electronic Check	ARC
*Check Received at Point-of-Sale Scanned and Converted to Electronic Check in Back Office	BOC

* Please note that POP, ARC, and BOC transactions can only be created using the Remote Deposit Batch API

If NACHA decides to audit a merchant or processor, part of the audit process may require providing proof of the authorization method (SEC Code) specified for any given transaction. Failure to properly comply and provide proof of the authorization can result in fines up to $10,000 for each transaction in violation, so it is important that you correctly indicate the SEC Code and maintain good records of your authorizations. Additional information about SEC Codes can be provided upon request.

Overview of the SpeedChex Gateway Command Process

The following is an overview of the major components of integrating the ***SpeedChex Web Service API*** into your software application:

- **Data Gathering** - Merchants are responsible for collecting and submitting all data associated with an echeck transaction command.

- **Submitting a Gateway Command –** Your software will need to instantiate, populate and transmit a Transact_Command object for processing. The rules for constructing and sending the commands are defined in the next section of this document titled *General Implementation Rules and Specifications*.

- **Response Processing** - The gateway will return a Transact_Response object after it receives and processes the command. The exact structure, format and meaning response object values will be based on the command issued as defined in the next section of this document titled *General Implementation Rules and Specifications*.

General Implementation Rules and Specifications

The ***SpeedChex Web Service API*** supports SOAP Version1.2 protocol for sending and receiving data through web service methods. MTOM is also support for sending and receiving binary files as necessary.

1. **Endpoints** – The following table shows the endpoint for this web service and important proxy setup details:

Web Service Endpoints
SOAP 1.2 Endpoint - https://www.speedchex.com/webservices/transact.svc **SOAP 1.1 Endpoint - https://www.speedchex.com/webservices/transact-ws11.svc**
Comments
Please direct web reference or service reference proxy requests to one of these SSL secured Internet address endpoints. When using Microsoft Visual Studio 2008, you can create a Service Reference proxy to the SOAP 1.2 URL to take advantage of advanced WS* features like MTOM support. When using Microsoft Visual Studio 2005, create a Web Reference proxy to the SOAP 1.2 URL and modify your project properties to support Web Services Enhancements (WSE). The SOAP 1.1 Endpoint is provided to support older development platforms and organizations whose development policies require the use of the more common SOAP 1.1 standards. WSDL discovery can be accomplished by appending '?wsdl' to the end of these addresses.

2. **The Transact_Command Class** – The *Transact_Command* class provides the object definition for all properties that can be defined when sending a command to the SpeedChex Gateway.

   The following table lists the basic command template properties of the *Transact_Command* class which will generally apply to all gateway commands:

Transact_Command Class – Basic Command Template

Field Name	Usage	Field Value Format Constraints
Command	Required	Set to the command you want the SpeedChex Gateway to execute
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.
TestMode	Optional	Set this value to ***On*** to test a command response.
Merchant_Credentials (assign a new *Transact_MerchantCredentials* object to this property with the following fields)		
.MerchantID	Required	Provided to Merchant
.GateID	Required	Provided to Merchant
.GateKey	Required	Provided to Merchant
<additional fields as required>		Based on the Command, you may be required to define additional fields to send in the Transact_Command object. These fields will be defined in the various sections of this document below dedicated to each specific command.

3. **Web Service Methods** – The following web service method definition(s) exist for this API:

Method Name	
ExecuteCommand (*Transact_Command* object) returns a *Transact_Response* object	
Usage	**Rules and Information**
Required	Create a new *Transact_Command* object, populate the fields in this object according to the rules defined in this API for the specific command that you wish to submit, and then call this method with your new *Transact_Command* object as its parameter. You will receive a *Transact_Response* object indicating whether the command succeeded or failed and any additional response information specifically related to the command issued.

4. **The Transact_Response Class** – In response to an *ExecuteCommand* web service method, the SpeedChex Gateway will always send a *Transact_Response* object indicating whether the command succeeded or failed and any additional information specifically related to the command issued.

   The following table defines the structure of the *Transact_Response* object with an explanation about the field values that will be returned in every ECheck command response:

The Transact_Response Class

Field Name	Field Contents	Max Length	Additional Information
CommandStatus	Returns one of the following values: • ***Approved*** • ***Declined*** • ***Error***	30	Indicates the success or failure of the command issued.
ResponseCode	A 3 digit code indicating command success or reason for command failure.	3	Please refer to ***Appendix A - Response Code Definitions*** for a list of possible ResponseCode values, their descriptions, and what ErrorInformation may be made available.
Description	Description of the *ResponseCode* value	255	
ErrorInformation	Additional information to help determine the source of an error.	50	
ExpressVerify.Status	Returns one of the following values if *Express Verify* is activated: 'POS', 'NEG', 'UNK' or 'ERR'.	3	ExpressVerify is a complex object that contains the bank account verification results from *Express Verify*. Please refer to **Appendix B - Express Verify Response Codes** for more details about these responses.
ExpressVerify.Code	A code indicating the reason for the *ExpressVerify*.Status value	5	
ExpressVerify.Description	A brief explanation for the *ExpressVerify*.Status value	255	
ResponseData	Please see the documentation for the specific command to be issued for an explanation of the possible value(s) for this field.		This is a generic object that can take the form of any scalar or complex object called for by the command that is issued.
Provider_TransactionID	The *Provider_TransactionID* value defined in the command.	50	This value can be used as a transaction reference when processing responses must be deferred (like for batch uploads)
PaymentKey	A unique token assigned to the credit card account just used AND the billing profile associated with that credit card.	255	Merchant must sign up with PaymentKeys for this service.
Transact_ReferenceID	A unique ID assigned to each command submitted to the SpeedChex Gateway.	30	This value can be used for as a unique transaction identifier or as a reference for support on any command.

Transaction Commands – *ECheck.Authorize*

Command: ECheck.Authorize

Description: Validates the transaction data packet for errors, performs basic routing and account number validation and optionally verifies the bank account using the *Express Verify* service. Does not process the electronic check through the Federal Reserve, or verify or lock funds. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.Authorize***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Provider_TransactionID	Optional	A unique identifier the merchant wants assigned to this payment	50
PaymentDirection	Required	Value must be ***FromCustomer*** or ***ToCustomer***	12
Amount	Required	The amount of the check.	-
CheckType	Required	Value must be ***Personal*** or ***Business***	8
AccountType	Required	Value must be ***Checking*** or ***Savings***	8
RoutingNumber	Required	ABA routing number on customer's check.	9
AccountNumber	Required	Customer's bank account number	30
CheckNumber	Conditional	Customer's check number. Only required for non-ACH merchants.	25
LocationName	Optional	Any location pre-defined by the merchant in their administration console	50
Merchant_ReferenceID	Optional	The internal ID or invoice number the merchant wants assigned to this payment	50
Description	Optional	A description for this transaction	100
Billing_CustomerID	Optional	A unique ID assigned to the Customer.	50
Billing_CustomerName	Required	Name of bank account holder	80
Billing_Company	Conditional	Company name on bank account. Required if *CheckType* field is set to ***Business***	80
Billing_Address1	Required	Street Address	70
Billing_Address2	Optional	Additional street address information	40
Billing_City	Required	City	70
Billing_State	Required	2-letter state abbreviation	30
Billing_Zip	Required	Zip Code (format: ##### or #####-####)	10
Billing_Country	Optional	2-letter country code (ISO 3166). Default is ***US***	2
Billing_Phone	Required	Phone number	20
Billing_Email	Conditional	Payment notification email address. Required if *SendEmailToCustomer* is set to ***Yes***	80
SendEmailToCustomer	Required	Value must be ***Yes*** or ***No***	3
Customer_IPAddress	Conditional	Customer's IP Address. Only required if the *SECCode* field is set to ***WEB***.	15
Run_ExpressVerify	Required	Value must be ***Yes*** or ***No***	3
SECCode	Required	Value must be ***PPD***, ***CCD***, ***WEB***, or ***TEL***.	3

Transaction Commands – *ECheck.Capture*

Command: ECheck.Capture

Description: Schedules a previously authorized ECheck payment for processing through the Federal Reserve at the next End-of-Day Batch Settlement date/time. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.Capture***	-
CommandVersion	Required	Set to ***1.0*** for this API documentation revision	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Transact_ReferenceID	Required	The unique *Transact_ReferenceID* sent in response to the original *ECheck.Authorize* command.	50
Provider_TransactionID	Optional	Updates the unique identifier the merchant wants assigned to this payment	50
DateScheduled	Optional	Date to process this payment.	-
Amount	Optional	Provides option to process a different payment amount than was originally authorized.	-
Merchant_ReferenceID	Optional	Updates the internal ID or invoice number the merchant wants assigned to this payment	50

Transaction Commands – *ECheck.ProcessPayment*

Command: ECheck.ProcessPayment

Description: Processes payments from or payments to a bank account. Performs an *ECheck.Authorize* and *ECheck.Capture* in a single command. Payment is only processed to the Federal Reserve if it passes the authorization process. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.ProcessPayment***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Provider_TransactionID	Optional	A unique identifier the merchant wants assigned to this payment.	50
DateScheduled	Optional	Date to process this payment.	-
PaymentDirection	Required	Value must be ***FromCustomer*** or ***ToCustomer***	12
Amount	Required	The amount of the check.	-
CheckType	Required	Value must be ***Personal*** or ***Business***	8
AccountType	Required	Value must be ***Checking*** or ***Savings***	8
RoutingNumber	Required	ABA routing number on customer's check.	9
AccountNumber	Required	Customer's bank account number	30
CheckNumber	Conditional	Customer's check number. Only required for non-ACH merchants.	25
LocationName	Optional	Any location pre-defined by the merchant in their administration console	50
Merchant_ReferenceID	Optional	The internal ID or invoice number the merchant wants assigned to this payment	50
Description	Optional	A description for this transaction	100
Billing_CustomerID	Optional	A unique ID assigned to the Customer.	20
Billing_CustomerName	Required	Name of person on bank account	80
Billing_Company	Conditional	Company name on bank account. Required if *CheckType* field is set to ***Business***	80
Billing_Address1	Required	Street Address on bank account	70
Billing_Address2	Optional	Additional street address information	40
Billing_City	Required	City	70
Billing_State	Required	State	30
Billing_Zip	Required	Zip Code (format: ##### or #####-####)	10
Billing_Country	Optional	2-letter country code (ISO 3166). Default is ***US***	2
Billing_Phone	Required	Phone number	20
Billing_Email	Conditional	Payment notification email address. Required if *SendEmailToCustomer* is set to ***Yes***	80
SendEmailToCustomer	Required	Value must be ***Yes*** or ***No***	3
Customer_IPAddress	Conditional	Customer's IP Address. Only required if the *SECCode* field is set to ***WEB***.	15
Run_ExpressVerify	Required	Value must be ***Yes*** or ***No***	3
SECCode	Required	Value must be ***PPD***, ***CCD***, ***WEB***, or ***TEL***.	3

Transaction Commands – *ECheck.VerifyBankAccount*

Command: ECheck.VerifyBankAccount

Description: Performs basic algorithm verification on a routing number and account number and optionally verifies the bank account using the *Express Verify* service. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.VerifyBankAccount***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
PaymentDirection	Required	Value must be ***FromCustomer*** or ***ToCustomer***	12
Amount	Required	The amount of the check.	-
CheckType	Required	Value must be ***Personal*** or ***Business***	8
AccountType	Required	Value must be ***Checking*** or ***Savings***	8
RoutingNumber	Required	ABA routing number on customer's check.	9
AccountNumber	Required	Customer's bank account number	30
Run_ExpressVerify	Required	Value must be ***Yes*** or ***No***	3

Response Note: If *Run_ExpressVerify* is set to **Yes**, the SpeedChex Gateway will return a failure *ResponseCode* value of **202** (**Failed Express Verify**) when the *ExpressVerify.Status* value returns is **NEG** (negative).

If the *ExpressVerify.Status* value is **POS** (positive) or **UNK** (unknown), the *ResponseCode* value will be set to **000** (**Command Successful. Approved.**).

Please refer to **Appendix B - Express Verify Response Codes** for more details about the possible responses from the *Express Verify* service to make sure your code handles each type of response appropriately according to your company's or your merchant's policies.

Transaction Commands – *ECheck.Update*

Command: ECheck.Update

Description: Modifies a transaction if it has not yet been sent to the Federal Reserve for processing. The following table defines the data field rules for this command:

Note: Please do not specify a value for an optional field if you do not intend to modify its value.

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.Update***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Transact_ReferenceID	Required	The unique *Transact_ReferenceID* sent in response to the original *ECheck.Authorize* or *ECheck.ProcessPayment* command.	50
Provider_TransactionID	Optional	Updates the unique identifier the merchant wants assigned to this payment	50
DateScheduled	Optional	Date to process this payment.	-
PaymentDirection	Optional	Value must be ***FromCustomer*** or ***ToCustomer***	12
Amount	Optional	The amount of the check.	-
CheckType	Optional	Value must be ***Personal*** or ***Business***	8
AccountType	Optional	Value must be ***Checking*** or ***Savings***	8
RoutingNumber	Optional	ABA routing number on customer's check.	9
AccountNumber	Optional	Customer's bank account number	30
CheckNumber	Optional	Customer's check number. Only required for non-ACH merchants.	25
LocationName	Optional	Any location pre-defined by the merchant in their administration console	50
Merchant_ReferenceID	Optional	The internal ID or invoice number the merchant wants assigned to this payment	50
Description	Optional	A description for this transaction	100
Billing_CustomerID	Optional	A unique ID assigned to the Customer.	20
Billing_CustomerName	Required	Name of person on bank account	80
Billing_Company	Conditional	Company name on bank account. Required if *CheckType* field is set to ***Business***	80
Billing_Address1	Required	Street Address on bank account	70
Billing_Address2	Optional	Additional street address information	40
Billing_City	Required	City	70
Billing_State	Required	State	30
Billing_Zip	Required	Zip Code (format: ##### or #####-####)	10
Billing_Country	Optional	2-letter country code (ISO 3166). Default is ***US***	2
Billing_Phone	Required	Phone number	20
Billing_Email	Conditional	Payment notification email address. Required if *SendEmailToCustomer* is set to ***Yes***	80
SendEmailToCustomer	Optional	Value must be ***Yes*** or ***No***	3
Customer_IPAddress	Optional	Payer's IP Address. Only required if the *SECCode* field is set to ***WEB***.	15
Run_ExpressVerify	Optional	Value must be ***Yes*** or ***No***	3
SECCode	Optional	Value must be ***PPD***, ***CCD***, ***WEB***, or ***TEL***.	3

Transaction Commands – *ECheck.Refund*

Command: ECheck.Refund

Description: Reverses a previous debit that has settled (Cleared) and refunds the same amount (or less if specified) to the same bank account as the original referenced debit. Refunds are automatically captured for settlement. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.Refund***	-
CommandVersion	Required	Set to ***1.0*** for this API documentation revision	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Transact_ReferenceID	Required	The unique *Transact_ReferenceID* sent in response to the original debit *ECheck.Authorize or ECheck.ProcessPayment* command.	50
Provider_TransactionID	Optional	A unique identifier the merchant wants assigned to the new refund payment	50
DateScheduled	Optional	Date to process this payment.	-
Amount	Optional	Use this field if you need to specify a refund amount less than the original debit amount.	-
Merchant_ReferenceID	Optional	The internal ID or invoice number the merchant wants assigned to this refund transaction.	50
Description	Optional	A description for the refund transaction	100

Transaction Commands – *ECheck.Void*

Command: ECheck.Void

Description: Cancels (stops) a transaction from processing to the Federal Reserve. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.Void***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Transact_ReferenceID	Required	The unique *Transact_ReferenceID* sent in response to the original *ECheck.Authorize* or *ECheck.ProcessPayment* command.	50

Transaction Commands – *ECheck.Hold*

Command: ECheck.Hold

Description: Places a scheduled transaction on 'Merchant Hold' if it has not yet been sent to the Federal Reserve for processing. This is a delay in processing that a merchant may impose on a transaction until they are ready to remove the hold. Authorized transactions cannot be placed on hold.

The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.Hold***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Transact_ReferenceID	Required	The unique *Transact_ReferenceID* sent in response to the original *ECheck.Authorize*, *ECheck.ProcessPayment* or *ECheck.Refund* command.	50

Transaction Commands – *ECheck.RemoveHold*

Command: ECheck.RemoveHold

Description: Removes the 'Merchant Hold' status on a transaction and reschedules the transaction for processing on the date specified in the command. The following table defines the data field rules for this command:

Field Name	Usage	Field Value Format Constraints	Max Length
Command	Required	Set to ***ECheck.RemoveHold***	50
CommandVersion	Required	Set to ***1.0*** for this API documentation revision.	-
TestMode	Optional	Set this value to ***On*** to test a command response. Default value is ***Off***.	3
Merchant_Credentials	Required	Please refer to the **Transact_Command Class – Basic Command Template** for more details	-
Transact_ReferenceID	Required	The unique *Transact_ReferenceID* sent in response to the original *ECheck.Authorize, ECheck.ProcessPayment* or *ECheck.Refund* command.	50
DateScheduled	Required	Date to process this payment.	-

Appendix A – Response Code Definitions

Response Code	Description	Contents of the *ErrorInformation* Field
GATEWAY COMMAND SUCCESS		
000	Command Successful. Approved.	
GATEWAY COMMAND ERRORS		
100	Invalid Gateway Credentials	Credential Object Name
101	Invalid Gateway Command	
102	Duplicate Command Not Processed	Transact_ReferenceID of the original Command
103	Transaction Cannot Be Modified	Transaction Status
104	Batch Cannot Be Modified	Batch Status
105	Invalid Transact_ReferenceID	
106	Invalid BatchID	
107	Non-Unique Reference/Transaction ID	Field Name
108	Invalid Reference/Transaction ID	Field Name
109	Invalid Source IP	
110	Invalid Value In Message	
INPUT DATA VALIDATION ERRORS		
150	Required Field Missing	Field Name
151	Field Value Is Not Valid	Field Name
152	Field Value Exceeds Maximum Length	Field Name
PAYMENT ACCOUNT VERIFICATION FAILURES		
200	Failed AVS	
201	Failed CVN	
202	Failed Express Verify	
203	Invalid Credit Card Number	
204	No Such Card Issuer	
205	Expired Card	
206	Invalid Expiration Date	
208	Call Issuer for Further Information	
209	Invalid Routing Number	
210	Invalid Bank Account Number	
211	Invalid PIN	
212	Invalid PaymentKey	
PAYMENT ACCOUNT DECLINES		
300	Transaction was Declined by Processor	
301	Transaction was Rejected by Gateway	
302	No Card Number on File with Issuer	
304	Invalid Account Type	
305	Account Closed	
306	Account Inactive	

Response Code Definitions Continued on Next Page…

Appendix A – Response Code Definitions

Response Code	Description	Contents of the ErrorInformation Field
PAYMENT ACCOUNT DECLINES (*continued…*)		
307	Account Frozen	
309	Insufficient Funds	
310	Over Limit	
311	Do Not Honor	
312	Transaction Not Allowed	Reason (if known)
313	Invalid for Debit	Reason (if known)
314	Invalid for Credit	Reason (if known)
315	Customer Opt Out	Reason (if known)
316	Customer Advises Not Authorized	
317	Manual Key Not Allowed	
318	Duplicate Transaction at Processor	
319	PaymentKey Authentication Failed	
FRAUD DECLINES		
400	Pick Up Card	
401	Lost Card	
402	Stolen Card	
403	Fraudulent Card	
404	Excessive Declines From Same Source	
405	Excessive PIN Attempts	
406	Excessive Purchase Frequency	
MERCHANT DIRECTIVES FROM PROCESSOR		
500	Declined - Stop All Recurring Payments	
501	Declined - Update Cardholder Data Available	
502	Declined - Further Instructions Available	Instructions
503	Declined - Call Processor for Voice Authorization	
504	Declined - Call Processor for Fraud Instructions	
PROCESSOR ADMINISTRATIVE ERRORS		
600	Internal Gateway Error	
601	Internal Processor Error	
602	Communication Error with Issuer	
603	Communication Error with Processor	
604	Processor Feature Not Available	
605	Processor Format Error	
606	Invalid Terminal Number	
607	Merchant Not Setup	
608	Merchant Account is Inactive	
609	Invalid Merchant Configuration	
610	Invalid Payment Method for Merchant	
611	Unsupported Card Type	
OTHER		
999	Contact Support Representative	

Appendix B – Express Verify Response Codes

Bank accounts that are found and in good standing are approved with a POS (positive) result status. Accounts that do not exist or are in a negative standing at their bank are rejected with a NEG (negative) result status. If a bank account is from a bank that is not part of the *Express Verify* network or the bank is not reporting information about the bank account, the transaction is approved with an UNK (unknown) result status.

The following table shows all possible responses from the *Express Verify* system*:*

Status	Code	Description
ERR	E01	EXPRESS VERIFY SERVICE NOT ACTIVATED
NEG	P00	ACCT NOT LOCATED
NEG	P01	ACCOUNT CLOSED
NEG	P03	NO DEBITS
NEG	P04	NO CHECKS
NEG	P05	NSF
NEG	P06	UNCOLLECTED FUNDS
NEG	P12	ISSUER DECLINED
UNK	P40	NO INFO
NEG	P41	NEGATIVE INFO
UNK	P50	NON PARTICIPANT
POS	P70	VALIDATED
POS	P72	VALIDATED AMOUNT
NEG	V02	ACCOUNT NOT APPROVED
NEG	V10	INVALID ROUTING NUMBER
UNK	V90	PREAUTH VENDOR UNAVAILABLE
UNK	V91	PREAUTH VENDOR ERROR

Appendix C – Sample Code

Visual Basic .NET Sample Code – Sending an ECheck.ProcessPayment Command

```
'Define the web service client object
Dim Transact_WebService As New Transact_WebServiceClient

'Create the new Transact_Command object to send to the web service
Dim Payment_Command As New Transact_Command

'Specify the command to issue to the SpeedChex Transact Gateway
Payment_Command.Command = "ECheck.ProcessPayment"
Payment_Command.CommandVersion = "1.0"

'Create a new Transact_MerchantCredentials object and populate the merchant's gateway credential data
Dim MerchantCredentials As New Transact_MerchantCredentials
MerchantCredentials.MerchantID = "2001"
MerchantCredentials.GateID = "test"
MerchantCredentials.GateKey = "test"

'Assign the gateway credential objects to the command
Payment_Command.Merchant_Credentials = MerchantCredentials

'Define the unique ID you have assigned to this transaction internally for later status tracking, etc.
Payment_Command.Provider_TransactionID = "12345"

'Assign known or captured check information to command
Payment_Command.CheckNumber = "1234"
Payment_Command.CheckType = "Business"
Payment_Command.AccountType = "Checking"
Payment_Command.RoutingNumber = "123123123"
Payment_Command.AccountNumber = "987654321"

Payment_Command.Amount = 50.00
Payment_Command.PaymentDirection = "FromCustomer"
Payment_Command.Merchant_ReferenceID = "12345"
Payment_Command.Description = "Test Transaction"

Payment_Command.Billing_CustomerID = "1234567"
Payment_Command.Billing_CustomerName = "Joe Buyer"
Payment_Command.Billing_Company = "Some Company, Inc."
Payment_Command.Billing_Address1 = "1234 Purchaser Lane"
Payment_Command.Billing_Address2 = "Suite 500"
Payment_Command.Billing_City = "New York"
Payment_Command.Billing_State = "NY"
Payment_Command.Billing_Zip = "12345"
Payment_Command.Billing_Phone = "(555) 222-1234"
Payment_Command.Billing_Email = "jbuyer@speedchex.com"

Payment_Command.SendEmailToCustomer = "Yes"

'Create a Transact_Response object to receive the response from the gateway
Dim Command_Response As New Transact_Response

'Execute the Transact Gateway command
Command_Response = Transact_WebService.ExecuteCommand(Payment_Command)

'Parse the response
Select Case Command_Response.CommandStatus
    Case "Approved
        'Write code related to successful response here

    Case "Declined
        'Write payment declined handling code here

    Case "Error
        'Write error handling code here

End Select
```

Appendix C – Sample Code

C# .NET Sample Code – Sending an ECheck.ProcessPayment Command

```
//Define the web service client object
Transact_WebServiceClient Transact_WebService = new Transact_WebServiceClient();

//Create the new Transact_Command object to send to the web service
Transact_Command Payment_Command = new Transact_Command();

//Specify the command to issue to the SpeedChex Transact Gateway
Payment_Command.Command = "ECheck.ProcessPayment";
Payment_Command.CommandVersion = "1.0";

//Create a new Transact_MerchantCredentials object and populate the merchant's gateway credential data
Transact_MerchantCredentials MerchantCredentials = new Transact_MerchantCredentials();
MerchantCredentials.MerchantID = "2001";
MerchantCredentials.GateID = "test";
MerchantCredentials.GateKey = "test";

//Assign the gateway credential objects to the command
Payment_Command.Merchant_Credentials = MerchantCredentials;

//Define the unique ID you have assigned to this transaction internally for later status tracking, etc.
Payment_Command.Provider_TransactionID = "12345";

//Assign known or captured check information to command
Payment_Command.CheckNumber = "1234";
Payment_Command.CheckType = "Business";
Payment_Command.AccountType = "Checking";
Payment_Command.RoutingNumber = "123123123";
Payment_Command.AccountNumber = "987654321";

Payment_Command.Amount = 50.00;
Payment_Command.PaymentDirection = "FromCustomer";
Payment_Command.Merchant_ReferenceID = "12345";
Payment_Command.Description = "Test Transaction";

Payment_Command.Billing_CustomerID = "1234567";
Payment_Command.Billing_CustomerName = "Joe Buyer";
Payment_Command.Billing_Company = "Some Company, Inc.";
Payment_Command.Billing_Address1 = "1234 Purchaser Lane";
Payment_Command.Billing_Address2 = "Suite 500";
Payment_Command.Billing_City = "New York";
Payment_Command.Billing_State = "NY";
Payment_Command.Billing_Zip = "12345";
Payment_Command.Billing_Phone = "(555) 222-1234";
Payment_Command.Billing_Email = "jbuyer@speedchex.com";

Payment_Command.SendEmailToCustomer = "Yes";

//Create a Transact_Response object to receive the response from the gateway
Transact_Response Command_Response;

//Execute the Transact Gateway command
Command_Response = Transact_WebService.ExecuteCommand(Payment_Command);

//Parse the response
switch (Command_Response.CommandStatus) {
      case "Approved":
            //Write code related to successful response here
            break;
       case "Declined":
             //Write payment declined handling code here
            break;

       case "Error":
             //Write error handling code here
            break;
}
```