Authorization Gateway Specification Document

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Version 1.15

Introduction:

This document serves as a technical guide for transmitting check transactions to GETI and details the communication method, authorization request specifications, and response specifications. Its purpose is to provide software developers with the necessary information to create an interface for check authorization.

Sample code is provided at the end of this document in VB.NET and C#. In addition, a complete Authorization Gateway sample solution is available to help further illustrate how to create an interface that uses the Authorization Gateway.

Overview:

The Authorization Gateway is designed to accommodate various input requirements based on a given terminals settings. This allows for the development of a single interface that can be easily configured to handle many different scenarios.

The Authorization Gateway uses web services to present distributed methods for integration into client applications, and an interface with the Authorization Gateway can be developed with any programming language that can consume a web service.

Extensible Markup Language (XML) is used to send data packet requests to the Authorization Gateway and to receive a response back. Simple Object Access Protocol (SOAP) is used for XML message exchange over HTTPS. The Authorization Gateway also employs a custom SOAP header for authentication information.

XML Schema Definitions (XSDs) are used by the Authorization Gateway to validate data packet requests sent by the client. Each terminal will be assigned a published XSD based on the terminal settings. If a data packet request does not conform to its assigned XSD a failed Validation Message response will be returned, otherwise the data packet will be processed as requested.

Contents

Connection Method

GETI supports connection via secure (https) webservice using SOAP. SOAP is a simple XML-based protocol to let applications exchange information over HTTP.
The webservice address used for certification and testing is as follows:

https://demo.eftchecks.com/webservices/AuthGateway.asmx

A username and password for certification will be provided upon request.

NOTE: A live webservice address, user name, and password will be supplied upon successful certification.

SEC Code Definitions

The Authorization Gateway uses the Standard Entry Class (SEC) codes to determine what information is required to be sent in the submission. A list of the SEC codes used by the Authorization Gateway is below.

- Point-of-Purchase Entry (POP)
- Internet Initiated Entry (WEB)
- Prearranged Payment and Deposit Entry (PPD)
- Corporate Credit or Debit (CCD)
- Telephone Initiated Entry (TEL)
- Although not an SEC Code, (C21) is used to denote Check 21

SUBMISSION

The Authorization Gateway has been designed for fast and easy integration with your existing system. Simply request the Terminal Settings, complete the returned xml data packet template, and return it to the Authorization Gateway for processing. To accomplish this Authorization Gateway provides four web methods; two for certification and two for production. In addition, each web method contains a custom SOAP header used for authentication.

SOAP Header

The SOAP header contains the following fields:

UserName	String	Username provided by GETI for authorization.
Password	String	Password provided by GETI for authorization.
TerminalID	Integer of Length 6.	Unique to each “virtual terminal” used. Provide by GETI at time of terminal approval. Terminal IDs for certification terminals are provided in this document.

Web Methods

A definition of the web methods can be found below. Each web method contains a hyperlink to a sample SOAP request and response.

- **GetCertificationTerminalSettings**
  - **Description:** This method will return the Terminal Settings for a certification Terminal. This method is used during interface testing and certification.
  - **Input:** Accepts no parameters.
  - **Output:** Outputs an XML string.

- **AuthGatewayCertification**
  - **Description:** This method will validate that the interface is sending a data packet that conforms to its schema and is used during interface testing and certification.
  - **Input:** Accepts an XML string called a data packet that must conform to the terminals schema provided in the certification Terminal Settings.
  - **Output:** Outputs an XML string.

- **ProcessSingleCertificationCheck**
  - **Description:** This method will run the authorization for a single certification check based on the settings for the provided certification terminal. A list of the valid certification routing numbers and their purpose is below. This method is used during interface testing and certification.

490000018	Authorization
490000034	Decline
490000021	Manager Needed
490000047	Re-Presented Check

  - **Input:** Accepts an XML string called a data packet that must conform to the certification terminals schema provided in the certification Terminal Settings.
  - **Output:** Outputs an XML string.

- **ProcessSingleCertificationCheckWithToken**
  - **Description:** This method will run the authorization for a single certification check based on the settings for the provided certification terminal using either, a given Token or the Account Type, Routing Number, and Account Number. A list of the valid certification routing numbers and their purpose is below. This method is used during interface testing and certification.

490000018	Authorization
490000034	Decline
490000021	Manager Needed
490000047	Re-Presented Check

- **Input:** Accepts an XML string called a data packet that must conform to the certification terminals schema provided in the certification Terminal Settings.
- **Output:** Outputs an XML string.

NOTE: Using this method by passing the Account Type, Routing Number, and Account Number will create a TOKEN and pass it back in the Authorization Message Response. If a TOKEN already exists for the Account Type, Routing Number, and Account Number, the current TOKEN will be passed back in the Authorization Message Response.

- **GetCertificationToken**
  - **Description:** This method will return a Token for the Account Type, Routing Number, and Account Number.
  - **Input:** Accepts an XML string called a data packet that must conform to the certification terminals schema provided in the certification Terminal Settings
  - **Output:** Outputs an XML string.

- **ParseCertificationMICR**
  - **Description:** This method will return an Account Type, Routing Number and Account Number.
  - **Input:** Accepts an XML string called a data packet that must conform to the certification terminals schema provided in the certification Terminal Settings
  - **Output:** Outputs an XML string.

- **GetTerminalSettings**
  - **Description:** This method will return the Terminal Settings for a terminal.
  - **Input:** Accepts no parameters.
  - **Output:** Outputs an XML string.

- **ProcessSingleCheck**
  - **Description:** This method will run the authorization for a single check based on the settings for the terminal.
  - **Input:** Accepts an XML string called a data packet that must conform to the terminals schema provided in the Terminal Settings.
  - **Output:** Outputs an XML string.

- **ProcessSingleCheckWithToken**
  - **Description:** This method will run the authorization for a single check based on the settings for the terminal using either, a given Token or the Account Type, Routing Number, and Account Number.
  - **Input:** Accepts an XML string called a data packet that must conform to the terminals schema provided in the Terminal Settings.
  - **Output:** Outputs an XML string.

  NOTE: Using this method by passing the Account Type, Routing Number, and Account Number will create a TOKEN and pass it back in the Authorization Message Response. If a TOKEN already exists for the Account Type, Routing Number, and Account Number, the current TOKEN will be passed back in the Authorization Message Response.

- **GetToken**
  - **Description:** This method will return a Token for the Account Type, Routing Number, and Account Number.
  - **Input:** Accepts an XML string called a data packet that must conform to the terminals schema provided in the Terminal Settings.
  - **Output:** Outputs an XML string.

- **ParseMICR**
  - **Description:** This method will return an Account Type, Routing Number and Account Number.
  - **Input:** Accepts an XML string called a data packet that must conform to the terminals schema provided in the Terminal Settings.
  - **Output:** Outputs an XML string.

- **GetArchivedResponse**
  - **Description:** This method will retrieve a response for a previously processed transaction.
  - **Input:** Accepts a Request ID string.
  - **Output:** Outputs an XML string.

Terminal Settings – XML Specification

The GetCertificationTerminalSettings and GetTerminalSettings web methods will return the following XML string.

Terminal Settings XML Example:

```
<?xml version="1.0" encoding="utf-8" ?>
 <TERMINAL_SETTINGS xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

```
    <TERMINAL_ID>1010</TERMINAL_ID>
    <SEC_CODE>PPD</SEC_CODE>
    <IS_GATEWAY_TERMINAL>true</IS_GATEWAY_TERMINAL>
    <DL_REQUIRED>false</DL_REQUIRED>
    <RUN_CHECK_VERIFICATION>false</RUN_CHECK_VERIFICATION>
    <RUN_IDENTITY_VERIFICATION>false</RUN_IDENTITY_VERIFICATION>
    <SCHEMA_FILE_PATH>
        https://demo.eftchecks.com/Webservices/Schemas/PPD/
        CheckNoVerificationDLOptional.xsd
    </SCHEMA_FILE_PATH>
    <XML_TEMPLATE_PATH>
        https://demo.eftchecks.com/Webservices/Schemas/PPD/
        Templates/CheckNoVerificationDLOptional.xml
    </XML_TEMPLATE_PATH>
</TERMINAL_SETTINGS>
```

The Terminal Settings XML will contain the following elements:

- **TERMINAL_SETTINGS:** Is the parent element and contains all other elements within the Terminal Settings XML document.
- **TERMINAL_ID:** Contains the ID for the terminal. The Terminal ID will be numeric and be six digits or less.
- **SEC_CODE:** Contains the Standard Entry Class. This will either be Ck21, PPD, CCD, POP, TEL, or WEB.
- **IS_GATEWAY_TERMINAL:** Contains true or false indicating if the Terminal is a gateway terminal or not.
- **DL_REQUIRED:** Contains true or false indicating if the terminal requires the driver's license state and number is to be included in the data packet request.
- **RUN_CHECK_VERIFICATION:** Contains true or false indicating if the terminal is setup for check verification.
- **RUN_IDENTITY_VERIFICATION:** Contains true or false indicating if the terminal is setup for identity verification.
- **SCHEMA_FILE_PATH:** Contains the Uniform Resource Identifier (URI) specifying the published XML Schema Definition (XSD) that the data packet request will be validated against.
- **XML_TEMPLATE_PATH:** Contains the Uniform Resource Identifier (URI) specifying the published XML template that can be used as the basis for creating the data packet request.

Data Packet - XML Specification

The data packet is an XML string sent to the AuthGatewayCertification, ProcessSingleCheck, and ProcessSingleCheckWithToken web methods. The XML data packet must conform to the XSD specified in the Terminal Settings. The XML Template provided in the Terminal Settings can be used as a basis to create the Data Packet.

NOTE: Methods with Token will operate the same as those without tokens. Tokens are used in place of Account Type, Routing Number, and Account Number.

Authorization Gateway XML Data Packet Example:

This XML data packet example contains all available elements. The elements and data types that are required for a specific terminal are defined in that terminal's XSD.

```
<?xml version="1.0" encoding="utf-8" ?>
<AUTH_GATEWAY REQUEST_ID="2ac30460-62d6-4a20-b46f-2a84947d2f5f">
   <TRANSACTION>
      <TRANSACTION_ID>
         e2df4ddb-a0b5-4dfe-9712-cc3dc8011d9d
      </TRANSACTION_ID>
      <MERCHANT>
         <TERMINAL_ID>1113</TERMINAL_ID>
      </MERCHANT>
      <PACKET>
         <IDENTIFIER>A</IDENTIFIER>
         <CONTROL_CHAR>M</CONTROL_CHAR>
         <VERIFICATION_ONLY>false</VERIFICATION_ONLY>
         <ACCOUNT>
            <MICR_DATA />
            <ROUTING_NUMBER>490000018</ROUTING_NUMBER>
            <ACCOUNT_NUMBER>24413815</ACCOUNT_NUMBER>
            <CHECK_NUMBER>100</CHECK_NUMBER>
            <ACCOUNT_TYPE>Checking</ACCOUNT_TYPE>
         </ACCOUNT>
         <CONSUMER>
            <FIRST_NAME>Test</FIRST_NAME>
            <LAST_NAME>Guy</LAST_NAME>
            <ADDRESS1>1001 Test Drive</ADDRESS1>
            <ADDRESS2>#200</ADDRESS2>
            <CITY>Destin</CITY>
            <STATE>FL</STATE>
            <ZIP>32540</ZIP>
            <PHONE_NUMBER>2345678912</PHONE_NUMBER>
            <DL_STATE>FL</DL_STATE>
            <DL_NUMBER>D12346544</DL_NUMBER>
            <COURTESY_CARD_ID />
            <IDENTITY>
               <SSN4>1234</SSN4>
               <DOB_YEAR></DOB_YEAR>
            </IDENTITY>
         </CONSUMER>
         <CHECK>
            <CHECK_AMOUNT>1.25</CHECK_AMOUNT>
```

```
                    <IMAGE_FRONT SIZE="" Type="" />
                    <IMAGE_BACK SIZE="" Type="" />
                </CHECK>
            </PACKET>
        </TRANSACTION>
</AUTH_GATEWAY>
```

The Authorization Gateway XML data packet may contain the following elements:

- **AUTH_GATEWAY:** Is the parent element and contains all other elements within the Terminal Settings XML document.
- **REQUEST_ID:** Is an optional attribute that contains a unique user defined ID to identify the authorization gateway request. The Request ID will be returned in the Authorization Gateway response.
- **TRANSACTION:** Contains all of the elements for a given transaction.
- **TRANSACTION_ID:** Is an optional element that contains a unique user defined ID to identify the transaction. The Transaction ID will be returned in the Authorization Gateway response.
- **MERCHANT:** Contains all of the elements for the merchant.
- **TERMINAL_ID:** Contains the ID for the Terminal. The Terminal ID will be numeric and be six digits or less.
- **PACKET:** Contains all of the elements for packet.
- **IDENTIFIER:** Contains a value that identifies the packet being sent as an Authorization, Void, Override, or Payroll transaction. The identifier is a single alpha character. A list of identifiers follows, but valid identifiers will vary by schema. A=Authorize, V=Void, O=Override, P=Payroll, R=Recurring, F = Refund
- **CONTROL_CHAR:** Contains a value that identifies the information in the packet as being entered manually or retrieved from a check reader. Valid control characters are as follows: M=Manual, S=Swipe.
- **VERIFICATION_ONLY:** Contains a true or false value identifying if the transaction should be processed as verification only. NOTE: The Boolean data type in the XSD will require that true/false be all lower case.
- **ACCOUNT:** Contains all of the elements for a given account.
- **MICR_DATA:** Contains the MICR data read from a check reader. The MICR Data can be up to 200 characters including the following: 0-9, T, O, -.
- **ROUTING_NUMBER:** Contains the keyed in 9 digit routing number.
- **ACCOUNT_NUMBER:** Contains the keyed in account number. Valid account numbers should be between 3 and 18 numeric characters.
- **CHECK_NUMBER:** Contains the keyed in check number. Valid check numbers should be between 1 and 10 characters.
- **ACCOUNT_TYPE:** Contains the type of account. Valid values are Checking or Savings.
- **CONSUMER:** Contains all of the elements for a given consumer.

- **FIRST_NAME:** Contains the first name of the consumer. The First Name can be up to 100 alpha characters.
- **LAST_NAME:** Contains the last name of the consumer. The Last Name can be up to 100 alpha characters.
- **ADDRESS1:** Contains the first line of the consumer's address. The Address1 can be up to 200 alpha-numeric characters and can include the following: # , - , : , ;
- **ADDRESS2:** Contains the second line of the consumer's address. The Address2 can be up to 200 alpha-numeric characters and can include the following: # , - , : , ;
- **CITY:** Contains the city of the consumer's address. The City can be up to 50 alpha characters.
- **STATE:** Contains the state or province of the consumer's address. Valid state and province codes can be found at the location below. http://demo.eftchecks.com/webservices/Schemas/Types/StatesAndProvincesSimpleType.xsd
- **ZIP:** Contains the zip code of the consumer's address.
- **PHONE_NUMBER:** Contains the consumer's contact phone number. The phone number is expected as a 10 digit number without a – or ().
- **DL_STATE:** Contains the consumer's driver's license state or province code. Valid state and province codes can be found at the location below. http://demo.eftchecks.com/webservices/Schemas/Types/StatesAndProvincesSimpleType.xsd
- **DL_NUMBER:** Contains the consumer's driver's license number. The driver's license number can be up to 50 alpha-numeric characters.
- **COURTESY_CARD_ID:** Contains the consumer's courtesy card ID. The Courtesy Card ID can be up to 50 alpha-numeric characters. This element will be used if a merchant is setup with driver's license required, a courtesy card number may be substituted. This is a number generated by the merchant for the specific customer. This is most common in check cashing environments.
- **IDENTITY:** Contains all of the possible elements available for identifying the consumer. The IDENTITY element can only contain one child element. If the XML data packet template provided in the terminal settings contains more than one child element, than one element must be populated with a value and the other elements removed from the XML data packet prior to submitting it to the Authorization Gateway.
- **SSN4:** Contains the last four digits of the consumer's social security number. The SSN4 must be 4 numeric characters.
- **DOB_YEAR:** Contains the date of birth of the consumer. The date of birth must be 4 numeric characters begin with either 19 or 20.
- **CHECK:** Contains all of the elements for the check.
- **CHECK_AMOUNT:** Contains the amount of the check and should be between $0.01 and $999999.99.
- **CUSTOM1- CUSTOM4:** These are optional elements that can contain up to 50 alpha numeric characters. We will return this in reporting.
- **IMAGE_FRONT:** Contains the image data for the check front. Image data must be base64.

- **SIZE:** The size attribute contains the image size in bytes. The size can be expressed as a decimal.
- **TYPE:** The type attribute contains the content type of the image. Valid TYPE values are "tiff".

- **IMAGE_BACK:** Contains the image data for the check back. Image data must be base64.
  - **SIZE:** The size attribute contains the image size in bytes. The size can be expressed as a decimal.
  - **TYPE:** The type attribute contains the content type of the image. Valid TYPE values are "tiff".

Authorization Gateway XML Data Packet With Token Example:

This XML data packet example contains all available elements. The elements and data types that are required for a specific terminal are defined in that terminal's XSD.

```
<?xml version="1.0" encoding="utf-8" ?>
<AUTH_GATEWAY REQUEST_ID="2ac30460-62d6-4a20-b46f-2a84947d2f5f">
   <TRANSACTION>
      <TRANSACTION_ID>
         e2df4ddb-a0b5-4dfe-9712-cc3dc8011d9d
      </TRANSACTION_ID>
      <MERCHANT>
         <TERMINAL_ID>1113</TERMINAL_ID>
      </MERCHANT>
      <PACKET>
         <IDENTIFIER>A</IDENTIFIER>
         <CONTROL_CHAR>M</CONTROL_CHAR>
         <VERIFICATION_ONLY>false</VERIFICATION_ONLY>
         <ACCOUNT>
            <TOKEN>C7E057491C4A4D67B617EE512D1300AE</TOKEN>
            <CHECK_NUMBER>100</CHECK_NUMBER>
         </ACCOUNT>
         <CONSUMER>
            <FIRST_NAME>Test</FIRST_NAME>
            <LAST_NAME>Guy</LAST_NAME>
            <ADDRESS1>1001 Test Drive</ADDRESS1>
            <ADDRESS2>#200</ADDRESS2>
            <CITY>Destin</CITY>
            <STATE>FL</STATE>
            <ZIP>32540</ZIP>
            <PHONE_NUMBER>2345678912</PHONE_NUMBER>
            <DL_STATE>FL</DL_STATE>
            <DL_NUMBER>D12346544</DL_NUMBER>
            <COURTSEY_CARD_ID />
            <IDENTITY>
               <SSN4>1234</SSN4>
```

```
                        <DOB_YEAR></DOB_YEAR>
                    </IDENTITY>
                </CONSUMER>
                <CHECK>
                    <CHECK_AMOUNT>1.25</CHECK_AMOUNT>
                    <IMAGE_FRONT SIZE="" Type="" />
                    <IMAGE_BACK SIZE="" Type="" />
                </CHECK>
            </PACKET>
    </TRANSACTION>
</AUTH_GATEWAY>
```

The Authorization Gateway XML data packet may contain the following elements:

- **AUTH_GATEWAY:** Is the parent element and contains all other elements within the Terminal Settings XML document.
- **REQUEST_ID:** Is an optional attribute that contains a unique user defined ID to identify the authorization gateway request. The Request ID will be returned in the Authorization Gateway response.
- **TRANSACTION:** Contains all of the elements for a given transaction.
- **TRANSACTION_ID:** Is an optional element that contains a unique user defined ID to identify the transaction. The Transaction ID will be returned in the Authorization Gateway response.
- **MERCHANT:** Contains all of the elements for the merchant.
- **TERMINAL_ID:** Contains the ID for the Terminal. The Terminal ID will be numeric and be six digits or less.
- **PACKET:** Contains all of the elements for packet.
- **IDENTIFIER:** Contains a value that identifies the packet being sent as an Authorization, Void, Override, or Payroll transaction. The identifier is a single alpha character. A list of identifiers follows, but valid identifiers will vary by schema. A=Authorize, V=Void, O=Override, P=Payroll, R=Recurring, F = Refund
- **CONTROL_CHAR:** Contains a value that identifies the information in the packet as being entered manually or retrieved from a check reader. Valid control characters are as follows: M=Manual, S=Swipe.
- **VERIFICATION_ONLY:** Contains a true or false value identifying if the transaction should be processed as verification only. NOTE: The Boolean data type in the XSD will require that true/false be all lower case.
- **ACCOUNT:** Contains all of the elements for a given account.
- **TOKEN:** Contains a 32 character alphanumeric value all uppercase. NOTE: This token replaces the account type, routing number, and account number.
- **CHECK_NUMBER:** Contains the keyed in check number. Valid check numbers should be between 1 and 10 characters.
- **CONSUMER:** Contains all of the elements for a given consumer.

- **FIRST_NAME:** Contains the first name of the consumer. The First Name can be up to 100 alpha characters.
- **LAST_NAME:** Contains the last name of the consumer. The Last Name can be up to 100 alpha characters.
- **ADDRESS1:** Contains the first line of the consumer's address. The Address1 can be up to 200 alpha-numeric characters and can include the following: # , - , : , ;
- **ADDRESS2:** Contains the second line of the consumer's address. The Address2 can be up to 200 alpha-numeric characters and can include the following: # , - , : , ;
- **CITY:** Contains the city of the consumer's address. The City can be up to 50 alpha characters.
- **STATE:** Contains the state or province of the consumer's address. Valid state and province codes can be found at the location below. http://demo.eftchecks.com/webservices/Schemas/Types/StatesAndProvincesSimpleType.xsd
- **ZIP:** Contains the zip code of the consumer's address.
- **PHONE_NUMBER:** Contains the consumer's contact phone number. The phone number is expected as a 10 digit number without a – or ().
- **DL_STATE:** Contains the consumer's driver's license state or province code. Valid state and province codes can be found at the location below. http://demo.eftchecks.com/webservices/Schemas/Types/StatesAndProvincesSimpleType.xsd
- **DL_NUMBER:** Contains the consumer's driver's license number. The driver's license number can be up to 50 alpha-numeric characters.
- **COURTSEY_CARD_ID:** Contains the consumer's courtesy card ID. The Courtesy Card ID can be up to 50 alpha-numeric characters. This element will be used if a merchant is setup with driver's license required, a courtesy card number may be substituted. This is a number generated by the merchant for the specific customer. This is most common in check cashing environments.
- **IDENTITY:** Contains all of the possible elements available for identifying the consumer. The IDENTITY element can only contain one child element. If the XML data packet template provided in the terminal settings contains more than one child element, than one element must be populated with a value and the other elements removed from the XML data packet prior to submitting it to the Authorization Gateway.
- **SSN4:** Contains the last four digits of the consumer's social security number. The SSN4 must be 4 numeric characters.
- **DOB_YEAR:** Contains the date of birth of the consumer. The date of birth must be 4 numeric characters begin with either 19 or 20.
- **CHECK:** Contains all of the elements for the check.
- **CHECK_AMOUNT:** Contains the amount of the check and should be between $0.01 and $999999.99.
- **CUSTOM1- CUSTOM4:** These are optional elements that can contain up to 50 alpha numeric characters. We will return this in reporting.
- **IMAGE_FRONT:** Contains the image data for the check front. Image data must be base64.

- **SIZE:** The size attribute contains the image size in bytes. The size can be expressed as a decimal.
- **TYPE:** The type attribute contains the content type of the image. Valid TYPE values are "tiff".

- **IMAGE_BACK:** Contains the image data for the check back. Image data must be base64.
  - **SIZE:** The size attribute contains the image size in bytes. The size can be expressed as a decimal.
  - **TYPE:** The type attribute contains the content type of the image. Valid TYPE values are "tiff".

How to determine which XML Template to Use

The XML data packet can be built from scratch by the web service consumer or one of the available XML templates can be used to build the XML data packet prior to submitting the data packet to the Authorization Gateway. The URI for the XML data packet for a given terminal can be retrieved from the Terminal Settings, but can also be determined by using the criteria below.

The root path for all XML Templates is https://demo.eftchecks.com/webserivces/schemas/ followed by the SEC Code, "/Templates/", and the XML Template name. The XML Template is determined by the following criteria:

- If the Terminal requires the Drivers License Information.
- If the Terminal is configured for Check Verification.
- If the Terminal is configured for Identity Verification.

An example XML Template file path for a PPD terminal that does *not* require the drivers license information, *is* setup for check verification, and *is* setup for identity verification would be as follows:

https://demo.eftchecks.com/webservices/schemas/ppd/templates/CheckVerificationIdentityVerificationDLOptional.xml

A matrix of the available XML Templates for each SEC code can be found below. Each grid contains the name of the XML Template, based on the XML Templates determining criteria, and a link to the actual XML Template.

The grid also includes the Terminal IDs that can be used for testing and certifying the XML data packet that can be built from the provided XML Template. The Terminal ID will be different for guaranteed transactions and Non-guaranteed transactions. Guaranteed terminals are numbered 1xxx, and Non-guaranteed terminals are numbered 2xxx.

PPD XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/ppd/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLOptional.xml				1010 / 2010
CheckNoVerificationDLRequired.xml	X			1011 / 2011
CheckVerificationIdentityVerificationDLOptional.xml		X	X	1012 / 2012
CheckVerificationIdentityVerificationDLRequired.xml	X	X	X	1013 / 2013
CheckVerificationOnlyDLOptional.xml		X		1014 / 2014
CheckVerificationOnlyDLRequired.xml	X	X		1015 / 2015
IdentityVerificationOnlyDLOptional.xml			X	1016 / 2016
IdentityVerificationOnlyDLRequired.xml	X		X	1017 / 2017

POP XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/pop/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLOptional.xml				1110
CheckNoVerificationDLRequired.xml	X			1111
CheckVerificationIdentityVerificationDLOptional.xml		X	X	1112
CheckVerificationIdentityVerificationDLRequired.xml	X	X	X	1113
CheckVerificationOnlyDLOptional.xml		X		1114
CheckVerificationOnlyDLRequired.xml	X	X		1115
IdentityVerificationOnlyDLOptional.xml			X	1116
IdentityVerificationOnlyDLRequired.xml	X		X	1117

TEL XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/tel/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLOptional.xml				1210 / 2210
CheckNoVerificationDLRequired.xml	X			1211 / 2211
CheckVerificationIdentityVerificationDLOptional.xml		X	X	1212 / 2212
CheckVerificationIdentityVerificationDLRequired.xml	X	X	X	1213 / 2213
CheckVerificationOnlyDLOptional.xml		X		1214 / 2214
CheckVerificationOnlyDLRequired.xml	X	X		1215 / 2215
IdentityVerificationOnlyDLOptional.xml			X	1216 / 2216

IdentityVerificationOnlyDLRequired.xml	X		X	1217 / 2217

WEB XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/web/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Non Guar)
CheckNoVerificationDLOptional.xml				2310
CheckNoVerificationDLRequired.xml	X			2311
CheckVerificationIdentityVerificationDLOptional.xml		X	X	2312
CheckVerificationIdentityVerificationDLRequired.xml	X	X	X	2313
CheckVerificationOnlyDLOptional.xml		X		2314
CheckVerificationOnlyDLRequired.xml	X	X		2315
IdentityVerificationOnlyDLOptional.xml			X	2316
IdentityVerificationOnlyDLRequired.xml	X		X	2317

Check21 XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/c21/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLOptional.xml				1610
CheckNoVerificationDLRequired.xml	X			1611
CheckVerificationIdentityVerificationDLOptional.xml		X	X	1612
CheckVerificationIdentityVerificationDLRequired.xml	X	X	X	1613
CheckVerificationOnlyDLOptional.xml		X		1614
CheckVerificationOnlyDLRequired.xml	X	X		1615
IdentityVerificationOnlyDLOptional.xml			X	1616
IdentityVerificationOnlyDLRequired.xml	X		X	1617

CCD XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/ccd//templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLOptional.xml				1710 / 2710
CheckNoVerificationDLRequired.xml	X			1711 / 2711
CheckVerificationIdentityVerificationDLOptional.xml		X	X	1712 / 2712
CheckVerificationIdentityVerificationDLRequired.xml	X	X	X	1713 / 2713
CheckVerificationOnlyDLOptional.xml		X		1714 / 2714
CheckVerificationOnlyDLRequired.xml	X	X		1715 / 2715

IdentityVerificationOnlyDLOptional.xml			X	1716 / 2716
IdentityVerificationOnlyDLRequired.xml	X		X	1717 / 2717

There are also published example XML data packets that contain example data. These published examples are only available for the PPD SEC code.

The root path for all of the XML examples is https://demo.eftchecks.com/webservices/schemas/ppd/examples/ followed by the XML Template name. A link to one of the example XML data packets is provided below: https://demo.eftchecks.com/webservices/schemas/ppd/examples/CheckVerificationIdentityVerificationDLOptional.xml

XML Templates When Using Token:

A matrix of the available XML Token Templates for each SEC code can be found below. Each grid contains the name of the XML Template, based on the XML Templates determining criteria, and a link to the actual XML Template.

PPD XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/ppd/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLWithTokenOptional.xml				1010 / 2010
CheckNoVerificationDLWithTokenRequired.xml	X			1011 / 2011
CheckVerificationIdentityVerificationDLWithTokenOptional.xml		X	X	1012 / 2012
CheckVerificationIdentityVerificationDLWithTokenRequired.xml	X	X	X	1013 / 2013
CheckVerificationOnlyDLWithTokenOptional.xml		X		1014 / 2014
CheckVerificationOnlyDLWithTokenRequired.xml	X	X		1015 / 2015
IdentityVerificationOnlyDLWithTokenOptional.xml			X	1016 / 2016
IdentityVerificationOnlyDLWithTokenRequired.xml	X		X	1017 / 2017

POP XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/pop/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLWithTokenOptional.xml				1110
CheckNoVerificationDLWithTokenRequired.xml	X			1111

CheckVerificationIdentityVerificationDLWithTokenOptional.xml		X	X	1112
CheckVerificationIdentityVerificationDLWithTokenRequired.xml	X	X	X	1113
CheckVerificationOnlyDLWithTokenOptional.xml		X		1114
CheckVerificationOnlyDLWithTokenRequired.xml	X	X		1115
IdentityVerificationOnlyDLWithTokenOptional.xml			X	1116
IdentityVerificationOnlyDLWithTokenRequired.xml	X		X	1117

TEL XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/tel/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLWithTokenOptional.xml				1210 / 2210
CheckNoVerificationDLWithTokenRequired.xml	X			1211 / 2211
CheckVerificationIdentityVerificationDLWithTokenOptional.xml		X	X	1212 / 2212
CheckVerificationIdentityVerificationDLWithTokenRequired.xml	X	X	X	1213 / 2213
CheckVerificationOnlyDLWithTokenOptional.xml		X		1214 / 2214
CheckVerificationOnlyDLWithTokenRequired.xml	X	X		1215 / 2215
IdentityVerificationOnlyDLWithTokenOptional.xml			X	1216 / 2216
IdentityVerificationOnlyDLWithTokenRequired.xml	X		X	1217 / 2217

WEB XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/web/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLWithTokenOptional.xml				1310 / 2310
CheckNoVerificationDLWithTokenRequired.xml	X			1311 / 2311
CheckVerificationIdentityVerificationDLWithTokenOptional.xml		X	X	1312 / 2312
CheckVerificationIdentityVerificationDLWithTokenRequired.xml	X	X	X	1313 / 2313
CheckVerificationOnlyDLWithTokenOptional.xml		X		1314 / 2314
CheckVerificationOnlyDLWithTokenRequired.xml	X	X		1315 / 2315
IdentityVerificationOnlyDLWithTokenOptional.xml			X	1316 / 2316
IdentityVerificationOnlyDLWithTokenRequired.xml	X		X	1317 / 2317

Check21 XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/c21/templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLWithTokenOptional.xml				1610
CheckNoVerificationDLWithTokenRequired.xml	X			1611
CheckVerificationIdentityVerificationDLWithTokenOptional.xml		X	X	1612
CheckVerificationIdentityVerificationDLWithTokenRequired.xml	X	X	X	1613
CheckVerificationOnlyDLWithTokenOptional.xml		X		1614
CheckVerificationOnlyDLWithTokenRequired.xml	X	X		1615
IdentityVerificationOnlyDLWithTokenOptional.xml			X	1616
IdentityVerificationOnlyDLWithTokenRequired.xml	X		X	1617

CCD XML Templates

(Root path: https://demo.eftchecks.com/webservices/schemas/ccd//templates)

Template	DL Required	Verify Check	Verify ID	Certification Terminal ID (Guar/Non)
CheckNoVerificationDLWithTokenOptional.xml				1710 / 2710
CheckNoVerificationDLWithTokenRequired.xml	X			1711 / 2711
CheckVerificationIdentityVerificationDLWithTokenOptional.xml		X	X	1712 / 2712
CheckVerificationIdentityVerificationDLWithTokenRequired.xml	X	X	X	1713 / 2713
CheckVerificationOnlyDLWithTokenOptional.xml		X		1714 / 2714
CheckVerificationOnlyDLWithTokenRequired.xml	X	X		1715 / 2715
IdentityVerificationOnlyDLWithTokenOptional.xml			X	1716 / 2716
IdentityVerificationOnlyDLWithTokenRequired.xml	X		X	1717 / 2717

How to determine which XSD to Use

The XSD that will be used can be retrieved from the Terminal Settings, but can also be determined by using the criteria below.

The root path for all XSDs is https://demo.eftchecks.com/webservices/schemas followed by the SEC Code and Schema Name. The Schema Name is determined by the following criteria:

- If the Terminal requires the Drivers License Information.

- If the Terminal is configured for Check Verification.
- If the Terminal is configured for Identity Verification.
- For PPD and CCD entries, If the Terminal is configured to allow Credit entries

An example XSD file path for a PPD terminal that does *not* require the drivers license information, *is* setup for check verification, and *is* setup for identity verification, and *does not* allow credits would be as follows:

https://demo.eftchecks.com/webservices/schemas/ppd/CheckVerificationIdentityVerificationDLOptional.xsd

A matrix of the available XSDs for each SEC code can be found below. Each grid contains the name of the schema, based on the schemas determining criteria, and a link to the actual schema. The grid also includes the Terminal IDs that can be used for testing and certifying against the provided schema

PPD Schemas – Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/ppd/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
Debits Only:				
CheckNoVerificationDLOptional.xsd				1010
CheckNoVerificationDLRequired.xsd	X			1011
CheckVerificationIdentityVerificationDLOptional.xsd		X	X	1012
CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1013
CheckVerificationOnlyDLOptional.xsd		X		1014
CheckVerificationOnlyDLRequired.xsd	X	X		1015
IdentityVerificationOnlyDLOptional.xsd			X	1016
IdentityVerificationOnlyDLRequired.xsd	X		X	1017
Credits and Debits Allowed:				
CreditCheckNoVerificationDLOptional.xsd				1810
CreditCheckNoVerificationDLRequired.xsd	X			1811
CreditCheckVerificationIdentityVerificationDLOptional.xsd		X	X	1812
CreditCheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1813
CreditCheckVerificationOnlyDLOptional.xsd		X		1814
CreditCheckVerificationOnlyDLRequired.xsd	X	X		1815
CreditIdentityVerificationOnlyDLOptional.xsd			X	1816
CreditIdentityVerificationOnlyDLRequired.xsd	X		X	1817

PPD Schemas – Non-Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/ppd/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
Debits Only:				
Ng_CheckNoVerificationDLOptional.xsd				2010
Ng_CheckNoVerificationDLRequired.xsd	X			2011
Ng_CheckVerificationIdentityVerificationDLOptional.xsd		X	X	2012
Ng_CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	2013
Ng_CheckVerificationOnlyDLOptional.xsd		X		2014
Ng_CheckVerificationOnlyDLRequired.xsd	X	X		2015
Ng_IdentityVerificationOnlyDLOptional.xsd			X	2016
Ng_IdentityVerificationOnlyDLRequired.xsd	X		X	2017
Credits and Debits Allowed:				
Ng_CreditCheckNoVerificationDLOptional.xsd				2810
Ng_CreditCheckNoVerificationDLRequired.xsd	X			2811
Ng_CreditCheckVerificationIdentityVerificationDLOptional.xsd		X	X	2812
Ng_CreditCheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	2813
Ng_CreditCheckVerificationOnlyDLOptional.xsd		X		2814
Ng_CreditCheckVerificationOnlyDLRequired.xsd	X	X		2815
Ng_CreditIdentityVerificationOnlyDLOptional.xsd			X	2816
Ng_CreditIdentityVerificationOnlyDLRequired.xsd	X		X	2817

POP Schemas

(Root path: https://demo.eftchecks.com/webservices/schemas/pop/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLOptional.xsd				1110
CheckNoVerificationDLRequired.xsd	X			1111
CheckVerificationIdentityVerificationDLOptional.xsd		X	X	1112
CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1113
CheckVerificationOnlyDLOptional.xsd		X		1114
CheckVerificationOnlyDLRequired.xsd	X	X		1115
IdentityVerificationOnlyDLOptional.xsd			X	1116
IdentityVerificationOnlyDLRequired.xsd	X		X	1117

TEL Schemas – Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/tel/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLOptional.xsd				1210
CheckNoVerificationDLRequired.xsd	X			1211
CheckVerificationIdentityVerificationDLOptional.xsd		X	X	1212
CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1213
CheckVerificationOnlyDLOptional.xsd		X		1214
CheckVerificationOnlyDLRequired.xsd	X	X		1215
IdentityVerificationOnlyDLOptional.xsd			X	1216
IdentityVerificationOnlyDLRequired.xsd	X		X	1217

TEL Schemas – Non-Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/tel/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
Ng_CheckNoVerificationDLOptional.xsd				2210
Ng_CheckNoVerificationDLRequired.xsd	X			2211
Ng_CheckVerificationIdentityVerificationDLOptional.xsd		X	X	2212
Ng_CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	2213
Ng_CheckVerificationOnlyDLOptional.xsd		X		2214
Ng_CheckVerificationOnlyDLRequired.xsd	X	X		2215
Ng_IdentityVerificationOnlyDLOptional.xsd			X	2216
Ng_IdentityVerificationOnlyDLRequired.xsd	X		X	2217

WEB Schemas – Non-Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/web/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
Ng_CheckNoVerificationDLOptional.xsd				2310
Ng_CheckNoVerificationDLRequired.xsd	X			2311
Ng_CheckVerificationIdentityVerificationDLOptional.xsd		X	X	2312
Ng_CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	2313
Ng_CheckVerificationOnlyDLOptional.xsd		X		2314
Ng_CheckVerificationOnlyDLRequired.xsd	X	X		2315

Ng_IdentityVerificationOnlyDLOptional.xsd			X	2316
Ng_IdentityVerificationOnlyDLRequired.xsd	X		X	2317

Check 21 Schemas

(Root path: https://demo.eftchecks.com/webservices/schemas/c21/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
CheckNoVerificationDLOptional.xsd				1610
CheckNoVerificationDLRequired.xsd	X			1611
CheckVerificationIdentityVerificationDLOptional.xsd		X	X	1612
CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1613
CheckVerificationOnlyDLOptional.xsd		X		1614
CheckVerificationOnlyDLRequired.xsd	X	X		1615
IdentityVerificationOnlyDLOptional.xsd			X	1616
IdentityVerificationOnlyDLRequired.xsd	X		X	1617

CCD Schemas – Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/ccd/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
Debits only:				
CheckNoVerificationDLOptional.xsd				1710
CheckNoVerificationDLRequired.xsd	X			1711
CheckVerificationIdentityVerificationDLOptional.xsd		X	X	1712
CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1713
CheckVerificationOnlyDLOptional.xsd		X		1714
CheckVerificationOnlyDLRequired.xsd	X	X		1715
IdentityVerificationOnlyDLOptional.xsd			X	1716
IdentityVerificationOnlyDLRequired.xsd	X		X	1717
Credits and Debits Allowed:				
CreditCheckNoVerificationDLOptional.xsd				1910
CreditCheckNoVerificationDLRequired.xsd	X			1911
CreditCheckVerificationIdentityVerificationDLOptional.xsd		X	X	1912
CreditCheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	1913
CreditCheckVerificationOnlyDLOptional.xsd		X		1914
CreditCheckVerificationOnlyDLRequired.xsd	X	X		1915
CreditIdentityVerificationOnlyDLOptional.xsd			X	1916

CreditIdentityVerificationOnlyDLRequired.xsd	X		X	1917

CCD Schemas – Non-Guaranteed

(Root path: https://demo.eftchecks.com/webservices/schemas/ccd/)

Schema	DL Required	Verify Check	Verify ID	Certification Terminal ID
Debits only:				
Ng_CheckNoVerificationDLOptional.xsd				2710
Ng_CheckNoVerificationDLRequired.xsd	X			2711
Ng_CheckVerificationIdentityVerificationDLOptional.xsd		X	X	2712
Ng_CheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	2713
Ng_CheckVerificationOnlyDLOptional.xsd		X		2714
Ng_CheckVerificationOnlyDLRequired.xsd	X	X		2715
Ng_IdentityVerificationOnlyDLOptional.xsd			X	2716
Ng_IdentityVerificationOnlyDLRequired.xsd	X		X	2717
Credits and Debits Allowed:				
Ng_CreditCheckNoVerificationDLOptional.xsd				2910
Ng_CreditCheckNoVerificationDLRequired.xsd	X			2911
Ng_CreditCheckVerificationIdentityVerificationDLOptional.xsd		X	X	2912
Ng_CreditCheckVerificationIdentityVerificationDLRequired.xsd	X	X	X	2913
Ng_CreditCheckVerificationOnlyDLOptional.xsd		X		2914
Ng_CreditCheckVerificationOnlyDLRequired.xsd	X	X		2915
Ng_CreditIdentityVerificationOnlyDLOptional.xsd			X	2916
Ng_CreditIdentityVerificationOnlyDLRequired.xsd	X		X	2917

Data Types

Each element in the XML data packet that is sent to the Authorization Gateway has a data type that defines the format of the data contained within the element. The Terminal's XSD defines which elements are of what data type. A list and links to the available data types is located below.

- States and Provinces
  - https://demo.eftchecks.com/Webservices/schemas/types/StatesAndProvincesSimpleType.xsd
- Authorization Gateway Types
  - https://demo.eftchecks.com/Webservices/schemas/types/AuthGatewayTypes.xsd
- Authorization Gateway Response Types

- https://demo.eftchecks.com/Webservices/schemas/types/AuthGatewayResponseTypes.xsd

RESPONSE

Each web method in the Authorization Gateway will return an XML string and detail the success or failure of the submission. If the transaction is accepted (authorized) an authorization number will be returned at a minimum.

The Authorization Gateway XML response may contain the following elements:

- **REQUEST_ID:** Is an attribute that contains a unique user defined ID to identify the authorization gateway request. The Request ID contained in the Authorization Gateway Request is returned in the Authorization Gateway response.
- **VALIDATION_MESSAGE:** Contains all of the elements in the validation message.
- **AUTHORIZATION_MESSAGE:** Contains all of the elements in the authorization message. NOTE: The AuthGatewayCertification web method response will not contain this element.

Validation Message Response

The AuthGatewayCertification, ProcessSingleCheck, and ProcessSingleCheckWithToken web methods will validate that the interface is sending a data packet that conforms to its schema. The following are examples of success and failure responses:

Validation Message - Example Success Response

```
<? xml version="1.0" encoding="utf-8" ?>
<RESPONSE xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
REQUEST_ID="2ac30460-62d6-4a20-b46f-2a84947d2f5f">
    <VALIDATION_MESSAGE>
        <RESULT>Passed</RESULT>
        <SCHEMA_FILE_PATH>
            https://demo.eftchecks.com/Webservices/Schemas/PPD/
            CheckNoVerificationDLOptional.xsd
        </SCHEMA_FILE_PATH>
    </VALIDATION_MESSAGE>
</RESPONSE>
```

Validation Message - Example Failure Response

This data packet failed validation because the Driver's License Information is required by the XSD and was not provided in the data packet.

```
<?xml version="1.0" encoding="utf-8" ?>
<RESPONSE xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
REQUEST_ID="2ac30460-62d6-4a20-b46f-2a84947d2f5f">
```

```
<VALIDATION_MESSAGE>
    <RESULT>Failed</RESULT>
    <SCHEMA_FILE_PATH>
        http://localhost/GETI.eMagnus.WebServices/Schemas/PPD/
        CheckNoVerificationDLRequired.xsd
    </SCHEMA_FILE_PATH>
    <VALIDATION_ERROR LINE_NUMBER="1" LINE_POSITION="561" >
        <SEVERITY>Error</SEVERITY>
        <MESSAGE>
            The 'DL_STATE' element has an invalid value according to its data
            type. An error occurred at , (1, 561).
        </MESSAGE>
    </VALIDATION_ERROR>
    <VALIDATION_ERROR LINE_NUMBER="1" LINE_POSITION="583">
        <SEVERITY>Error</SEVERITY>
        <MESSAGE>
            The 'IDENTIFIER' element has an invalid value according to its data
            type.
        </MESSAGE>
    </VALIDATION_ERROR>
</VALIDATION_MESSAGE>
</RESPONSE>
```

The Validation Message may contain the following elements and attributes:

- **RESULT:** Contains Passed or Failed indicating if the validation was successful or not.
- **SCHEMA_FILE_PATH:** Contains the Uniform Resource Identifier (URI) specifying the published XML Schema Definition (XSD) that the data packet request will be validated against.
- **VALIDATION_ERROR:** Contains all of the elements in the validation error.
- **LINE_NUMBER:** Contains the line the number where the validation error occurred.
- **LINE_POSITION:** Contains the line position where the validation error occurred.
- **SEVERITY:** Contains warning or error indicating the severity of the validation error.
- **MESSAGE:** Contains the complete validation error message and will include the element that failed the validation and may contain the location the validation error occurred.

Authorization Message Response

The ProcessSingleCheck web method will process a valid XML data packet and return an Authorization Message within the response. An example of the Authorization message is below.

Authorization Message - Example Response

```
<?xml version="1.0" encoding="utf-8" ?>
 <RESPONSE xmlns:xsd="http://www.w3.org/2001/XMLSchema"
```

```
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
REQUEST_ID="2ac30460-62d6-4a20-b46f-2a84947d2f5f">

<VALIDATION_MESSAGE>
        <RESULT>Passed</RESULT>
        <SCHEMA_FILE_PATH>
              http://localhost/GETI.eMagnus.WebServices/Schemas/PPD
             /CheckVerificationIdentityVerificationDLRequired.xsd
       </SCHEMA_FILE_PATH>
</VALIDATION_MESSAGE>
 <AUTHORIZATION_MESSAGE>
         <TRANSACTION_ID>
               0a4f529d-70fd-4ddb-b909-b5598dc07579
          </TRANSACTION_ID>
          <RESPONSE_TYPE>A</RESPONSE_TYPE>
          <RESPONSE_TYPE_TEXT>APPROVED</RESPONSE_TYPE_TEXT>
          <RESULT_CODE>0</RESULT_CODE>
          <TYPE_CODE>4096</TYPE_CODE>
          <CODE>AUTH NUM 272-172</CODE>
          <MESSAGE>APPROVAL</MESSAGE>
  </AUTHORIZATION_MESSAGE>
</RESPONSE>
```

The Authorization Message may contain the following elements:

- **TRANSACTION_ID:** Contains the unique user defined ID to identify the packet. The Transaction ID provided for a given transaction in the data packet is returned in the authorization message in the response.
- **RESPONSE_TYPE:** Contains an identifier to aid in determining the transaction result. A complete list of response types is located in the Authorization Response Types XSD.
- **RESPONSE_TYPE_TEXT:** Contains the full text description of the response type identifier.
- **RESULT_CODE:** Contains a numeric bit that indicates one or many result messages. Examples of result messages are Approved, Decline, or Unpaid Check Limit Exceeded. A complete list of result codes is located in the Authorization Response Types XSD. A bit comparison will need to be done to determine the result messages.
- **TYPE_CODE:** Contains a numeric bit that indicates one or many type messages. Examples of type messages are Personal Check, Business Check, or Voided Check. A complete list of type codes is located in the Authorization Response Types XSD. A bit comparison will need to be done to determine the result messages.
- **CODE:** Contains the text message with the Authorization Number if the transaction was Approved or additional information if the transaction was not approved.
- **MESSAGE:** Contains additional text information about the transaction.

Authorization Message Response with Token

The ProcessSingleCheckWithToken web method will process a valid XML data packet and return an Authorization Message within the response. An example of the Authorization message is below.

Authorization Message - Example Response

```
<?xml version="1.0" encoding="utf-8" ?>
 <RESPONSE xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 REQUEST_ID="2ac30460-62d6-4a20-b46f-2a84947d2f5f">

 <VALIDATION_MESSAGE>
        <RESULT>Passed</RESULT>
        <SCHEMA_FILE_PATH>
              http://localhost/GETI.eMagnus.WebServices/Schemas/PPD
             /CheckVerificationIdentityVerificationDLRequired.xsd
       </SCHEMA_FILE_PATH>
</VALIDATION_MESSAGE>
 <AUTHORIZATION_MESSAGE>
         <TRANSACTION_ID>
               0a4f529d-70fd-4ddb-b909-b5598dc07579
         </TRANSACTION_ID>
         <RESPONSE_TYPE>A</RESPONSE_TYPE>
         <RESPONSE_TYPE_TEXT>APPROVED</RESPONSE_TYPE_TEXT>
         <RESULT_CODE>0</RESULT_CODE>
         <TYPE_CODE>4096</TYPE_CODE>
         <CODE>AUTH NUM 272-172</CODE>
         <MESSAGE>APPROVAL</MESSAGE>
         <TOKEN> C7E057491C4A4D67B617EE512D1300AE</TOKEN>
  </AUTHORIZATION_MESSAGE>
</RESPONSE>
```

The Authorization Message may contain the following elements:

- **TRANSACTION_ID:** Contains the unique user defined ID to identify the packet. The Transaction ID provided for a given transaction in the data packet is returned in the authorization message in the response.
- **RESPONSE_TYPE:** Contains an identifier to aid in determining the transaction result. A complete list of response types is located in the Authorization Response Types XSD.
- **RESPONSE_TYPE_TEXT:** Contains the full text description of the response type identifier.
- **RESULT_CODE:** Contains a numeric bit that indicates one or many result messages. Examples of result messages are Approved, Decline, or Unpaid Check Limit Exceeded. A complete list of result codes is located in the Authorization Response Types XSD. A bit comparison will need to be done to determine the result messages.

- **TYPE_CODE:** Contains a numeric bit that indicates one or many type messages. Examples of type messages are Personal Check, Business Check, or Voided Check. A complete list of type codes is located in the Authorization Response Types XSD. A bit comparison will need to be done to determine the result messages.
- **CODE:** Contains the text message with the Authorization Number if the transaction was Approved or additional information if the transaction was not approved.
- **MESSAGE:** Contains additional text information about the transaction.
- **TOKEN:** Contains the Token that is used in place of the Account Type, Routing Number, and Account Number. This token can then be used for future transactions.

Exceptions

If an error occurs within the Authorization Gateway the XML string response will detail the reason for the error within an Exception element. The Exception element will NOT be present if an error did not occur. However, should an error occur, the Exception element may be found as a child element of either the Response element, the Terminal Settings element, or the Transaction element.

EXCEPTION Element - Example as a child of the TERMINAL_SETTINGS element

```
<?xml version="1.0" encoding="utf-8" ?>
   <TERMINAL_SETTINGS xmlns:xsd="http://www.w3.org/2001/XMLSchema"
                      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <TERMINAL_ID>9999</TERMINAL_ID>
        <EXCEPTION>
             <MESSAGE>Invalid Terminal</MESSAGE>
        </EXCEPTION>
        <SEC_CODE>Unknown</SEC_CODE>
        <IS_GATEWAY_TERMINAL>false</IS_GATEWAY_TERMINAL>
        <DL_REQUIRED>false</DL_REQUIRED>
        <RUN_CHECK_VERIFICATION>false</RUN_CHECK_VERIFICATION>
        <RUN_IDENTITY_VERIFICATION>false</RUN_IDENTITY_VERIFICATION>
        <SCHEMA_FILE_PATH />
        <XML_TEMPLATE_PATH />
    </TERMINAL_SETTINGS>
```

EXCEPTION Element - Example as a child of the RESPONSE element

```
<? xml version="1.0" encoding="utf-8" ?>
   <RESPONSE xmlns:xsd="http://www.w3.org/2001/XMLSchema"
                     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    REQUEST_ID="" >
        <EXCEPTION>
              <MESSAGE>An internal error occurred. The transaction was NOT
               Processed.
             </MESSAGE>
         </EXCEPTION>
   </RESPONSE>
```

The Exception element will contain the following elements.

- **MESSAGE:** Contains text information about the exception.

Request an Archived Response

Each time a valid data packet request is processed the Authorization Message that is returned is archived. To maintain a high level of performance Authorization Messages are archived asynchronously while the original Authorization Message is returned to the requestor.

If needed an Authorization Message for a previously processed transaction can be requested again by invoking the GetArchivedResponse web method. It is important to note that the transaction is not processed again, only the original Authorization Message that was archived is returned. Each Authorization Message is archived along with the unique user defined Request ID and Terminal ID that was provided in the data packet request. The GetArchivedResponse web method accepts the Request ID as an input parameter and will return the original Authorization Message for the given Request ID and Terminal ID.

NOTE: If Authorization Gateway Request IDs are duplicated for a given Terminal, only the last Authorization Message for the pairing will be returned.

Authorization Requirements

Authorization Page

For prearranged payment and deposit (PPD/CCD) entries the receiver must have the following text listed on the authorization page of their site.

- "Submission of this transaction assumes an agreement is in place between both parties to allow converting this transaction into an Electronic Funds Transfer transaction or paper draft, and to debit this account for the amount of the transaction. Additionally, the agreement further states that in the event this draft or EFT is returned unpaid, a service fee, as allowable by law, will be charged to this account via draft or EFT."

For internet initiated (WEB) entries the receiver must have the following text listed on the authorization page of their site.

- "By authorizing this transaction, customer agrees that merchant may convert this transaction into an Electronic Funds Transfer (EFT) transaction or paper draft, and to debit this account for the amount of the transaction. Additionally, in the event this

draft or EFT is returned unpaid, a service fee, as allowable by law, will be charged to this account via EFT or draft."

Merchants are required to retain the original authorization or copy of the original authorization in its original form that can be reproduced upon request. NACHA does not accept proof of an authorization as being a listing of the information captured at time of authorization.

The following information must be included in the authorization record:

- Consumer IP Address of Origination
- Consumer Name
- Consumer Address
- Transaction Amount
- Transaction Effective Date
- Consumer E-mail address (optional; industry recommended best practice)
- Website where payment was accepted
- Signifying whether authorization is for a single or recurring/multiple debits, and debit schedule if recurring/multiple
- Consumer Banking information
- Statement of how the consumer's identity was authenticated

Recorded Authorization

For telephone initiated (TEL) entries the receiver must have the following verbiage (or substantially similar) read and captured on the recorded customer authorization.

- "By providing your bank account information and verbal authorization today, <Today>, you are authorizing <Merchant> to create an ACH debit to your account and that this Check by Phone may be drafted from your account as early as today. In the event your Check by Phone is returned from your bank unpaid, you further agree that a fee of $<Fee> or as allowable by law shall also be charged to your account via draft or ACH debit. Do you authorize <Merchant> to proceed with this Check by Phone? A Check by Phone will be drafted from your bank account with the following information(Bank Routing Number, Account Number, Check Number, and Check by Phone Amount). Please allow 12 to 72 business hours for this transaction to post to your account. Should you have any questions regarding your payment, you may reach our office at <Contact Phone>."

Receipt

For point-of-purchase (POP) single debit entries the receiver must receive a copy of the receipt and the voided check. The receipt provided to the receiver must contain the following for each of the transaction types below.

- **Approved Sale or Override:**
  - **Footer Text:** "I authorize the merchant to convert my check to an electronic funds transfer, or paper draft, and debit my account for the amount of the transaction. In the event that my draft or EFT is returned unpaid, I agree that a fee of $25 (or as allowed by law) may be charged to my account via draft or EFT."
  - **Signature Line:** Yes

- **Verification Only:**
  - **Footer Text:** "Must retain check for deposit."
  - **Signature Line:** No

- **Decline:**
  - **Footer Text:** None
  - **Signature Line:** No

- **Void:**
  - **Footer Text:** None
  - **Signature Line:** No

Sample Code – Microsoft Visual Studio 2003

The first step is to add a Web Reference to the web service URL below in your project called com.eftchecks.demo.

https://demo.eftchecks.com/Webservices/AuthGateway.asmx

Example Code - GetCertificationTerminalSettings()

VB.NET

```
Public Function GetCertificationTerminalSettings() As String
        'This function will get the Certification Terminal Settings for Terminal 1010.

        'Create variable to hold Authorization Gateway Response
        Dim myAuthGatewayResponse As String

        'Create an instance of the Authorization Gateway
        Dim myAuthGateway As New com.eftchecks.demo.AuthGateway

        'Create an instance of the Authorization Header
        Dim myAuthHeader As New com.eftchecks.demo.AuthGatewayHeader

        'Populate the Auth Header with the User Name, Password, and Terminal ID
        With myAuthHeader
            .UserName = "myUserNameGoesHere"
            .Password = "myPasswordGoesHere"
            .TerminalID = 1010
        End With
```

```
        'Apply the Auth Header to the Auth Gateway
        myAuthGateway.AuthGatewayHeaderValue = myAuthHeader

        'Get the Certification Terminal Settings from the Authorization Gateway
        myAuthGatewayResponse = myAuthGateway.GetCertificationTerminalSettings()

        'Create a new XML Document for the Certification Terminal Settings
        Dim myTerminalSettings As New System.Xml.XmlDocument

        'Load the Certification Terminal Settings XML into an XML Document
        myTerminalSettings.LoadXml(myAuthGatewayResponse)

        'Return the Certification Terminal Settings
        Return myTerminalSettings.OuterXml.ToString

    End Function
```

C#

```
public string GetCertificationTerminalSettings()
{
  //This function will get the Certification Terminal Settings for Terminal 1010.

  //Create variable to hold Authorization Gateway Response
  string myAuthGatewayResponse;

  //Create an instance of the Authorization Gateway
  com.eftchecks.demo.AuthGateway myAuthGateway = new com.eftchecks.demo.AuthGateway();

  //Create an instance of the Authorization Header
  com.eftchecks.demo.AuthGatewayHeader myAuthHeader = new
  com.eftchecks.demo.AuthGatewayHeader();

  //Populate the Auth Header with the User Name, Password, and Terminal ID
       {
          myAuthHeader.UserName = "myUserNameGoesHere";
          myAuthHeader.Password = "myPasswordGoesHere";
          myAuthHeader.TerminalID = 1010;
       }

  //Apply the Auth Header to the Auth Gateway
  myAuthGateway.AuthGatewayHeaderValue = myAuthHeader;

  //Get the Certification Terminal Settings from the Authorization Gateway
  myAuthGatewayResponse = myAuthGateway.GetCertificationTerminalSettings();

  //Create a new XML Document for the Certification Terminal Settings
  System.Xml.XmlDocument myTerminalSettings = new System.Xml.XmlDocument();

  //Load the Certification Terminal Settings XML into an XML Document
  myTerminalSettings.LoadXml(myAuthGatewayResponse);

  //Return the Certification Terminal Settings
  return myTerminalSettings.OuterXml.ToString;

}
```

Contact Information

For questions or to receive certification and live username/passwords and URLs please contact:

Integration Department
integration@globaletelecom.com

Document History

Version Number	Modification Date	Modification
1.1	03/21/2008	Updated MICR_DATA element description and data type
1.2	04/02/2008	Updated to include EXCEPTION element information
1.3	05/08/2008	Updated to include GetArchivedResponse Web Method
1.3	05/08/2008	Updated to include Line Number and Line Position attributes on the Validation Error Element
1.4	05/13/2008	Updated to include Check 21 Specification
1.5	05/15/2008	Updated to include requested Username and Password.
1.5	05/15/2008	Updated to include Process Single Certification Check Web Method.
1.6	07/31/2008	Update Courtesy Card Information
1.7	02/27/2009	Updated to include CCD specification & Credits for PPD and CCD
1.8	4/12/2010	Added Void and Refund to all SEC Codes
1.9	6/16/2010	Added non-guarantee schemas to PPD, CCD TEL and WEB
1.10	9/28/2010	Updated non-guarantee & credit schema links to PPD, CCD TEL and WEB
1.11	12/13/2011	Added Authorization Verbiage for each SEC code, updated Contact Information and added Custom field descriptions
1.12	2/29/2012	Add CCD definition
1.13	3/13/2012	Removed WEB Schemas – Guaranteed and terminals from the documentation. Corrected misspelling issues.
1.14	4/17/2012	Corrected Ck21 hyperlinks, added Token & MICR

		information & removed ARC & BOC information
1.15	6/15/2012	Added additional Web authorization requirements

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