DOTS BIN Validation

Developer's Guide

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Introduction

DOTS BIN Validation is an XML web service that provides information about charge cards. By using the first six digits of the card number (aka BIN or Bank Identification Number), DOTS BIN Validation provides information about the charge card itself as well as the bank that issued the card.

With BIN validation, users can verify bank and charge card information to protect against fraud and superfluous charge-backs. This information can be used to improve online applications or as supplemental information for existing databases.

Integration

Integration of DOTS BIN Validation into user applications is generally a straightforward process. For common programming platforms, such as ASP, ASP.NET, ColdFusion, PHP, etc., Service Objects will likely have sample code available online:

http://www.serviceobjects.com/support/dots_example_code.asp

If the code you seek is not available online, you can ask Service Objects to build a custom example for you. Email support@serviceobjects.com for more details.

Web Service Structure

Web services provide a standard interface to encapsulate tricky business logic. They allow simple integration of applications via the web. Service Objects has followed web services best practices and come up with some of its own standards to ensure that its web services are as easy to integrate, and as accessible as possible.

The host path, or physical location of the web service is here:
http://trial.serviceobjects.com/bv/BinValidation.asmx

The location of the WSDL, or Web Service Definition Language document, is here:
http://trial.serviceobjects.com/bv/BinValidation.asmx?WSDL
(This is also accessible via the "Service Definition" link on the web service page.)

The WSDL is an XML document that defines the interaction web service, meaning its inputs, outputs, operations, and the like. Most likely, you will have another tool read this WSDL and make the operations available to you in your application via some type of proxy class. Whenever your utilities or IDE asks for a WSDL path, you can provide this one.

Every web service has *operations* that it offers to subscribers. These operations, also called methods, contain different functionality and return different outputs. DOTS BIN Validation has just one operation:

ValidateBIN – Uses the provided BIN to retrieve charge card and bank information. If the specified BIN is not found, an error will be returned requesting a valid BIN.

Request Types

DOTS BIN Validation is a public XML web service that supports SOAP(1.1 and 1.2), POST, and GET request methods. A request type is just the type of web (HTTP) request used to interact with our web services.

GET - All of the input data is in the query string appended to the URL. The response is simple XML.

POST - The input parameters are in the body of the request instead of the query string. The response is simple XML.

SOAP - The input parameters are in an XML SOAP message contained within the body of the request. The response is an XML SOAP message.

Analysis of Request Types

GET is the easiest method to implement by hand because you just set up the URL and query string. It is also easy to debug because you can test the URL + query string in a web browser and see the output.

POST is probably the best method to implement by hand because you do not have to know the specifics of SOAP, and is a little cleaner than passing input parameters in the query string via GET.

SOAP is the best method if you are using a platform that supports SOAP. In many programming environments you can the service's WSDL file (http://trial.serviceobjects.com/bv/BinValidation2.asmx?WSDL) to create a proxy class to help you interact with the web service. In this case you only have to create an instance of the proxy and use its methods. This completely abstracts the programmer from any complications like sending/receiving web requests/responses as well as any XML parsing. This is typically available in newer environments like PHP version 5, ColdFusion version 7, .NET, etc. Older languages like PHP version 4 and ColdFusion version 5 will require the use of GET or POST.

XML Parsing

If you are not using an environment that provides a proxy class for you to use, then you will have to parse XML. If you do have a proxy, then it uses an XML parser behind the scenes for you. Although XML parsing can be done without a parser, most programming environments provide easy access to several standard ones. **We strongly recommend that you take advantage of an XML parser**. These parsers may take a few more minutes to integrate if the developer is not familiar with them, but will give your application an added level of security against improper parsing. Without them it is very difficult, even for skilled programmers to write robust code that can handle all cases of XML properly. Because we have very consistent XML you could get away without this extra precaution, but we suggest you use an XML parser anyway to ensure your application is of the highest quality.

Operation Definitions

This section defines the input, output and behavior of the operations in DOTS BIN Validation.

Validate BIN - Inputs

Name	**Type**	**Description**
BinNumber	String	The six-digit BIN you wish to validate. The BIN is the first six digits of a given charge card number.
LicenseKey	String	Your license key to use the service. Sign up for a free trial key at www.serviceobjects.com.

Validate BIN – Outputs

If no errors are encountered a BinValidationInfo element will be returned with the following information. If there is an error, an Error object will be returned (explained in next section).

Name	**Type**	**Description**
BIN	String	The input BIN
BankName	String	The name of the bank that issued the charge card.
PaymentMethod	String	Credit, Debit, or Prepaid
CardType	String	Description of the type of card (i.e. Classic, Platinum, etc.)
CountryAbbreviation	String	Abbreviation of the country where the issuing bank is located.
CountryName	String	Name of the country where the issuing bank is located
PhoneNumbers	String	List of service phone numbers for the charge card.
DEBUG	String	Unused in this service.

Errors

Generally, an error is anything that happens during a run of DOTS BIN Validation that causes the service to fail. If an error occurs, an XML error message, similar to the one below, will result instead of the BinValidationInfo output described above:

Example:

```
<Error>
  <Type>Authorization</Type>
  <TypeCode>1</TypeCode>
  <Desc>Your license key does not work on this service.</Desc>
  <DescCode>8</DescCode>
</Error>
```

There are four error types described below.

Error Types

Type	Type Code	Billable	Standard Across All Gen2 Web Services
Authorization	1	No	Yes
User Input	2	Yes	No
Service Objects Fatal	3	No	Yes
Domain Specific	4	Yes	No

Error type 1: Authorization

Theses are standard to all Generation 2 DOTS Web Services.

DescCode	Desc
0	Unknown authorization error.
1	Please provide a valid license key for this web service.
2	The daily allowable number of transactions for this license key has been exceeded.
3	The monthly allowable number of transactions for this license key has been exceeded.
4	The total allowable number of transactions for this license key has been exceeded.
5	There are not enough transactions available. Check your daily/monthly transaction limits.
6	This license key has not yet been activated.
7	This license key has expired.
8	Your license key does not work on this service.

Error type 2: User Input

User Input errors are caused when a user inputs an invalid value or fails to provide a certain input field altogether. If a developer creates a request and mistypes a parameter name, it will probably cause a User Input Error.

DescCode	Desc
1	`"You must input a license key in the LicenseKey field."`
2	`"Improper BIN format. Please input a valid BIN."`

Error type 3: Service Objects Fatal

The Desc will always be the same and the DescCode has no meaning. This is standard to all Generation 2 DOTS Web Services. This is a rare error that signals either a bug in the DOTS BIN Validation service, or a Network/Connectivity issue.

DescCode	Desc
1	"Unhandled error. Please contact Service Objects."

Error type 4: Domain Specific

Domain specific errors represent the common errors seen in Service Objects services. Domain Specific errors indicate that the service completed successfully but the result is not good.

DescCode	Desc
1	"BIN not found. Please input a valid BIN."
2	"Bank information is currently unavailable."

Conclusion

Service Objects is pleased to offer you a free trial of DOTS BIN Validation.

Sign up today for a free trial at:
http://www.serviceobjects.com/products/dots_bin_validation.asp

Technical questions or concerns can be directed to support@serviceobjects.com.

If you are interested in purchasing DOTS BIN Validation, please contact:
sales@serviceobjects.com.

We welcome your feedback! Please do not hesitate to let us know what you think of our web services, documentation, or customer support.
www.serviceobjects.com