Securities Lending Reporting Web Service

External Interface Specification

November 2009

Table of Contents

Introduction

About this Guide

This specification has been designed as to provide external parties with the information required in order to write interfaces to the Web Service ASX is developing for the ASX Securities Lending direct reporting facility[1]. The Securities Lending Submission Service is provided to the Participants who may be interested in automating the data submission process.

The Submission Service itself is described by way of a Web Services Description Language (WSDL).

The Submission Service exposes two operations as per WSDL below:

- Daily Submission (submitDaily)
- Quarterly Submission (submitQuarterly)

Both Daily and Quarterly submission operations require four arguments, being:

- ASXOnline User Name,
- ASXOnline Password,
- ASXOnline Company PIN, and
- The CSV file being uploaded.

If you do not have an ASX Online User Name, Password or Company PIN, please contact the ASX Online administrator in your firm. They will provide you with these details. If you do not know who your ASX Online administrator is, or are not a Participant of ASX, please contact the ASX Online Help Desk on 1800 682 484 or via email at ASX.Online@asx.com.au.

As well as providing the above functions via the Web Service described in this document, these functions can be performed essentially manually via the internet by logging into the ASXOnline Securities Lending Reporting Facility through your internet browser. The steps required to access the ASXOnline facility are described in a separate User Guide which can be found here: https://www.asxonline.com/participants/services/securitylending/usernotes.pdf.

Aside from error response upon unsuccessful submission, no reports will be available directly through the Web Service.

If you have any questions or require clarification on the use of the web service, please contact ASX Customer Service (Hours are 8:30am-6:00pm Sydney) on:
- 131 ASX (131 279)   from within Australia (cost of a local call) or
- +61 2 9338 0000   from Overseas

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[1] ASTC Bulletin references P2009/583 *Technical Capability & Effective Date For Securities Lending Activity Reporting - Daily Reporting And Quarterly Reporting ("Direct Reporting")*: https://www.asxonline.com/intradoc-cgi/groups/clearing_and_settlement/documents/communications/asx_024864.pdf

Securities Lending Submission Service Overview

The following WSDL defines the Submission service.

```xml
<?xml version="1.0" encoding="utf-8"?>
<definitions
    xmlns="http://schemas.xmlsoap.org/wsdl/"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
    targetNamespace="http://webservice.participants.asx.com.au"
    xmlns:tns="http://webservice.participants.asx.com.au"
    xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">

  <message name="uploadReturn">
        <part name="uploadReturn" type="xsd:boolean"></part>
  </message>
  <message name="uploadRequest">
   <part name="username" type="xsd:string"></part>
   <part name="password" type="xsd:string"></part>
   <part name="pin" type="xsd:string"></part>
   <part name="csv" type="xsd:hexBinary"></part>
  </message>

  <portType name="SecurityLendingSubmission">
   <operation name="submitDaily">
     <input message="tns:uploadRequest"/>
     <output message="tns:uploadReturn"/>
   </operation>
   <operation name="submitQuarterly">
     <input message="tns:uploadRequest"/>
     <output message="tns:uploadReturn"/>
   </operation>
  </portType>

  <binding name="SecurityLendingSubmissionBinding" type="tns:SecurityLendingSubmission">
   <soap:binding style="rpc" transport="http://schemas.xmlsoap.org/soap/http"/>
   <operation name="submitDaily">
    <soap:operation soapAction=""/>
    <input>
     <mime:multipartRelated>
      <mime:part>
        <soap:body use="literal"/>
      </mime:part>
      <mime:part>
        <mime:content part="csv" type="application/octet-stream"/>
      </mime:part>
     </mime:multipartRelated>
    </input>
    <output>
     <soap:body use="literal"/>
    </output>
```

```
  </operation>
  <operation name="submitQuarterly">
   <soap:operation soapAction=""/>
   <input>
    <mime:multipartRelated>
     <mime:part>
      <soap:body use="literal"/>
     </mime:part>
     <mime:part>
      <mime:content part="csv" type="application/octet-stream"/>
     </mime:part>
    </mime:multipartRelated>
   </input>
   <output>
    <soap:body use="literal"/>
   </output>
  </operation>
 </binding>

 <service name="SecurityLendingService">
  <port name="SecurityLendingSubmission" binding="tns:SecurityLendingSubmissionBinding">
   <soap:address location="https://www.asxonline.com/Participants/services/SecurityLendingSubmission"/>
  </port>
 </service>

</definitions>
```

SOAP Request example

Here is an example of daily submission SOAP request.

```
------=_Part_0_10159276.1255406309890
Content-Type: text/xml; charset=UTF-8
Content-Transfer-Encoding: 8bit
Content-ID: test1234

<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:web="http://webservice.participants.asx.com.au">
  <soapenv:Header/>
  <soapenv:Body>
    <web:submitDaily>
      <username>smith_j</username>
      <password>password</password>
      <pin>123456</pin>
      <csv href="file1234"/>
    </web:submitDaily>
  </soapenv:Body>
</soapenv:Envelope>
------=_Part_0_10159276.1255406309890
Content-Type: application/octet-stream
Content-Transfer-Encoding: binary
Content-ID: <file1234>

14/09/2009
ASX_CODE
BHP,222,111
```

------=_Part_0_10159276.1255406309890--

Daily Submission

The **submitDaily** operation requires four mandatory arguments:

- ASXOnline User Name,

- ASXOnline Password,

- ASXOnline Company PIN, and

- CSV file containing the daily data (as attachment)

If you do not have an ASX Online User Name, Password or Company PIN, please contact the ASX Online administrator in your firm. They will provide you with these details. If you do not know who your ASX Online administrator is, or are not a Participant of ASX, please contact the ASX Online Help Desk on 1800 682 484 or via email at ASX.Online@asx.com.au.

CSV file format for Daily Submissions

A comma separated file format has been chosen, identical to the format required for manual submissions. This format is as follows:

	A	B	C	D
1	DD/MM/YYYY			
2	<file-type - [ISIN|ASX_CODE]>			
3	<asx code or isin>	<borrowed-volume>	<loaned-volume>	
4	<asx code or isin>	<borrowed-volume>	<loaned-volume>	
5	<asx code or isin>	<borrowed-volume>	<loaned-volume>	
6	<asx code or isin>	<borrowed-volume>	<loaned-volume>	
7				
8				
9				
10				

Example of the file containing ISINs

```
24/07/2009
ISIN
AU000000BHP4,12,13
```

Example of file containing ASX codes

```
24/07/2009
ASX_CODE
BHP,12,13
```

File name should not be longer than 30 characters including .csv extension which is mandatory.

On Success

On successful submission, the data specified in the CSV file are committed to the database and the service returns a status code of 1 in the response as shown below.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soapenv:Header/>
  <soapenv:Body>
    <tns:submitDailyResponse xmlns:tns="http://webservice.participants.asx.com.au">
      <uploadReturn>1</uploadReturn>
    </tns:submitDailyResponse>
  </soapenv:Body>
</soapenv:Envelope>
```

Quarterly Submission

The **submitDaily** operation requires four mandatory arguments:

- ASXOnline User Name,

- ASXOnline Password,

- ASXOnline Company PIN, and

- CSV file containing the quarterly data (as attachment)

If you do not have an ASX Online User Name, Password or Company PIN, please contact the ASX Online administrator in your firm. They will provide you with these details. If you do not know who your ASX Online administrator is, or are not a Participant of ASX, please contact the ASX Online Help Desk on 1800 682 484 or via email at ASX.Online@asx.com.au.

CSV file format

A comma separated file format has been chosen, identical to the format required for manual submissions. This format is as follows:

	A	B	C
1	<year>-<quarter>		
2	<file-type - [ISIN|ASX_CODE]>		
3	<asx code or isin>	<committed-volume>	
4	<asx code or isin>	<committed-volume>	
5	<asx code or isin>	<committed-volume>	
6	<asx code or isin>	<committed-volume>	
7			
8			
9			
10			

Example of the file containing ISINs

```
2009-3
ISIN
AU000000BHP4,12
```

Example of file containing ASX codes

```
2009-3
ASX_CODE
ASX,12
```

File name should not be longer than 30 characters including .csv extension which is mandatory.

On Success

On successful submission, the data specified in the CSV file are committed to the database and the service returns a status code of 1 in the response SOAP message.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soapenv:Header/>
  <soapenv:Body>
    <tns: submitQuarterly Response xmlns:tns="http://webservice.participants.asx.com.au">
      <uploadReturn>1</uploadReturn>
    </tns: submitQuarterly Response>
  </soapenv:Body>
</soapenv:Envelope>
```

Error Handling

The service invocation may fail due to various conditions, such as incorrect password or PIN supplied in the service request.

On these conditions, the web service responds with SOAP Fault element in the response. As per standard, the SOAP Fault element contains the fault code and the fault string that contains the detailed message indicating the nature of the error.

ASX recommends that when Participants encounter error during web service calls they are to submit the data manually via the website to obtain the source of the error. Hence the fault string will not contain fine-grained error information.

The error response will be of the following structure:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soapenv:Header/>
  <soapenv:Body>
    <soapenv:Fault>
      <faultcode>SOAP-ENV:Client</faultcode>
      <faultstring>Some error description</faultstring>
    </soapenv:Fault>
  </soapenv:Body>
</soapenv:Envelope>
```

If you continue to experience problems using the web service, please contact ASX Customer Service (Hours are 8:30am-6:00pm Sydney) on:
- 131 ASX (131 279)   from within Australia (cost of a local call) or
- +61 2 9338 0000   from Overseas