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Online Software Provider (OSP) Appointment Web Service - MIG

Message Implementation Guide (MIG)

Version 1.2



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VERSION CONTROL

Version	Revision date	Author	Summary of Change
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0.2	12/10/2015	Janet Wong	<ol style="list-style-type: none"> 1. Accepted track changes from review feedback. 2. Updated to reflect review feedback.
0.3	14/10/2015	Janet Wong	<ol style="list-style-type: none"> 1. Separated the Business Rules in two sections 5.3.1 (Partner Agency Business Rules) and 5.3.2 (OSP Business Rules) to reflect feedback. 2. Documented the mailbox in section 2.2 ('Cloud Software A&A' mailbox at CloudSoftwareA&A@ato.gov.au).
1.0	19/10/2015	Alex Duncan	Prepared for release.
1.1	26/02/2016	Tung Le	<ol style="list-style-type: none"> 1. Updated sample request in Appendix A. 2. Updated service endpoint url to https from http in section 3.4.
1.2	26/02/2016	Tung Le	<ol style="list-style-type: none"> 1. Updated WSDL to single file format in section 4.4

Document versioning is described in [IT Standard 03](#)



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1 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to provide information that will assist authorised software developers (OSP) and authorised partner government agencies (Partner Agencies) in the implementation of calls to the Online Software Provider (OSP) Appointment Web Service.

1.2 AUDIENCE

The audience for this document is any organisation (e.g. authorised partner government agencies and online software developers) that will be building components that consume the OSP Appointment Web Service into their systems.

1.3 DOCUMENT SCOPE

This document contains the necessary information required to implement the OSP Appointment Web Service as described in the following functions and processes:

- validation rules;
- error messages; and
- message structure.

In Scope	Rationale for Inclusion
OSP Appointment Web Service schema description	Describes the necessary information that will assist online software developers to implement the OSP Appointment Web Service into their software.

Table 1: In Scope

The following is not in scope for this document

Out of Scope	Rationale for Exclusion
ATO "back-end" services and components	Details of the inner workings of ATO systems such as Access Manager are described in related documents that are not required to be understood by external stakeholders.
Alternate endpoints using different protocols	Alternate endpoints (if any) for the same service using different protocols or transport mechanisms (e.g. a REST service) would be described in a different document. The rationale for this decision is that a calling system would only use one technology or protocol stack to call any given service to perform a business operation.

Table 2: Out of Scope

1.4 REFERENCES

Name	Document Owner	Description
1 ATO Common Message Implementation Guide	SBR	<p>Refer to references contained in https://standardbusinessreporting.sharefile.com</p> <p>Instructions common to many ATO forms, schedules and services that use the SBR channel.</p> <p>Refer to the following sections:</p> <ul style="list-style-type: none"> • 1 Introduction • 1.5 Supporting documentation • 2 Business Context
2 SBR ebMS3 Web Services Implementation Guide	SBR	<p>Refer to references contained in https://standardbusinessreporting.sharefile.com</p> <p>Technical interface data that is common to all business processes and messages that use the SBR channel. Contains web service protocol specifications, standard message header structure, standard error codes, authentication protocol and trust broker.</p> <p>Refer to the following sections:</p> <ul style="list-style-type: none"> • 1.6.2.4 Web Service Implementation Guides (WIG) • 1.6.2 SBR ebMS3 knowledge repository • 1.6.2.5 Message Implementation Guides (MIG) • 1.6.2.6 Identity Management • 1.6.2.7 Software Developer Kit (SDK) • 6. Secure Communication with SBR ebMS3 • 6.3 Security Token Service (STS) • 6.4 Secure Messaging • 6.5 Signature Structures

Table 3: References

1.5 TERMINOLOGY

This section contains terms and acronyms used within this document.

Term/Acronym	Expanded	Definition
ABN	Australian business number	A unique public identifier issued to all entities registered in the Australian Business Register (ABR), to be used in their dealings with government. Companies registered under the Corporations Law and business entities carrying on an enterprise in Australia are entitled to an ABN. It is restricted to an 11 digit number.
AM	Access Manager	Access manager is the authorisation system for ATO's online services.
AUSKey		A single secure online sign on for business to government agencies. AUSKey is a requirement for interactions with OSP Appointment Web Service.
Device AUSKey		An AUSKey assigned to a device (that has a <i>custodian</i>), i.e., system, rather than an individual.
Partner Agency	N/A	An authorised government agency that is registered to interact with services that retrieve information related to OSP subscriptions, i.e., the OSP Appointment Web Service.
OSP	Online Software Provider	An OSP is the business that owns the device AUSKey used to authenticate with the OSP Appointment Web Service. It is this business that has "subscribers" that nominated the OSP ABN through the ATO external-facing AM web application. The service is used to retrieve and verify data regarding relationships between OSPs and their subscribers.
Sender	N/A	The entity sending the request message to the OSP Appointment Web Service. The entity can be an OSP or partner agency. The sender must have a Device AUSKey.
SAML		Security Assertion Markup Language used to describe a format for security tokens (commonly referred to as <i>SAML tokens</i>).
Security Token		A representation of a user's identity and authentication data that can be transmitted as structure on the wire. In this interaction one type of token is used: a SAML token returned by the VANguard STS (see below). In other channels, the

		ATO can return a similar token in order to maintain an ATO session after authenticating once with VANguard (to establish a VANguard session).
SOAP	Simple Object Access Protocol	XML-based protocol (defined by an XML Schema) used to implement services.
SSID	Software Subscription Identifier	The unique software subscription identifier of the subscriber (ABN).
STS	Security Token Service	Security Token Service
Subscriber		An OSP Subscriber is a business (with an ABN) that has nominated an OSP through AM, either using an AUSkey to access the AM web application or requesting that an ATO operator perform this on their behalf which is permitted if the external user does not wish to obtain an AUSkey provided they pass ATO call centre proof of identity checks.
VANguard		A Whole-of-Government program providing a range of authentication services to secure business-to-government (B2G) and government-to-government (G2G) online transactions delivered by the Department of Industry, Innovation, Science Research and Tertiary Education (DIISRTE).
Web Service	N/A	A web service is a software component that is implemented using SOAP (for message serialisation) and typically (as is the case in this document) described via web service description language (WSDL) and most commonly uses HTTP as a transport protocol. See www.ws-i.org for further information.
WSDL	Web Services Description Language	The standard syntax for the definition of web services defined by the World Wide Web Consortium (W3C). An XML format for describing network services as a set of endpoints operating on messages containing either document-oriented or procedure-oriented information.

Table 4: Terminology

1.6 NAMESPACES

The namespace definitions used by the OSP Appointment web Service are listed below.

Namespace
http://www.w3.org/2007/05/addressing/metadata
http://www.w3.org/2005/08/addressing" xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy
http://tempuri.org/
http://schemas.microsoft.com/ws/2005/12/wsd/contract
http://www.w3.org/2006/05/addressing/wsd/
http://schemas.xmlsoap.org/ws/2004/08/addressing/policy
http://schemas.xmlsoap.org/ws/2004/09/mex
http://schemas.xmlsoap.org/ws/2004/08/addressing
http://schemas.xmlsoap.org/wsd/soap12/" xmlns:soap="http://schemas.xmlsoap.org/wsd/soap/
http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd
http://schemas.xmlsoap.org/soap/encoding/
http://www.w3.org/2001/XMLSchema
http://schemas.xmlsoap.org/wsd/
tns="urn:xml-gov-au:ato:services-online-software-provider-appointment:1.0"

Table 5: Namespaces

For more info, refer to the WSDL referred to in section 4.4, *WSDL Schema*.

2 GENERAL INSTRUCTIONS

This section provides instructions that are specific to the OSP Appointment Web Service.

2.1 PRE-REQUISITES

Prior to performing any interactions with the OSP Appointment Web Service, the sender must:

- Be registered as an Australian business and have obtained an ABN from the Australian Business Register (ABR);

- Obtain and install a Device AUSKey;
- Link the Device AUSKey to the ATO (through performing any electronic transaction); and
- Be authorised in Access Manager as an OSP or Partner Agency with access granted.

The calling system shall be capable of authenticating with the VANguard STS and receiving a SAML token. While not strictly a pre-requisite, it is strongly recommended that developers of the calling system use the SBR Authentication SDK to perform this interaction to obtain a SAML token and are familiar with the relevant documentation on the use of this SDK because it also covers the use of the SAML token with agency services where it is required.

For more info on SBR SDK, refer to the folder located in the link below:

<https://standardbusinessreporting.sharefile.com>

The folder contains the following SDKs for Java, .NET and C:

- AUSKey Keystore Manager SDK
- Security Token Manager SDK

Note: The above site requires authentication with a registered SBR developer account.

2.2 SENDER

For OSPs, contact the SBR Service Desk on **1300 488 231** or via SBRServiceDesk@sbr.gov.au (Available between 8:00am and 7:00pm AEST Monday to Friday).

For partner agencies, contact the 'Cloud Software A&A' mailbox at CloudSoftwareA&A@ato.gov.au.

3 OSP APPOINTMENT WEB SERVICE

3.1 OVERVIEW

This section describes the transmission of the OSP Appointment Web Service request/response messages.

Once a sender has met the pre-requisites, that sender may submit a SOAP request to the OSP Appointment Web Service. Note: A sender may belong to a partner agency or an OSP as described above.

The following diagram describes the process a sender follows when submitting their SOAP request to the OSP Appointment Web Service.

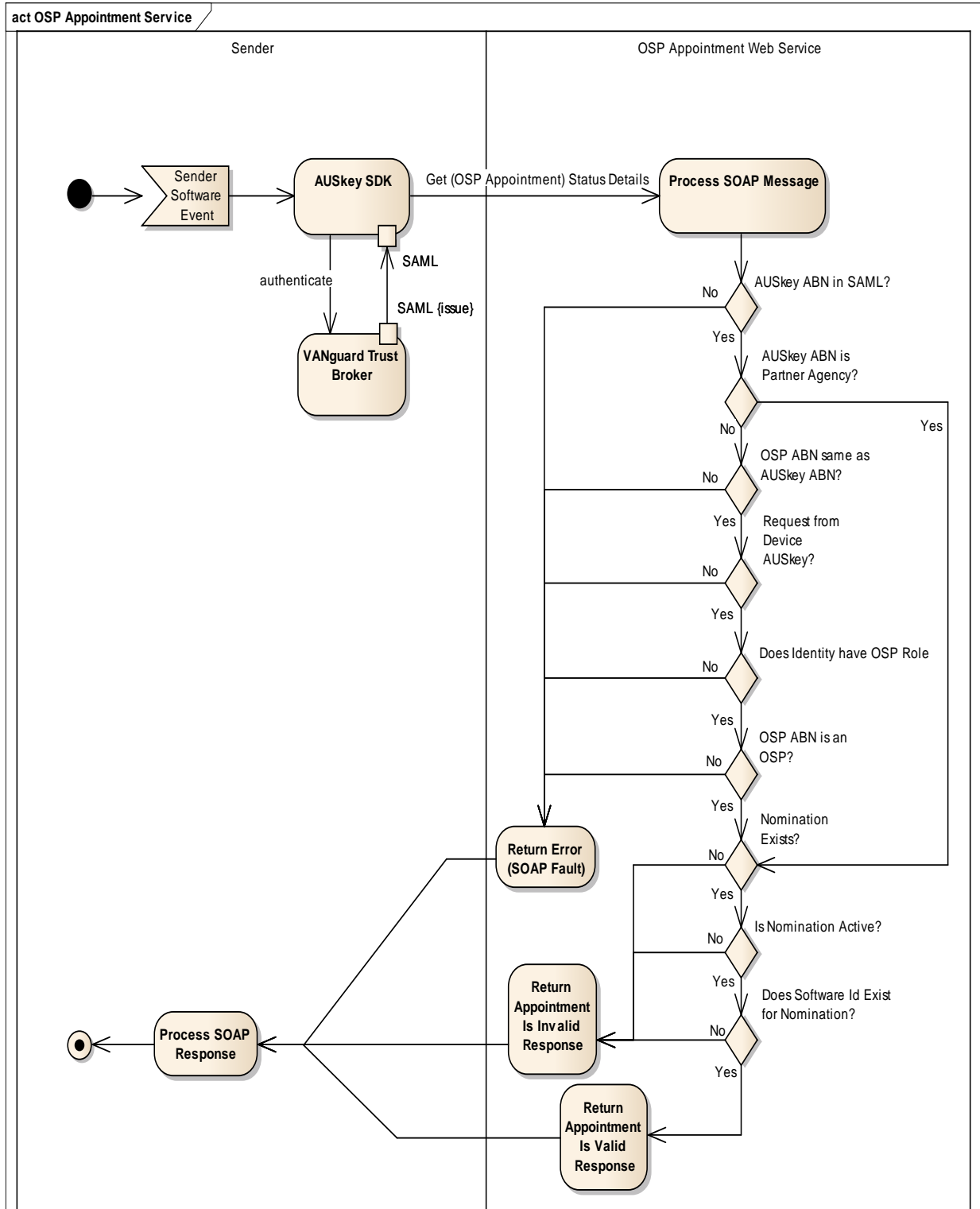


Figure 1: Overview process flow

3.1.1 Methods

The OSP Appointment Web Service will offer the following method:

- GetStatusDetails() – processes the SOAP request and returns the response with the status of the appointment and sometimes a reason why it is not considered a valid appointment.

Refer to section 5 (Service Operation Specifications) for more details.

3.2 WEB SERVICE STANDARDS

The OSP Appointment Web Service shall conform to the key standards specified in the table below.

Category	Applicable Recommendations
Transport	HTTP 1.1 HTTP over SSL
Messaging	SOAP 1.2 WS-Addressing
Security	HTTP over SSL RFC2459: Internet X.509 Public Key Infrastructure Certificate and CRL Profile WS-Security: SOAP Message Security 1.1 (WS-Security 2004) OASIS Standard Specification, 1 February 2006 Web Services Security: X.509 Certificate Token Profile 1.1 OASIS Standard Specification, 1 February 2006 Web Services Security: SAML Token Profile 1.1 OASIS Standard Specification, 1 February 2006

Table 6: Web Service Standards

3.3 COMMON CHARACTERISTICS

The OSP Appointment Web Service has the following common characteristics:

- All requests SHALL be initiated by a partner agency or OSP.
- All requests coming into the OSP Appointment service SHALL contain SAML in the WS-Security header.

3.4 AUTHENTICATION

Consumers of the OSP Appointment Web Service are required to authenticate with the VANguard Trust Broker in order to obtain a SAML token that can be used to call the service. The response from VANguard will include a signing key that must be used to sign a timestamp that is used to guard against replay attacks.

Details regarding calling the Trust Broker are outside the scope of this document. However, the developer is required to pass the following (using WS-Trust):

- AppliesTo SHALL be set to the first part of the service endpoint URL:
`https://am.ato.gov.au/webservices`

4 MESSAGE STRUCTURE

4.1 OVERVIEW

All OSP Appointment Web Service requests/responses SHALL employ the common SOAP message format using the document-literal style.

All messages SHALL be carried over a one way HTTPS transport and employ the SOAP envelope structure.

SOAP messages MUST employ UTF-8 or UTF-16 character encodings.

The SOAP message contains standard SOAP header and SOAP body as described in the figure below.

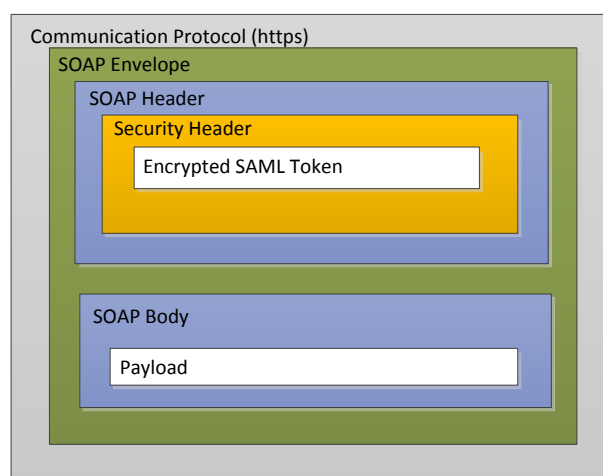


Figure 2: OSP Appointment Web Service - SOAP Message Structure

4.2 SOAP HEADER

4.2.1 Security Element

The OSP Appointment Web Service has adopted the Web Service Security 1.1 recommendation. All security related information **MUST** be carried in one or more Security elements within the SOAP header.

While the OSP Appointment Web Service is not an SBR service, it is expected that most consumers will use the SBR SDKs to simplify their interactions with VANguard. Whether or not the SDK is used by the consumer, the SBR documentation is an excellent starting point for developers wishing to understand how their services must integrate with VANguard in order to call the OSP Appointment Web Service.

Note that a Timestamp element shall also be generated by the caller and included in the request as per WS-Security Utility 1.0. This element will include a Created datetime based on the time that the message was created and an Expires datetime that allows for network latency between the caller and the ATO.

4.2.2 MessageId Element

The OSP Appointment Web Service supports WS-Addressing headers as described by a Policy element in the WSDL definition.

The only WS-Addressing header supported (not ignored) is the MessageId element that may optionally be used by the caller to facilitate analysis by the ATO of issues calling the service. In some cases the ATO may request that the caller include this header to facilitate diagnosis. It is therefore **highly recommended** that callers pass a MessageId to avoid subsequent changes to their codebase.

If supplied, the MessageId shall contain a string that conforms to the following format:

urn:uuid:xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx

where “x” represents a valid hexadecimal character (0-9a-f, A-F). In other words, it is expected that the final component (as delimited by colons) is a formatted UUID (or GUID) in what is commonly known as “(Windows) registry format” (without braces) or “canonical format”. The entire string is a Uniform Reference Name (URN) described by RFC 1737 where *uuid* is the namespace identifier for a UUID (RFC 4122).

A response from the service will then contain the same string in a WS-Addressing RelatesTo header so that the caller can correlate request and response messages for diagnostic purposes. The MessageId will appear in ATO logs allowing the ATO to access relevant log messages if the MessageId is quoted during support calls or other correspondence with the ATO.

Sample requests and responses in this document include the MessageId and RelatesTo headers, respectively, because the use of MessageId is recommended.

4.3 SOAP BODY

4.3.1 Request Message

The table below shows the elements that constitute the SOAP payload of the request message received by OSP Appointment Web Service.

For a sample request, refer to Appendix A in section 8 (Sample Request, Response and Service Fault).

ELEMENT	PURPOSE	MANDATORY
ProviderId	Identify the ABN of the provider (an ABN).	YES
SubscriberId	Identify the ABN of the subscriber (an ABN).	YES
SubscriptionId	Identify the Software Subscription Identifier (SSID), i.e. Software Id.	YES

Table 7: Request Message

4.3.2 Response Messages

4.3.2.1 Valid Response Message

Each SOAP request message received by OSP Appointment Web Service will undergo validation checks and the following details will be returned in the SOAP payload of the response message for all valid responses called by GetStatusDetails() method as described in the table below.

For a sample response, refer to Appendix A in section 8 (Sample Request, Response and Service Fault).

ELEMENT	PURPOSE	MANDATORY
ProviderId	Returns the ABN of the provider (aka Provider ABN) from the request.	YES
SubscriberId	Returns the ABN of the subscriber (aka Subscriber ABN) from the request.	YES
SubscriptionId	Returns the Software Subscription Identifier (SSID) from the request (Software Id).	YES
IsValid	A Boolean value to indicate if the authorisation request is valid (true) or invalid (false).	YES
Reason	A description of the reason why the appointment was determined to be valid or invalid.	YES

ReasonCode	A reason code relating to the reason.	YES
------------	---------------------------------------	-----

Table 8: Valid Response Message**Invalid Appointment Response Reason Codes**

The table below lists the possible reason codes for valid responses where IsValid is false that can be returned to the caller.

Reason Code	Reason
00000	N/A (valid appointment / nomination)
32010	A nomination does not exist between subscriber <SubscriberId> and provider <ProviderId>.
32011	The nomination is disabled.
32012	Subscription id <SubscriptionId> not found for the nomination between subscriber <SubscriberId> and provider <ProviderId>.

Table 9: Invalid Appointment Reason Codes (Valid Response)**4.3.2.2 Service Fault (Exceptions)**

Each SOAP request message received by OSP Appointment Web Service will undergo validation checks and the following details will be returned as a service fault for all invalid requests (exceptions) as described in the table below. Refer to section 8 (Sample requests & responses') for more details.

For a sample service fault, refer to Appendix A in section 8 (Sample Request, Response and Service Fault).

ELEMENT	PURPOSE	MANDATORY
ErrorCode	Describes the error code number.	YES
ErrorMessage	Describes the error message relating to the error code.	YES
ErrorId	Describes the error Id (GUID) which is a unique identifier and automatically generated by the system.	YES

Table 10: Service Fault (Exceptions)

4.4 WSDL SCHEMA

The WSDL schema used by the OSP Appointment Web Service is described below (along with necessary related schemas):

OspAppointmentService.wsdl

```
<?xml version="1.0" encoding="utf-8" ?>
<wsdl:definitions name="OspAppointmentService" targetNamespace="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:wsap="http://schemas.xmlsoap.org/ws/2004/08/addressing/policy"
xmlns:wsa10="http://www.w3.org/2005/08/addressing" xmlns:tns="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0"
xmlns:misc="http://schemas.microsoft.com/ws/2005/12/wsdl/contract"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:wsx="http://schemas.xmlsoap.org/ws/2004/09/mex"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:i0="http://tempuri.org/"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"
xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" xmlns:wsu="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <wsp:Policy wsu:Id="WSHttpBinding_IOspAppointmentService_policy">
    <wsp:ExactlyOne>
      <wsp>All>
        <wsaw:UsingAddressing />
      </wsp>All>
    </wsp:ExactlyOne>
  </wsp:Policy>
  <wsdl:types>
    <xs:schema elementFormDefault="qualified" targetNamespace="urn:xml-gov-
au:ato:messages-online-software-provider-appointment:1.0"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:tns="urn:xml-gov-
au:ato:messages-online-software-provider-appointment:1.0">
      <xs:import namespace="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0" />
      <xs:element name="GetStatusDetailsRequest">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" ref="q1:ProviderId" xmlns:q1="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
            <xs:element minOccurs="0" ref="q2:SubscriberId" xmlns:q2="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
            <xs:element minOccurs="0" ref="q3:SubscriptionId" xmlns:q3="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetStatusDetailsResponse">
        <xs:complexType>
```



```
<xs:sequence>
  <xs:element minOccurs="0" ref="q4:ProviderId" xmlns:q4="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
  <xs:element minOccurs="0" ref="q5:SubscriberId" xmlns:q5="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
  <xs:element minOccurs="0" ref="q6:SubscriptionId" xmlns:q6="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
  <xs:element minOccurs="0" ref="q7:IsValid" xmlns:q7="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
  <xs:element minOccurs="0" ref="q8:Reason" xmlns:q8="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
  <xs:element minOccurs="0" ref="q9:ReasonCode" xmlns:q9="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0" />
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>
<xs:schema attributeFormDefault="qualified" elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/2003/10/Serialization/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:tns="http://schemas.microsoft.com/2003/10/Serialization/">
  <xs:element name="anyType" nillable="true" type="xs:anyType" />
  <xs:element name="anyURI" nillable="true" type="xs:anyURI" />
  <xs:element name="base64Binary" nillable="true" type="xs:base64Binary" />
  <xs:element name="boolean" nillable="true" type="xs:boolean" />
  <xs:element name="byte" nillable="true" type="xs:byte" />
  <xs:element name="dateTime" nillable="true" type="xs:dateTime" />
  <xs:element name="decimal" nillable="true" type="xs:decimal" />
  <xs:element name="double" nillable="true" type="xs:double" />
  <xs:element name="float" nillable="true" type="xs:float" />
  <xs:element name="int" nillable="true" type="xs:int" />
  <xs:element name="long" nillable="true" type="xs:long" />
  <xs:element name="QName" nillable="true" type="xs:QName" />
  <xs:element name="short" nillable="true" type="xs:short" />
  <xs:element name="string" nillable="true" type="xs:string" />
  <xs:element name="unsignedByte" nillable="true" type="xs:unsignedByte" />
  <xs:element name="unsignedInt" nillable="true" type="xs:unsignedInt" />
  <xs:element name="unsignedLong" nillable="true" type="xs:unsignedLong" />
  <xs:element name="unsignedShort" nillable="true" type="xs:unsignedShort" />
  <xs:element name="char" nillable="true" type="tns:char" />
  <xs:simpleType name="char">
    <xs:restriction base="xs:int" />
  </xs:simpleType>
  <xs:element name="duration" nillable="true" type="tns:duration" />
  <xs:simpleType name="duration">
    <xs:restriction base="xs:duration">
      <xs:pattern value="\-?P(\d*D)?(T(\d*H)?(\d*M)?(\d*(\.\d*)?S)?)?" />
      <xs:minInclusive value="-P10675199DT2H48M5.4775808S" />
      <xs:maxInclusive value="P10675199DT2H48M5.4775807S" />
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="guid" nillable="true" type="tns:guid" />
  <xs:simpleType name="guid">
    <xs:restriction base="xs:string">
```

```

        <xs:pattern value="[\\da-fA-F]{8}-[\\da-fA-F]{4}-[\\da-fA-F]{4}-[\\da-fA-F]{4}-[\\da-fA-F]{12}" />
    </xs:restriction>
</xs:simpleType>
<xs:attribute name="FactoryType" type="xs:QName" />
<xs:attribute name="Id" type="xs:ID" />
<xs:attribute name="Ref" type="xs:IDREF" />
</xs:schema>
<xs:schema elementFormDefault="qualified" targetNamespace="urn:xml-gov-
au:ato:services-online-software-provider-appointment:1.0"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:element name="ProviderId" nillable="true" type="xs:string" />
    <xs:element name="SubscriberId" nillable="true" type="xs:string" />
    <xs:element name="SubscriptionId" nillable="true" type="xs:string" />
    <xs:element name="IsValid" type="xs:boolean" />
    <xs:element name="Reason" nillable="true" type="xs:string" />
    <xs:element name="ReasonCode" nillable="true" type="xs:string" />
</xs:schema>
<xs:schema elementFormDefault="qualified"
targetNamespace="http://schemas.datacontract.org/2004/07/Ato.EN.Security.Authorisation.AM
.Messaging.Cloud" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:ser="http://schemas.microsoft.com/2003/10/Serialization/"
xmlns:tns="http://schemas.datacontract.org/2004/07/Ato.EN.Security.Authorisation.AM.Messa
ging.Cloud">
    <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/" />
    <xs:complexType name="ServiceFault">
        <xs:sequence>
            <xs:element minOccurs="0" name="ErrorCode" type="xs:int" />
            <xs:element minOccurs="0" name="ErrorId" type="ser:guid" />
            <xs:element minOccurs="0" name="Message" nillable="true" type="xs:string" />
        </xs:sequence>
    </xs:complexType>
    <xs:element name="ServiceFault" nillable="true" type="tns:ServiceFault" />
</xs:schema>
</wsdl:types>
<wsdl:message name="GetStatusDetailsRequest">
    <wsdl:part name="parameters" element="q1:GetStatusDetailsRequest" xmlns:q1="urn:xml-
gov-au:ato:messages-online-software-provider-appointment:1.0" />
</wsdl:message>
<wsdl:message name="GetStatusDetailsResponse">
    <wsdl:part name="parameters" element="q2:GetStatusDetailsResponse" xmlns:q2="urn:xml-
gov-au:ato:messages-online-software-provider-appointment:1.0" />
</wsdl:message>
<wsdl:message
name="IOspAppointmentService_GetStatusDetails_ServiceFaultFault_FaultMessage">
    <wsdl:part name="detail" element="q3:ServiceFault"
xmlns:q3="http://schemas.datacontract.org/2004/07/Ato.EN.Security.Authorisation.AM.Messa
ging.Cloud" />
</wsdl:message>
<wsdl:portType name="IOspAppointmentService">
    <wsdl:operation name="GetStatusDetails">
        <wsdl:input wsaw:Action="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/IOspAppointmentService/GetStatusDetails" name="GetStatusDetailsRequest"
message="tns:GetStatusDetailsRequest" />

```

```
<wsdl:output wsaw:Action="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/IOspAppointmentService/GetStatusDetailsResponse"
name="GetStatusDetailsResponse" message="tns:GetStatusDetailsResponse" />
  <wsdl:fault wsaw:Action="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/IOspAppointmentService/GetStatusDetailsServiceFaultFault"
name="ServiceFaultFault"
message="tns:IOspAppointmentService_GetStatusDetails_ServiceFaultFault_FaultMessage" />
</wsdl:operation>
</wsdl:portType>
<wsdl:binding name="WSHttpBinding_IOspAppointmentService"
type="tns:IOspAppointmentService">
  <wsp:PolicyReference URI="#WSHttpBinding_IOspAppointmentService_policy" />
  <soap12:binding transport="http://schemas.xmlsoap.org/soap/http" />
  <wsdl:operation name="GetStatusDetails">
    <soap12:operation soapAction="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/IOspAppointmentService/GetStatusDetails" style="document" />
    <wsdl:input name="GetStatusDetailsRequest">
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output name="GetStatusDetailsResponse">
      <soap12:body use="literal" />
    </wsdl:output>
    <wsdl:fault name="ServiceFaultFault">
      <soap12:fault use="literal" name="ServiceFaultFault" namespace="" />
    </wsdl:fault>
  </wsdl:operation>
</wsdl:binding>
<wsdl:service name="OspAppointmentService">
  <wsdl:port name="WSHttpBinding_IOspAppointmentService"
binding="tns:WSHttpBinding_IOspAppointmentService">
    <soap12:address
location="https://am.ato.gov.au/webservices/2015/10/OspAppointmentService.svc" />
    <wsa10:EndpointReference>

<wsa10:Address>https://am.ato.gov.au/webservices/2015/10/OspAppointmentService.svc</wsa10
:Address>
    <Identity xmlns="http://schemas.xmlsoap.org/ws/2006/02/addressingidentity">
      <Dns>localhost</Dns>
    </Identity>
  </wsa10:EndpointReference>
</wsdl:port>
</wsdl:service>
</wsdl:definitions>
```

5 SERVICE OPERATION SPECIFICATIONS

5.1 GETSTATUSDETAILS()

Interaction name	GetStatusDetails()
Description	The purpose of this method call is to allow a partner agency or an OSP to submit a SOAP request to the OSP Appointment Web Service and get the status details (successful or failure submission) in the response message.
Consumers	Partner agency, OSP
Pre-conditions	Refer to 'Pre-requisites' in section 2.1 above.
Post-conditions	<p>For a successful submission the following will be returned:</p> <ul style="list-style-type: none"> a response message containing the information as described in in section 4.3.2 (Response Messages) above. <p>For an unsuccessful submission validation the following will be returned:</p> <ul style="list-style-type: none"> a service fault message (i.e. error code, error message and GUID) indicating the payload data that may be incorrect or incomplete. <p>Refer to section 0 (Validation Rules) for more details.</p>
Initiating party	Partner agency, OSP
Channel	Web Service

Table 11: GetStatusDetails()

5.2 VALIDATION RULES

Each SOAP request message received by OSP Appointment Web Service will undergo validation checks as described below.

5.2.1 Request Payload Validation Rules

The table below describes validation rules that apply to request interactions with the OSP Appointment Web Service.

Payload	Mandatory	Data Type	Validation Rules
ProviderId	Yes	Numeric(11)	<ol style="list-style-type: none"> 1. An error code 9005 will be returned if the mandatory Provider Id (ABN) is missing. 2. An error code 9006 will be returned if the value of the Provider Id (ABN) provided exceeds the size limit allowed, i.e. 11 characters in length. 3. An error code 9006 will be returned if the value of the Provider Id (ABN) provided contains invalid characters.
SubscriberId	Yes	Numeric(11)	<ol style="list-style-type: none"> 4. An error code 9005 will be returned if the mandatory Subscriber Id (ABN) is missing. 5. An error code 9006 will be returned if the value of the Subscriber Id (ABN) provided exceeds the size limit allowed, i.e. 11 characters in length. 6. An error code 9006 will be returned if the value of the Subscriber Id (ABN) provided contains invalid characters.
SubscriptionId	Yes	Numeric(10)	<ol style="list-style-type: none"> 7. An error code 9005 will be returned if the mandatory Subscription Id (SSID or Software Id) is missing. 8. An error code 9006 will be returned if the value of the Subscription Id (SSID) provided exceeds the size limit allowed, i.e. 10 characters in length. 9. An error code 9006 will be returned if the value of the Subscription Id (SSID) provided contains invalid characters. 10. An error code 9006 will be returned if the value of the Subscription Id (SSID) provided fails algorithm check.

Table 12: Payload Validation Rules

5.3 BUSINESS RULES

5.3.1 Partner Agency Business Rules

Business Rule		Valid Response (when condition is met)			Exception (when condition is not met)	
BR #	Condition	Invalid (True, False)	Reason Code	Reason	Error Code	Error Message
P1	All conditions below are met.	True	00000	N/A	N/A	N/A
P2	AUSkey ABN exists	N/A	N/A	N/A	9100	The requesting entity is not authorised to access this service.
P3	Nomination exists	False	32010	A nomination does not exist between subscriber <SubscriberId> and provider <ProviderId>.”	N/A	
P4	Nomination is active	False	32011	The nomination is disabled.	N/A	
P5	SSID exists for nomination	False	32012	The subscription id <SubscriptionId> not found for the nomination between subscriber <SubscriberId> and provider <ProviderId>.	N/A	

Table 13: Partner Agency Business Rules

5.3.2 OSP Business Rules

Business Rule		Valid Response (when condition is met)			Exception (when condition is not met)	
BR #	Condition	Invalid (True, False)	Reason Code	Reason	Error Code	Error Message
O1	All conditions below are met.	True	00000	N/A	N/A	N/A
O2	AUSkey ABN exists	N/A	N/A	N/A	9100	The requesting entity is not authorised to access this service.
O3	AUSkey ABN matches OSP ABN	N/A	N/A	N/A	9100	The requesting entity is not authorised to access this service.
O4	Identity has Device AUSkey	N/A	N/A	N/A	9102	The request entity must be a device AUSkey to access this service.
O5	Identity has OSP role	N/A	N/A	N/A	9103	The device AUSKey must be an online service provider (OSP) to access this service.
O6	AUSkey ABN is an OSP ABN	N/A	N/A	N/A	9101	The requesting entity must be an online service provider (OSP) to access this service.
O7	Nomination exists	False	32010	A nomination does not exist between subscriber <SubscriberId> and provider <ProviderId>.”	N/A	

O8	Nomination is active	False	32011	The nomination is disabled.	N/A	
O9	SSID exists for nomination	False	32012	The subscription id <SubscriptionId> not found for the nomination between subscriber <SubscriberId> and provider <ProviderId>.	N/A	

Table 14: OSP Business Rules

5.4 ERROR MANAGEMENT

This section describes the approach to be taken to the handling of errors and exception conditions associated with the submission of requests to OSP Appointment Web Service.

These conditions can be categorised into the following areas:

1. Request Validation – Data Validation Errors
2. Request Validation – Other User Errors
3. System Errors

Data Validation Errors result from invalid requests, i.e. the information content (provided by the user) of the payload is incorrect. These validation errors shall be handled as the service fault (error code, error message, GUID) and returned to the caller. Refer to section 5.4.1 (Data Validation Errors) for more details. The caller is expected to guard against receiving such errors through client-side validation in order to prevent unnecessary remote calls.

Other User Errors are based on other irregularities found in the user input, such as authorisation errors. Some of the conditions flagged at this level are of an informational or warning nature, and do not necessarily represent a service error condition. These conditions require additional setup using Access Manager, or separate registration or other liaison with the ATO in order to be corrected. These conditions require further action by parties initiating the service call but are considered exceptional during normal processing and are therefore returned as a service fault (error code, error message, GUID). Refer to section 5.4.2 for more details.

System Errors result from unexpected system errors due to the unavailability of system or network. These unexpected exceptions shall be handled as the service fault (error code, error message, GUID) and returned to the client. Refer to section 5.4.3 (System Errors) for more details.

5.4.1 Data Validation Errors

The table below lists the error codes and messages that will be returned from simple data type, length and format validation and returned to the caller as a service fault (exception).

Note: The reasons (text in table below) will not be returned in the response message. These reasons are documented here so that software developers can refer to them for troubleshooting purposes only.

Error Code	Error Message	Reason (Not returned in response message, i.e. for troubleshooting purposes only)
9005	The mandatory request payload information was missing.	<ul style="list-style-type: none"> The mandatory OSP ABN (operator client Id) was missing. The mandatory subscriber ABN was missing. The mandatory Subscription Id (Software Id) was missing.
9006	The request payload information provided was invalid.	<ul style="list-style-type: none"> The value of the OSP ABN (operator client Id) provided exceeded the size limit allowed. The value of the OSP ABN (operator client Id) provided contained invalid characters. The value of the subscriber ABN provided exceeded the size limit allowed. The value of the subscriber ABN provided contained invalid characters. The value of the software subscription Id provided exceeded the size limit allowed. The value of the software subscription Id provided contained invalid characters. The value of the software subscription Id provided failed algorithm check.

Table 15: Data Validation Errors

5.4.2 Other User Errors

The table below lists the error codes and messages that will be returned to the client as a service fault (exception).

Error Code	Error Message
9100	The requesting entity is not authorised to access this service.
9101	The requesting entity must be an online service provider (OSP) to access this service.
9102	The request entity must be a device AUSkey to access this service.
9103	The device AUSKey must be an online service provider (OSP) to access this service.

Table 16: Other User Errors

5.4.3 System Errors

The table below lists the error codes and messages that will be returned to the caller as a service fault, when an unexpected exception occurred.

Error Code	Error Message
9999	The system has encountered an unexpected error.

Table 17: System Errors

6 QUALITY OF SERVICE

The service has been configured to timeout after four seconds if a response is not able to be returned within that time.

6.1 SCHEDULED DOWNTIMES

The scheduled downtimes for the OSP Appointment Web Service are currently based on planned ATO Business Portal and Tax Agent Portal maintenance windows. Consumers should refer to the Portals web sites for up-to-date information on scheduled downtimes.

However, it is likely that Partner Agency consumers may have more stringent requirements on the availability of this service based on their own availability and performance metrics. These consumers should contact the CloudSoftwareA&A@ato.gov.au mailbox about their specific requirements.

7 END POINTS

This section defines the end points for OSP Appointment Web Service.

Logical Endpoint	Physical Endpoint URL	Metadata Endpoint URL
GetStatusDetails()	https://am.ato.gov.au/webservices/2015/10/OSPAppointmentService.svc	The WSDL definition has not been publicly exposed via an endpoint at this time.

Table 18: End points for OSP Appointment Web Service

8 APPENDIX A: SAMPLE REQUEST, RESPONSE AND SERVICE FAULT

Sample HTTP Request Body

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:wsu="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
  <s:Header>
    <a:Action s:mustUnderstand="1">urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/IospAppointmentService/GetStatusDetails</a:Action>
    <a:MessageID>urn:uuid:e04d2ef8-ccf5-4308-ab9f-f2d527139b5b</a:MessageID>
    <wsse:Security s:mustUnderstand="1" xmlns:wsse="http://docs.oasis-open.org/wss/oasis-
wss-wssecurity-secext-1.1.xsd">
      <d4p1:EncryptedAssertion Version="2.0" IssueInstant="2016-01-20T21:15:07.7409687Z"
d4p1:ID="_f8788ebe-2d55-4b96-b444-14176a8bfb5c"
xmlns:d4p1="urn:oasis:names:tc:SAML:2.0:assertion">
        <!-- SAML token from VANguard -->
      </d4p1:EncryptedAssertion>
      <wsu:Timestamp ID="_TimestampId">
        <wsu:Created>2015-10-25T22:31:03.8530813Z</wsu:Created>
        <wsu:Expires>2015-10-26T22:51:03.8530813Z</wsu:Expires>
      </wsu:Timestamp>
      <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
          <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#hmac-sha1" />
          <Reference URI="#_TimestampId">
            <Transforms>
              <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
            </Transforms>
            <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1" />
            <DigestValue>QAkhAm306bUX/j2axOQMRgdR7hQ</DigestValue>
          </Reference>
        </SignedInfo>
        <SignatureValue>u9pGputpCxCia+q9vBULD6Lyjyg</SignatureValue>
        <KeyInfo>
          <wsse:SecurityTokenReference xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-
1.0.xsd" xmlns:wssToken="http://docs.oasis-open.org/wss/oasis-wss-wssecurity-secext-
1.1.xsd" wsu:Id="STR1" wssToken:TokenType="http://docs.oasis-open.org/wss/oasis-wss-saml-
tokenprofile-1.1#SAMLV2.0">
            <wsse:KeyIdentifier ValueType="http://docs.oasis-open.org/wss/oasis-wss-saml-
token-profile-1.1#SAMLID">_27eb783f-5027-4986-806a-3c1464dd2009</wsse:KeyIdentifier>
          </wsse:SecurityTokenReference>
        </KeyInfo>
      </Signature>

```

```
</wsse:Security>
  <a:To s:mustUnderstand="1">http://blahblah:3112/OspAppointmentService.svc</a:To>
</s:Header>
<s:Body>
  <GetStatusDetailsRequest xmlns="urn:xml-gov-au:ato:messages-online-software-provider-
appointment:1.0" xmlns:cas="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">
    <cas:ProviderId>9999999999</cas:ProviderId>
    <cas:SubscriberId>0000000000</cas:SubscriberId>
    <cas:SubscriptionId>0000432100</cas:SubscriptionId>
  </GetStatusDetailsRequest>
</s:Body>
</s:Envelope>
```

Sample HTTP Response Body – Valid Response

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/IOspAppointmentService/GetStatusDetailsResponse</a:Action>
    <a:RelatesTo>urn:uuid:e04d2ef8-ccf5-4308-ab9f-f2d527139b5b</a:RelatesTo>
  </s:Header>
  <s:Body>
    <GetStatusDetailsResponse xmlns="urn:xml-gov-au:ato:messages-online-software-
provider-appointment:1.0">
      <ProviderId xmlns="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">9999999999</ProviderId>
      <SubscriberId xmlns="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">0000000000</SubscriberId>
      <SubscriptionId xmlns="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">0000432100</SubscriptionId>
      <IsValid xmlns="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">true</IsValid>
      <Reason xmlns="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">SUCCESS</Reason>
      <ReasonCode xmlns="urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0">0</ReasonCode>
    </GetStatusDetailsResponse>
  </s:Body>
</s:Envelope>
```

Sample HTTP Response Body – SOAP Fault

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">urn:xml-gov-au:ato:services-online-software-provider-
appointment:1.0/I0spAppointmentService/GetStatusDetailsServiceFaultFault</a:Action>
    <a:RelatesTo>urn:uuid:86d85d52-7b07-4c12-a3e1-7c3e9adabcd52</a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Sender</s:Value>
        <s:Subcode>
          <s:Value>s:Sender</s:Value>
        </s:Subcode>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-AU">The external caller of the service did not provide the
correct payload details in their request.</s:Text>
      </s:Reason>
      <s:Detail>
        <ServiceFault
xmlns="http://schemas.datacontract.org/2004/07/Ato.EN.Security.Authorisation.AM.Web.Cloud
AppointmentService.Messaging" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <ErrorCode>9006</ErrorCode>
          <ErrorId>72ec4b40-a79d-497b-b4d5-786091247411</ErrorId>
          <Message>The external caller of the service did not provide the correct payload
details in their request.</Message>
        </ServiceFault>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```