**Oracle® Communications ASAP Cartridge**
**SeaChange Axiom VOD Cartridge**

SeaChange Axiom VOD Cartridge Guide

First Edition

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Oracle Communications SeaChange Axiom VOD Cartridge Guide, First Edition

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# 1

# Cartridge Overview

This guide provides a detailed description of the SeaChange_Axiom_VOD Cartridge cartridge. It contains overview and technical information to assist with extending and integrating the cartridge into a customer environment.

The scope of this guide includes Oracle Communications ASAP (ASAP) as it pertains to the use of this cartridge. It is not intended to be a complete ASAP reference guide. For additional information when using this cartridge, refer to the ASAP documentation.

The SeaChange_Axiom_VOD Cartridge cartridge provides the ASAP service configuration and network element (NE) interface to activate subscriber services on T_ SEACHANGE-VOD_5-0_SEACHANGE_HOST NEs.

## Hardware and Software Requirements

The following sections contain the high-level software and hardware environment requirements for provisioning subscriber services on authentication center:

- NE Interface
- ASAP Version

### NE Interface

The following database tables in Service Activation Request Manager (SARM) are configured to support the NE configuration:

- tbl_host_clli
- tbl_clli_route
- tbl_comm_param
- tbl_resource_pool
- tbl_ne_config

### ASAP Version

This cartridge was developed and tested using ASAP version 7.

For more information on the operating environment of this ASAP version, refer to the ASAP version 7 Release Notes.

# Connecting to the NE

The cartridge uses Generic Message Based protocol.

# Services, Features, and Options

This cartridge supports the following services:

*Table 1–1    Supported Services*

| Service | Description |
| --- | --- |
| C_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT | Add Entitlement. Subscriber Management Service - Entitlement data |
| C_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT | Delete Entitlement. Subscriber Management Service - Entitlement data |
| C_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT | Replace Entitlement. Subscriber Management Service - Entitlement data |
| C_SEACHANGE-VOD_5-0_ADD_OFFERING | Add Offering. Subscriber Management Service - Offering data |
| C_SEACHANGE-VOD_5-0_DEL_OFFERING | Delete Offering. Subscriber Management Service - Offering data |
| C_SEACHANGE-VOD_5-0_MOD_OFFERING | Modify Offering. Subscriber Management Service - Offering data |
| C_SEACHANGE-VOD_5-0_ADD_SETTOP | Add SetTop. Subscriber Management Service - Settop data |
| C_SEACHANGE-VOD_5-0_DEL_SETTOP | Delete SetTop. Subscriber Management Service - Settop data |
| C_SEACHANGE-VOD_5-0_MOD_SETTOP | Modify SetTop. Subscriber Management Service - Settop data |
| C_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER | Add Subscriber. Subscriber Management Service |
| C_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER | Delete Subscriber. Subscriber Management Service |
| C_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER | Modify Subscriber. Subscriber Management Service |

# Communication Parameters

The following is the list of parameters for the sample NE configuration XML used by Service Activation Configuration Tool (SACT).

*Table 1–2    Communication Parameters*

| Parameter Label | Parameter Value | Description |
| --- | --- | --- |
| PROV_URL | http://98.174.76.68:8080 | Target(provisioning) URL. HTTPS protocol shall be used if the URL starts with 'https://' otherwise HTTP shall be used |
| IS_SSL | FALSE | Indicates whether http over SSL to be used for connection. |
| PROV_USER | admin | Provisioning user name. |
| PROV_PASSWORD | admin1 | Provisioning user password. |

*Table 1–2   (Cont.)  Communication Parameters*

| Parameter Label | Parameter Value | Description |
|---|---|---|
| READ_TIMEOUT | 10 | Read timeout for the HTTP(S) POST/GET Operation. |
| RESPONSELOG | true | Response logging enable or disable. |
| SSL_KEYSTORE_PATH | path1 | Keystore path(optional) - Used for authentication while using HTTPS connection |
| SSL_KEYSTORE_PASSWORD | password | Keystore password(optional) - Used for authentication while using HTTPS connection |
| SSL_TRUSTSTORE_PATH | path2 | truststore path(optional) - Used for authentication while using HTTPS connection |
| SSL_TRUSTSTORE_PASSWORD | password | truststore password(optional) - Used for authentication while using HTTPS connection |

# 2
# Atomic Service Description Layer (ASDL) Commands

ASDL commands represent a set of atomic actions that ASAP can perform on a network element (NE). ASAP can combine ASDLs to create meaningful services (CSDLs) within a cartridge.

This chapter presents detailed information on the ASDL parameters that we provide with this cartridge. The following table lists and describes the type of parameter information that is included.

*Table 2–1    ASDL Parameter Information*

| Item | Description |
| --- | --- |
| Parameter Name | Identifies the parameter that is configured for the stated service. |
| Description | Describes the parameter. |
| Range | Describes or lists the range of values that can be used to satisfy this parameter. |
| Default Value | Configures a default value for the parameter so that it is not mandatory for the upstream system to provide a value. |
| Type | Indicates one of the following parameter types:<br><br>■ S - Scalar, specifies the parameter label transmitted on the ASDL command. Scalar parameters are conventional name-value pair parameters.<br><br>■ C - Compound, specifies the base name of the compound parameter transmitted on the ASDL command. A compound parameter contains structures or arrays of information that are represented by a particular structure name or compound parameter name. Each compound parameter can contain a large number of elements. If you use compound parameters, you only require a single entry in the ASAP translation tables to call the compound parameter and all its associated parameter elements.<br><br>■ I - Indexed, identifies a parameter that contains a sequential numerical index value to tell the SARM that it should execute the same operation (for example, an ASDL command) for all occurrences of that index. Consequently, if there are several options on a particular CSDL command (OPT1, OPT2, OPT3, etc.), you can specify the OPT parameter as an indexed parameter. When you specify the OPT parameter as an indexed parameter, the SARM generates several occurrences of that same ASDL command and each command has a different value for the option being transmitted to the NEP.<br><br>For more information on parameter types, refer to the *ASAP Developer's Guide*. |

*Table 2–1    (Cont.)  ASDL Parameter Information*

| Item | Description |
|------|-------------|
| Class | Indicates one of the following parameter classifications:<br>■  R - Required scalar parameter<br>■  O - Optional scalar parameter<br>■  C - Required compound parameter<br>■  N - Optional compound parameter<br>■  M - Mandatory indexed parameter<br>■  I - Optional indexed parameter<br>■  S - Parameter count |

For a detailed description of the Required and Optional parameter classifications, refer to the *ASAP System Administrator's Guide.*

## ASDL Commands

This cartridge provides the following ASDL commands:

■  A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT

■  A_SEACHANGE-VOD_5-0_ADD_OFFERING

■  A_SEACHANGE-VOD_5-0_ADD_SETTOP

■  A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER

■  A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT

■  A_SEACHANGE-VOD_5-0_DEL_OFFERING

■  A_SEACHANGE-VOD_5-0_DEL_SETTOP

■  A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER

■  A_SEACHANGE-VOD_5-0_MOD_OFFERING

■  A_SEACHANGE-VOD_5-0_MOD_SETTOP

■  A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER

■  A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT

## A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT

Add Entitlement. Subscriber Management Service - Entitlement data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_ 0.entitlement.add.generated.AddEntitlementProxy.execute.**

*Table 2–2    A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| MCLI | MCLI Host | N/A | N/A | S | R |

*Table 2–2   (Cont.)  A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | O |
| MAC_ADDRESS | The device address of the set-top box or other consumer device. | N/A | N/A | S | O |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |

### MML commands

**MML Syntax** :

```
This function can be used to add an entitlement.

Note: The parameters SUBSCRIBER_KEY and MAC_ADDRESS are optional in service model.
But user needs to give value for SUBSCRIBER_KEY or MAC_ADDRESS in WO since it is
required by Network Element.
```

### Output Parameters

Returns as INFO parameters:

----------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_ADD_OFFERING

Add Offering. Subscriber Management Service - Offering data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.offering.add.generated.AddOfferingProxy.execute.**

*Table 2–3 A_SEACHANGE-VOD_5-0_ADD_OFFERING*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| PACKAGE_NAME | The descriptive name of the package | N/A | N/A | S | R |
| PRICE | The price that the service provider charges the subscriber for entitlement to the package | N/A | N/A | S | O |

### MML commands

### MML Syntax :

```
This function can be used to add an offering.
```

### Output Parameters

Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_OFFERING_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_OFFERING_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_ADD_OFFERING_INFO(I), Value <Result Message>

# A_SEACHANGE-VOD_5-0_ADD_SETTOP

Add SetTop. Subscriber Management Service - Settop data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_ 0.settop.add.generated.AddSettopProxy.execute.**

*Table 2–4 A_SEACHANGE-VOD_5-0_ADD_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| MAC_ADDRESS | The device address for the set-top box or other consumer device. | N/A | N/A | S | R |

*Table 2–4   (Cont.)  A_SEACHANGE-VOD_5-0_ADD_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| SERIAL_NUM | The serial number for the set-top box. | N/A | N/A | S | O |
| SMART_CARD_ID | The Smart Card ID for the set-top box. | N/A | N/A | S | O |

### MML commands

**MML Syntax** :

```
This function can be used to add a settop.
```

### Output Parameters
Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_SETTOP_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_SETTOP_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_ADD_SETTOP_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER

Add Subscriber. Subscriber Management Service. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.subscriber.add.generated.AddSubscriberProxy.execute.**

*Table 2–5    A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| BILLING_ID | The code that identifies the billing account of subscriber in the external SMS. | N/A | N/A | S | R |
| ACCOUNT_ BALANCE | The account balance for the current billing cycle, calculated from values such as payments credited, new charges, adjustments, and unpaid balance from the previous billing cycle. | N/A | N/A | S | O |

*Table 2–5   (Cont.)  A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| CREDIT_LIMIT | Maximum purchase amount | N/A | N/A | S | O |
| FIRST_NAME | The first name of subscriber. | N/A | N/A | S | O |
| MIDDLE_NAME | The middle initial of subscriber | N/A | N/A | S | O |
| LAST_NAME | The last name of subscriber | N/A | N/A | S | O |
| ADDRESS1 | The street address, such as the building number and street name. | N/A | N/A | S | O |
| ADDRESS2 | Additional street address data, such as the suite, unit, apartment, or other number. | N/A | N/A | S | O |
| CITY | The town, city, or other municipality in which the address of subscriber is located. | N/A | N/A | S | O |
| STATE | The two-character abbreviation for the state, province, or other geographic area in which the address of subscriber is located. | N/A | N/A | S | O |
| COUNTRY | The two-character abbreviation for the country in which the address of subscriber is located | N/A | N/A | S | O |
| ZIP | The zip code or other postal code for the address of subscriber. | N/A | N/A | S | O |
| PHONE1 | The primary phone number of subscriber. | N/A | N/A | S | O |
| PHONE2 | The secondary phone number of subscriber. | N/A | N/A | S | O |
| STATUS | The current status of subscriber | N/A | N/A | S | O |
| HOME_ID | The unique identifier of the home account of subscriber, which the service provider can use to associate multiple set-top boxes with a single subscriber account | N/A | N/A | S | O |
| CORP_ID | The 5-digit corporate number that uniquely identifies the group of set-top boxes of which the set-top boxes of subscriber are members. | N/A | N/A | S | O |

## MML commands

**MML Syntax** :

```
This function can be used to add a subscriber.
```

## Output Parameters

Returns as INFO parameters:

```
---------------------------
```

Success Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT

Delete Entitlement. Subscriber Management Service - Entitlement data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.entitlement.del.generated.DelEntitlementProxy.execute.**

*Table 2–6    A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | O |
| MAC_ADDRESS | The device address of the set-top box or other consumer device. | N/A | N/A | S | O |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |

### MML commands

**MML Syntax** :

```
This function can be used to delete an entitlement
```

### Output Parameters

Returns as INFO parameters:

----------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_DEL_OFFERING

Delete Offering. Subscriber Management Service - Offering data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.offering.del.generated.DelOfferingProxy.execute.**

*Table 2–7    A_SEACHANGE-VOD_5-0_DEL_OFFERING*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| PACKAGE_NAME | The descriptive name of the package | N/A | N/A | S | R |
| PRICE | The price that the service provider charges the subscriber for entitlement to the package | N/A | N/A | S | O |

### MML commands

**MML Syntax** :

```
This function can be used to delete an offering.
```

### Output Parameters

Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_OFFERING_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_OFFERING_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_DEL_OFFERING_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_DEL_SETTOP

Delete SetTop. Subscriber Management Service - Settop data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.settop.del.generated.DelSettopProxy.execute.**

*Table 2–8    A_SEACHANGE-VOD_5-0_DEL_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| MAC_ADDRESS | The device address for the set-top box or other consumer device. | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| SERIAL_NUM | The serial number for the set-top box. | N/A | N/A | S | O |
| SMART_CARD_ID | The Smart Card ID for the set-top box. | N/A | N/A | S | O |

### MML commands

**MML Syntax** :

```
This function can be used to delete a settop.
```

### Output Parameters

Returns as INFO parameters:

----------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_SETTOP_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_SETTOP_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_DEL_SETTOP_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER

Delete Subscriber. Subscriber Management Service. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_ 0.subscriber.del.generated.DelSubscriberProxy.execute.**

*Table 2–9    A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| BILLING_ID | The code that identifies the billing account of subscriber in the external SMS. | N/A | N/A | S | R |

*Table 2–9    (Cont.) A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| ACCOUNT_ BALANCE | The account balance for the current billing cycle, calculated from values such as payments credited, new charges, adjustments, and unpaid balance from the previous billing cycle. | N/A | N/A | S | O |
| CREDIT_LIMIT | Maximum purchase amount | N/A | N/A | S | O |
| FIRST_NAME | The first name of subscriber. | N/A | N/A | S | O |
| MIDDLE_NAME | The middle initial of subscriber | N/A | N/A | S | O |
| LAST_NAME | The last name of subscriber | N/A | N/A | S | O |
| ADDRESS1 | The street address, such as the building number and street name. | N/A | N/A | S | O |
| ADDRESS2 | Additional street address data, such as the suite, unit, apartment, or other number. | N/A | N/A | S | O |
| CITY | The town, city, or other municipality in which the address of subscriber is located. | N/A | N/A | S | O |
| STATE | The two-character abbreviation for the state, province, or other geographic area in which the address of subscriber is located. | N/A | N/A | S | O |
| COUNTRY | The two-character abbreviation for the country in which the address of subscriber is located | N/A | N/A | S | O |
| ZIP | The zip code or other postal code for the address of subscriber. | N/A | N/A | S | O |
| PHONE1 | The primary phone number of subscriber. | N/A | N/A | S | O |
| PHONE2 | The secondary phone number of subscriber. | N/A | N/A | S | O |
| STATUS | The current status of subscriber | N/A | N/A | S | O |
| HOME_ID | The unique identifier of the home account of subscriber, which the service provider can use to associate multiple set-top boxes with a single subscriber account | N/A | N/A | S | O |
| CORP_ID | The 5-digit corporate number that uniquely identifies the group of set-top boxes of which the set-top boxes of subscriber are members. | N/A | N/A | S | O |

## MML commands

### MML Syntax :

```
This function can be used to delete a subscriber.
```

**Output Parameters**

Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_MOD_OFFERING

Modify Offering. Subscriber Management Service - Offering data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_ 0.offering.mod.generated.ModOfferingProxy.execute.**

*Table 2–10    A_SEACHANGE-VOD_5-0_MOD_OFFERING*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| PACKAGE_NAME | The descriptive name of the package | N/A | N/A | S | R |
| PRICE | The price that the service provider charges the subscriber for entitlement to the package | N/A | N/A | S | O |

**MML commands**

**MML Syntax** :

```
This function can be used to mofify an offering.
```

**Output Parameters**

Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_MOD_OFFERING_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_MOD_OFFERING_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_MOD_OFFERING_INFO(I), Value <Result Message>

# A_SEACHANGE-VOD_5-0_MOD_SETTOP

Modify SetTop. Subscriber Management Service - Settop data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.settop.mod.generated.ModSettopProxy.execute.**

*Table 2–11    A_SEACHANGE-VOD_5-0_MOD_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| MAC_ADDRESS | The device address for the set-top box or other consumer device. | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| SERIAL_NUM | The serial number for the set-top box. | N/A | N/A | S | O |
| SMART_CARD_ID | The Smart Card ID for the set-top box. | N/A | N/A | S | O |

## MML commands

**MML Syntax** :

```
This function can be used to modify a settop.
```

## Output Parameters

Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_MOD_SETTOP_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_MOD_SETTOP_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_MOD_SETTOP_INFO(I), Value <Result Message>

## A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER

Modify Subscriber. Subscriber Management Service. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_ 0.subscriber.mod.generated.ModSubscriberProxy.execute.**

*Table 2–12    A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| BILLING_ID | The code that identifies the billing account of subscriber in the external SMS. | N/A | N/A | S | R |
| ACCOUNT_ BALANCE | The account balance for the current billing cycle, calculated from values such as payments credited, new charges, adjustments, and unpaid balance from the previous billing cycle. | N/A | N/A | S | O |
| CREDIT_LIMIT | Maximum purchase amount | N/A | N/A | S | O |
| FIRST_NAME | The first name of subscriber. | N/A | N/A | S | O |
| MIDDLE_NAME | The middle initial of subscriber | N/A | N/A | S | O |
| LAST_NAME | The last name of subscriber | N/A | N/A | S | O |
| ADDRESS1 | The street address, such as the building number and street name. | N/A | N/A | S | O |
| ADDRESS2 | Additional street address data, such as the suite, unit, apartment, or other number. | N/A | N/A | S | O |
| CITY | The town, city, or other municipality in which the address of subscriber is located. | N/A | N/A | S | O |
| STATE | The two-character abbreviation for the state, province, or other geographic area in which the address of subscriber is located. | N/A | N/A | S | O |
| COUNTRY | The two-character abbreviation for the country in which the address of subscriber is located | N/A | N/A | S | O |
| ZIP | The zip code or other postal code for the address of subscriber. | N/A | N/A | S | O |
| PHONE1 | The primary phone number of subscriber. | N/A | N/A | S | O |
| PHONE2 | The secondary phone number of subscriber. | N/A | N/A | S | O |

*Table 2–12   (Cont.)  A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| STATUS | The current status of subscriber | N/A | N/A | S | O |
| HOME_ID | The unique identifier of the home account of subscriber, which the service provider can use to associate multiple set-top boxes with a single subscriber account | N/A | N/A | S | O |
| CORP_ID | The 5-digit corporate number that uniquely identifies the group of set-top boxes of which the set-top boxes of subscriber are members. | N/A | N/A | S | O |

### MML commands

**MML Syntax** :

```
This function can be used to modify a subscriber.
```

### Output Parameters
Returns as INFO parameters:

---------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER_INFO(I), Value <Result Message>

# A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT

Replace Entitlement. Subscriber Management Service - Entitlement data. It is implemented by the Java method **com.mslv.activation.cartridge.seachange.vod.x5_0.entitlement.replace.generated.ReplaceEntitlementProxy.execute.**

*Table 2–13    A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MCLI | MCLI Host | N/A | N/A | S | R |

*Table 2–13   (Cont.)  A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | O |
| MAC_ADDRESS | The device address of the set-top box or other consumer device. | N/A | N/A | S | O |
| OFFERING_ID | The code that uniquely identifies the package. The memeber name is offeringID. | N/A | N/A | C | O |

### MML commands

**MML Syntax** :

```
This function can be used to replace an entitlement/entitlements.
```

### Output Parameters

Returns as INFO parameters:

--------------------------

Success Case:

-------------

A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT_UDET(I), Value <Result Code>

Failure Case:

-------------

A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT_UDET(I), Value <Result Code>

A_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT_INFO(I), Value <Result Message>

# User Exit Types

User exit types allow cartridge developers and systems administrators to map ASDL exit codes to one of the predefined base exit types. Base exit types determine the product behavior. Cartridges map return codes and status values from a network element to a user defined exit type.

Regular expressions (regex) are used to perform pattern searches on responses from network elements. The pattern is stored in "tbl_user_err" in the SARM database. The user exit type contains a regex pattern that is applied at runtime.

Regular expressions enable users to associate a series of responses to a specific base type. For example, a regular expression "6." can identify a pattern where any response with the character "6" followed by any number of characters will translate to base type of FAIL.

Regular expressions can also allow very specific searches within a response from a network element. Regular expressions are typically compiled before being executed. Compilation produces a binary version of the expression and ensures that the syntax of the regular expression is correct. This compilation occurs using SACT\SADT when user exit types are deployed into ASAP. If the syntax is deemed to be incorrect during compilation, SADT displays an error message and the deployment of the user exit type will fail.

For more information on pattern matching, refer to the *ASAP Developer's Guide* and the *ASAP System Administrator's Guide*.

## Understanding User Exit Type XML Files

```
…
<userDefinedExitType>
<neDescriptor>
<softwareLoad>DYNAMIC_SL</softwareLoad>
<technology>DYNAMIC_VENDOR-DYNAMIC_TECH</technology>
</neDescriptor>
<searchPattern>SUCCESS.</searchPattern>...1
<userType>U_SUCCEED</userType>...2
<baseType>SUCCEED<</baseType>...3
<description>The ASDL provisioning was successful</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>90.</searchPattern>
<userType>U_FAIL</userType>
<baseType>FAIL</baseType>
<description>The ASDL failed - fail the current order and stop
processing.</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>101-110[201-215]</searchPattern>...4
<userType>U_SOFT_FAIL</userType>
<baseType>SOFT_FAIL</baseType>
<description>The ASDL has encountered a soft failure. Processing will
continue.</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>801-850</searchPattern>...5
<userType>U_MINOR_ERROR</userType>
<baseType>SOFT_FAIL</baseType>
<description>The ASDL has encountered a soft failure. Processing will
continue.</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>251-275&&[^261-265]</searchPattern>...6
<userType>U_DELAYED_FAIL</userType>
<baseType>DELAYED_FAIL</baseType>
<description>The ASDL has failed during provisioning.</description>
</userDefinedExitType>
<userDefinedExitType>
<neDescriptor>
<softwareLoad>BCS36</softwareLoad>
<technology>NORTEL_DMS</technology>
<neVendor>Nortel</neVendor>
</neDescriptor>
<searchPattern>*.</searchPattern>
<userType>U_MAINTAIN</userType>
<baseType>MAINTENANCE</baseType>
```

```
<description>The ASDL will Wait until the NE comes out of Maintenance
Mode</description>
</userDefinedExitType>
```

The numbered elements highlighted in bold in the previous code sample are explained as follows:

1. Pattern searches accommodate situations in which responses from the device contain small variants that represent the same meaning. The user type contains an associated search pattern that is applied at runtime. Using regular expressions, you can default a series of responses. For example a regular expression "90." can specify a pattern where any response with the character "90" followed by any character will translate to base type of FAIL. If the regular expression is defined as "90*", then any response with the character "90" followed by any number of characters will translate to base type of FAIL.

2. The user type that the search pattern maps to.

3. The base type that maps to the user type.

4. 101 to 110 and 201 to 215 will translate to a base type of SOFT_FAIL

5. 801-850 will translate to a base type of SOFT_FAIL. Note that the user type differs from the previous range.

6. 251 to 275 but not 261 to 265 will translate to a base type of DELAYED_FAILURE.

The previous code sample shows some typical search pattern examples. Some additional examples follow:

- ^.*\b(one|two|three)\b.*$ = matches a complete line of text that contains any of the words "one", "two" or "three"

- ^(?=.*?\bone\b)(?=.*?\btwo\b)(?=.*?\bthree\b).*$ matches a complete line of text that contains all of the words "one", "two" and "three"

- "[^"\r\n]*" matches a single-line string that does not allow the quote character to appear inside the string.

- \b\d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}\b matches any IP address.

For more information on search patterns, refer to http://java.sun.com/j2se/1.4.2/docs/api/java/util/regex/Pattern.html.

For more information on user exit types, refer to the *ASAP Developer's Guide*.

## User Defined ASDL Exit Types

The following table lists the user defined ASDL exit types.

*Table 2–14    User Defined ASDL Exit Types*

| Search Pattern | User Type | Base Type | Description |
|---|---|---|---|
| 0 | SUCCEED | SUCCEED | Transaction process successfully. |
| ((?s).)*1((?s).)* | ERROR_DUPLICATE | FAIL | Unable to process transaction because a value specified in the transaction already exists in the database. |
| ((?s).)*2((?s).)* | ERROR_INVALID | FAIL | Unable to process transaction because a value specified in the transaction is invalid. |

*Table 2–14   (Cont.)  User Defined ASDL Exit Types*

| Search Pattern | User Type | Base Type | Description |
|---|---|---|---|
| ((?s).)*3((?s).)* | ERROR_MISSING | FAIL | Unable to process transaction because a required value is missing from the transaction. |
| ((?s).)*9999((?s).)* | ERROR_OTHER | FAIL | Unable to process transaction. |
| NO_UDET_MATCH | NO_UDET_MATCH | FAIL | No UDET match for search pattern |
| ((?s).)*\bJAVA_ EXCEPTION\b((?s).)* | JAVA_EXCEPTION | FAIL | Java Exception is caught. |
| ((?s).)*\bPROV_CART_ EXCEPTION\b((?s).)* | PROV_CART_EXCEPTION | FAIL | Provisioning Cartridge Exception is caught. |

# UserExitType.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<serviceModel xmlns="http://www.metasolv.com/ServiceActivation/2003/ServiceModel">
    <userDefinedExitType>
        <neDescriptor>
            <softwareLoad>5-0<///softwareLoad>
            <technology>VOD<///technology>
            <neVendor>SEACHANGE<///neVendor>
        <///neDescriptor>
        <searchPattern>0<///searchPattern>
        <userType>SUCCEED<///userType>
        <baseType>SUCCEED<///baseType>
        <description>Transaction process successfully.<///description>
    <///userDefinedExitType>
    .....................
    <///serviceModel >
```

# 3
## Service Definition

The SeaChange_Axiom_VOD Cartridge cartridge contains a set of CSDLs that map to one or more ASDL commands. You can also create additional CSDLs that map to existing and newly-created ASDLs. An upstream system can assemble any of these CSDL commands onto a work order for provisioning.

This chapter presents detailed information about the CSDL parameters in this cartridge. The following table lists and describes the type of parameter information that is included.

*Table 3–1 ASDL Parameter Information*

| Item | Description |
|---|---|
| Parameter Name | Identifies the parameter that is configured for the stated service. |
| Description | Describes the parameter. |
| Range | Describes or lists the range of values that can be used to satisfy this parameter. |
| Default Value | Configures a default value for the parameter so that it is not mandatory for the upstream system to provide a value. |
| Type | Indicates one of the following parameter types:<br>■ S - Scalar, specifies the parameter label transmitted on the ASDL command. Scalar parameters are conventional name-value pair parameters.<br>■ C - Compound, specifies the base name of the compound parameter transmitted on the ASDL command. A compound parameter contains structures or arrays of information that are represented by a particular structure name or compound parameter name. Each compound parameter can contain a large number of elements. If you use compound parameters, you only require a single entry in the ASAP translation tables to call the compound parameter and all its associated parameter elements.<br>■ I - Indexed, identifies a parameter that contains a sequential numerical index value to tell the SARM that it should execute the same operation (for example, an ASDL command) for all occurrences of that index. Consequently, if there are several options on a particular CSDL command (OPT1, OPT2, OPT3, etc.), you can specify the OPT parameter as an indexed parameter. When you specify the OPT parameter as an indexed parameter, the SARM generates several occurrences of that same ASDL command and each command has a different value for the option being transmitted to the NEP.<br>For more information on parameter types, refer to the *ASAP Developer's Guide*. |

*Table 3–1   (Cont.)  ASDL Parameter Information*

| Item | Description |
|------|-------------|
| Class | Indicates one of the following parameter classifications:<br>■   R - Required scalar parameter<br>■   O - Optional scalar parameter<br>■   C - Required compound parameter<br>■   N - Optional compound parameter<br>■   M - Mandatory indexed parameter<br>■   I - Optional indexed parameter<br>■   S - Parameter count |

For a detailed description of the Required and Optional parameter classifications, refer to the *ASAP System Administrator's Guide.*

# CSDL Commands

This cartridge provides the following CSDL commands:

- C_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT
- C_SEACHANGE-VOD_5-0_ADD_OFFERING
- C_SEACHANGE-VOD_5-0_ADD_SETTOP
- C_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER
- C_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT
- C_SEACHANGE-VOD_5-0_DEL_OFFERING
- C_SEACHANGE-VOD_5-0_DEL_SETTOP
- C_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER
- C_SEACHANGE-VOD_5-0_MOD_OFFERING
- C_SEACHANGE-VOD_5-0_MOD_SETTOP
- C_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER
- C_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT

## C_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT

Add Entitlement. Subscriber Management Service - Entitlement data.

*Table 3–2    C_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| MAC_ADDRESS | The device address of the set-top box or other consumer device. | N/A | N/A | S | O |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | O |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–3   CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT | A_SEACHANGE-VOD_5-0_ADD_ENTITLEMENT |

## C_SEACHANGE-VOD_5-0_ADD_OFFERING

Add Offering. Subscriber Management Service - Offering data.

*Table 3–4   C_SEACHANGE-VOD_5-0_ADD_OFFERING*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| PACKAGE_NAME | The descriptive name of the package | N/A | N/A | S | R |
| PRICE | The price that the service provider charges the subscriber for entitlement to the package | N/A | N/A | S | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–5   CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_ADD_OFFERING | A_SEACHANGE-VOD_5-0_ADD_OFFERING |

## C_SEACHANGE-VOD_5-0_ADD_SETTOP

Add SetTop. Subscriber Management Service - Settop data.

*Table 3–6   C_SEACHANGE-VOD_5-0_ADD_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| MAC_ADDRESS | The device address for the set-top box or other consumer device. | N/A | N/A | S | R |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| SERIAL_NUM | The serial number for the set-top box. | N/A | N/A | S | O |
| SMART_CARD_ID | The Smart Card ID for the set-top box. | N/A | N/A | S | O |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–7    CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_ADD_SETTOP | A_SEACHANGE-VOD_5-0_ADD_SETTOP |

# C_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER

Add Subscriber. Subscriber Management Service.

*Table 3–8    C_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| ACCOUNT_ BALANCE | The account balance for the current billing cycle, calculated from values such as payments credited, new charges, adjustments, and unpaid balance from the previous billing cycle. | N/A | N/A | S | O |
| ADDRESS1 | The street address, such as the building number and street name. | N/A | N/A | S | O |
| ADDRESS2 | Additional street address data, such as the suite, unit, apartment, or other number. | N/A | N/A | S | O |
| BILLING_ID | The code that identifies the billing account of subscriber in the external SMS. | N/A | N/A | S | R |
| CITY | The town, city, or other municipality in which the address of subscriber is located. | N/A | N/A | S | O |
| CORP_ID | The 5-digit corporate number that uniquely identifies the group of set-top boxes of which the set-top boxes of subscriber are members. | N/A | N/A | S | O |
| COUNTRY | The two-character abbreviation for the country in which the address of subscriber is located | N/A | N/A | S | O |
| CREDIT_LIMIT | Maximum purchase amount | N/A | N/A | S | O |
| FIRST_NAME | The first name of subscriber. | N/A | N/A | S | O |
| HOME_ID | The unique identifier of the home account of subscriber, which the service provider can use to associate multiple set-top boxes with a single subscriber account | N/A | N/A | S | O |
| LAST_NAME | The last name of subscriber | N/A | N/A | S | O |
| MIDDLE_NAME | The middle initial of subscriber | N/A | N/A | S | O |
| PHONE1 | The primary phone number of subscriber. | N/A | N/A | S | O |
| PHONE2 | The secondary phone number of subscriber. | N/A | N/A | S | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |

*Table 3–8    (Cont.)  C_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| STATE | The two-character abbreviation for the state, province, or other geographic area in which the address of subscriber is located. | N/A | N/A | S | O |
| STATUS | The current status of subscriber | N/A | N/A | S | O |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| ZIP | The zip code or other postal code for the address of subscriber. | N/A | N/A | S | O |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–9    CSDL to ASDL Mapping*

| CSDL | ASDL |
|---|---|
| C_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER | A_SEACHANGE-VOD_5-0_ADD_SUBSCRIBER |

# C_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT

Delete Entitlement. Subscriber Management Service - Entitlement data.

*Table 3–10    C_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MAC_ADDRESS | The device address of the set-top box or other consumer device. | N/A | N/A | S | O |
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | O |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–11    CSDL to ASDL Mapping*

| CSDL | ASDL |
|---|---|
| C_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT | A_SEACHANGE-VOD_5-0_DEL_ENTITLEMENT |

# C_SEACHANGE-VOD_5-0_DEL_OFFERING

Delete Offering. Subscriber Management Service - Offering data.

*Table 3–12    C_SEACHANGE-VOD_5-0_DEL_OFFERING*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| PACKAGE_NAME | The descriptive name of the package | N/A | N/A | S | R |
| PRICE | The price that the service provider charges the subscriber for entitlement to the package | N/A | N/A | S | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–13    CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_DEL_OFFERING | A_SEACHANGE-VOD_5-0_DEL_OFFERING |

## C_SEACHANGE-VOD_5-0_DEL_SETTOP

Delete SetTop. Subscriber Management Service - Settop data.

*Table 3–14    C_SEACHANGE-VOD_5-0_DEL_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| MAC_ADDRESS | The device address for the set-top box or other consumer device. | N/A | N/A | S | R |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| SERIAL_NUM | The serial number for the set-top box. | N/A | N/A | S | O |
| SMART_CARD_ID | The Smart Card ID for the set-top box. | N/A | N/A | S | O |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–15    CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_DEL_SETTOP | A_SEACHANGE-VOD_5-0_DEL_SETTOP |

## C_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER

Delete Subscriber. Subscriber Management Service.

*Table 3–16    C_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| ACCOUNT_ BALANCE | The account balance for the current billing cycle, calculated from values such as payments credited, new charges, adjustments, and unpaid balance from the previous billing cycle. | N/A | N/A | S | O |
| ADDRESS1 | The street address, such as the building number and street name. | N/A | N/A | S | O |
| ADDRESS2 | Additional street address data, such as the suite, unit, apartment, or other number. | N/A | N/A | S | O |
| BILLING_ID | The code that identifies the billing account of subscriber in the external SMS. | N/A | N/A | S | R |
| CITY | The town, city, or other municipality in which the address of subscriber is located. | N/A | N/A | S | O |
| CORP_ID | The 5-digit corporate number that uniquely identifies the group of set-top boxes of which the set-top boxes of subscriber are members. | N/A | N/A | S | O |
| COUNTRY | The two-character abbreviation for the country in which the address of subscriber is located | N/A | N/A | S | O |
| CREDIT_LIMIT | Maximum purchase amount | N/A | N/A | S | O |
| FIRST_NAME | The first name of subscriber. | N/A | N/A | S | O |
| HOME_ID | The unique identifier of the home account of subscriber, which the service provider can use to associate multiple set-top boxes with a single subscriber account | N/A | N/A | S | O |
| LAST_NAME | The last name of subscriber | N/A | N/A | S | O |
| MIDDLE_NAME | The middle initial of subscriber | N/A | N/A | S | O |
| PHONE1 | The primary phone number of subscriber. | N/A | N/A | S | O |
| PHONE2 | The secondary phone number of subscriber. | N/A | N/A | S | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| STATE | The two-character abbreviation for the state, province, or other geographic area in which the address of subscriber is located. | N/A | N/A | S | O |
| STATUS | The current status of subscriber | N/A | N/A | S | O |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| ZIP | The zip code or other postal code for the address of subscriber. | N/A | N/A | S | O |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–17    CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER | A_SEACHANGE-VOD_5-0_DEL_SUBSCRIBER |

# C_SEACHANGE-VOD_5-0_MOD_OFFERING

Modify Offering. Subscriber Management Service - Offering data.

*Table 3–18    C_SEACHANGE-VOD_5-0_MOD_OFFERING*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| OFFERING_ID | The code that uniquely identifies the package. | N/A | N/A | S | R |
| PACKAGE_NAME | The descriptive name of the package | N/A | N/A | S | R |
| PRICE | The price that the service provider charges the subscriber for entitlement to the package | N/A | N/A | S | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–19    CSDL to ASDL Mapping*

| CSDL | ASDL |
|------|------|
| C_SEACHANGE-VOD_5-0_MOD_OFFERING | A_SEACHANGE-VOD_5-0_MOD_OFFERING |

# C_SEACHANGE-VOD_5-0_MOD_SETTOP

Modify SetTop. Subscriber Management Service - Settop data.

*Table 3–20    C_SEACHANGE-VOD_5-0_MOD_SETTOP*

| Parameter Name | Description | Range | Default Value | Type | Class |
|----------------|-------------|-------|---------------|------|-------|
| MAC_ADDRESS | The device address for the set-top box or other consumer device. | N/A | N/A | S | R |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| SERIAL_NUM | The serial number for the set-top box. | N/A | N/A | S | O |
| SMART_CARD_ID | The Smart Card ID for the set-top box. | N/A | N/A | S | O |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–21    CSDL to ASDL Mapping*

| CSDL | ASDL |
|---|---|
| C_SEACHANGE-VOD_5-0_MOD_SETTOP | A_SEACHANGE-VOD_5-0_MOD_SETTOP |

# C_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER

Modify Subscriber. Subscriber Management Service.

*Table 3–22    C_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| ACCOUNT_BALANCE | The account balance for the current billing cycle, calculated from values such as payments credited, new charges, adjustments, and unpaid balance from the previous billing cycle. | N/A | N/A | S | O |
| ADDRESS1 | The street address, such as the building number and street name. | N/A | N/A | S | O |
| ADDRESS2 | Additional street address data, such as the suite, unit, apartment, or other number. | N/A | N/A | S | O |
| BILLING_ID | The code that identifies the billing account of subscriber in the external SMS. | N/A | N/A | S | R |
| CITY | The town, city, or other municipality in which the address of subscriber is located. | N/A | N/A | S | O |
| CORP_ID | The 5-digit corporate number that uniquely identifies the group of set-top boxes of which the set-top boxes of subscriber are members. | N/A | N/A | S | O |
| COUNTRY | The two-character abbreviation for the country in which the address of subscriber is located | N/A | N/A | S | O |
| CREDIT_LIMIT | Maximum purchase amount | N/A | N/A | S | O |
| FIRST_NAME | The first name of subscriber. | N/A | N/A | S | O |
| HOME_ID | The unique identifier of the home account of subscriber, which the service provider can use to associate multiple set-top boxes with a single subscriber account | N/A | N/A | S | O |
| LAST_NAME | The last name of subscriber | N/A | N/A | S | O |
| MIDDLE_NAME | The middle initial of subscriber | N/A | N/A | S | O |
| PHONE1 | The primary phone number of subscriber. | N/A | N/A | S | O |
| PHONE2 | The secondary phone number of subscriber. | N/A | N/A | S | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |

*Table 3–22   (Cont.)  C_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| STATE | The two-character abbreviation for the state, province, or other geographic area in which the address of subscriber is located. | N/A | N/A | S | O |
| STATUS | The current status of subscriber | N/A | N/A | S | O |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | R |
| ZIP | The zip code or other postal code for the address of subscriber. | N/A | N/A | S | O |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–23    CSDL to ASDL Mapping*

| CSDL | ASDL |
|---|---|
| C_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER | A_SEACHANGE-VOD_5-0_MOD_SUBSCRIBER |

# C_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT

Replace Entitlement. Subscriber Management Service - Entitlement data.

*Table 3–24    C_SEACHANGE-VOD_5-0_REPLACE_ENTITLEMENT*

| Parameter Name | Description | Range | Default Value | Type | Class |
|---|---|---|---|---|---|
| MAC_ADDRESS | The device address of the set-top box or other consumer device. | N/A | N/A | S | O |
| OFFERING_ID | The code that uniquely identifies the package. The memeber name is offeringID. | N/A | N/A | C | O |
| SEACHANGE_HOST | MCLI Host | N/A | N/A | S | R |
| SUBSCRIBER_KEY | The code that uniquely identifies the subscriber in the external SMS | N/A | N/A | S | O |

### Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

*Table 3–25    CSDL to ASDL Mapping*

| CSDL | ASDL |
|---|---|
| C_SEACHANGE-VOD_5-0_REPLACE_ ENTITLEMENT | A_SEACHANGE-VOD_5-0_REPLACE_ ENTITLEMENT |

**4**

# Configuring ASAP to Support Additional NE Instances

You can configure Oracle Communications ASAP (ASAP) to support the T_
SEACHANGE-VOD_5-0_SEACHANGE_HOST - NEP configuration using the Service
Activation Configuration Tool (SACT). Refer to the *ASAP System Administrator's Guide*
for more information.

## Extracting Source Files

Before you can access an XML file to modify it, you must extract it from the .sar file.
Use the following procedure to extract source files from the sar file.

To extract source files:

1.  If necessary, create a repository directory, copy the .sar file to the new directory
    and un-jar the sar file.

2.  After you un-jar the sar file, you can access the XML files.

## Loading a New XML File

When you finish modifying an XML file, you must create a new sar file, then restart
the cartridge using the new file.

## Configuration XML File

Below is an example of the Activation.Configuration.XML file for the SeaChange_
Axiom_VOD Cartridge cartridge.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<activationConfig
xmlns="http://www.metasolv.com/ServiceActivation/2003/ActivationConfig">
     <connectionPool name="AXIOM">
          <device name="SeaChange_Axiom_Vod_Con1">
                <environment/>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </device>
     </connectionPool>
     <element name="T_SEACHANGE-VOD_5-0_SEACHANGE_HOST">
          <vendor>SEACHANGE</vendor>
          <technology>VOD</technology>
          <softwareLoad>5-0</softwareLoad>
          <nepServerName>$NEP</nepServerName>
          <primaryPool>AXIOM</primaryPool>
```

```
                    <maximumConnections>5</maximumConnections>
                    <dropTimeout>1</dropTimeout>
                    <spawnThreshold>6</spawnThreshold>
                    <killThreshold>3</killThreshold>
                    <routingElement name="T_SEACHANGE-VOD_5-0_HOST"/>
                    <communicationParameter>
                          <label>PROV_URL</label>
                          <value>
                                <value>http://98.174.76.68:8080</value>
                          </value>
                          <description>Target(provisioning) URL. HTTPS protocol shall be used
       if the URL starts with 'https://' otherwise HTTP shall be used</description>
                          <deviceName>COMMON_DEVICE_CFG</deviceName>
                          <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
                    </communicationParameter>
                    <communicationParameter>
                          <label>IS_SSL</label>
                          <value>
                                <value>FALSE</value>
                          </value>
                          <description>Indicates whether http over SSL to be used for
       connection.</description>
                          <deviceName>COMMON_DEVICE_CFG</deviceName>
                          <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
                    </communicationParameter>
                    <communicationParameter>
                          <label>PROV_USER</label>
                          <value>
                                <value>admin</value>
                          </value>
                          <description>Provisioning user name.</description>
                          <deviceName>COMMON_DEVICE_CFG</deviceName>
                          <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
                    </communicationParameter>
                    <communicationParameter>
                          <label>PROV_PASSWORD</label>
                          <value>
                                <value>admin1</value>
                          </value>
                          <description>Provisioning user password.</description>
                          <deviceName>COMMON_DEVICE_CFG</deviceName>
                          <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
                    </communicationParameter>
                    <communicationParameter>
                          <label>READ_TIMEOUT</label>
                          <value>
                                <value>10</value>
                          </value>
                          <description>Read timeout for the HTTP(S) POST/GET
       Operation.</description>
                          <deviceName>COMMON_DEVICE_CFG</deviceName>
                          <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
                    </communicationParameter>
                    <communicationParameter>
                          <label>RESPONSELOG</label>
                          <value>
                                <value>true</value>
                          </value>
                          <description>Response logging enable or disable.</description>
                          <deviceName>COMMON_DEVICE_CFG</deviceName>
```

```
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
            <communicationParameter>
                <label>SSL_KEYSTORE_PATH</label>
                <value>
                    <value>path1</value>
                </value>
                <description>Keystore path(optional) - Used for authentication
while using HTTPS connection</description>
                <deviceName>COMMON_DEVICE_CFG</deviceName>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
            <communicationParameter>
                <label>SSL_KEYSTORE_PASSWORD</label>
                <value>
                    <value>password</value>
                </value>
                <description>Keystore password(optional) - Used for authentication
while using HTTPS connection</description>
                <deviceName>COMMON_DEVICE_CFG</deviceName>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
            <communicationParameter>
                <label>SSL_TRUSTSTORE_PATH</label>
                <value>
                    <value>path2</value>
                </value>
                <description>truststore path(optional) - Used for authentication
while using HTTPS connection</description>
                <deviceName>COMMON_DEVICE_CFG</deviceName>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
            <communicationParameter>
                <label>SSL_TRUSTSTORE_PASSWORD</label>
                <value>
                    <value>password</value>
                </value>
                <description>truststore password(optional) - Used for
authentication while using HTTPS connection</description>
                <deviceName>COMMON_DEVICE_CFG</deviceName>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
        </element>
</activationConfig>
```