UC1128 NGI UC for Manage Inbound AVS Agreements

CRUD Use Case Specification

Version Delivery Scheduling Information

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Contents

1. Brief Description 7

1.1 Background 7

1.2 References 7

1.3 Story Mapping 7

2. Actors 8

3. Basic Flow of Events 9

3.1 Basic Flow 1 – GUI Search and view Inbound Agreement 9

3.1.1 Specific Preconditions 9

3.1.2 Steps 9

3.1.3 Specific Post Conditions 9

3.2 Basic Flow 2 – GUI Create Inbound AVS Agreement 9

3.2.1 Specific Preconditions 9

3.2.2 Steps 9

3.2.3 Specific Post Conditions 10

3.3 Basic Flow 3 – Update Inbound AVS Agreement 10

3.3.1 Specific Preconditions 10

3.3.2 Steps 10

3.3.3 Specific Post Conditions 10

3.4 Basic Flow 4 – Delete Inbound AVS Agreement 10

3.4.1 Specific Preconditions 10

3.4.2 Steps 10

3.4.3 Specific Post Conditions 11

3.5 Basic Flow 5 – Copy Inbound AVS Agreement 11

3.5.1 Specific Preconditions 11

3.5.2 Steps 11

3.5.3 Specific Post Conditions 11

4. Alternate Flows 12

4.1 Alternate Flow 1 – Match single Inbound AVS Agreement 12

4.1.1 Specific Preconditions 12

4.1.2 Steps 12

4.1.3 Specific Post Conditions 12

5. Exception Flows 12

5.1 Exception Flow 1 – Validation Error 12

5.1.1 Specific Preconditions 12

5.1.2 Steps 12

5.1.3 Specific Post Conditions 12

5.2 Exception Flow 2 – No Records Found on Match 13

5.2.1 Specific Preconditions 13

5.2.2 Steps 13

5.2.3 Specific Post Conditions 13

6. Sub Flows 13

6.1 Sub Flow 1: Create Inbound Agreement 13

6.1.1 Specific Preconditions 13

6.1.2 Steps 13

6.1.3 Specific Post Conditions 13

6.2 Sub Flow 2: Retrieve Inbound Agreement 14

6.2.1 Specific Preconditions 14

6.2.2 Steps 14

6.2.3 Specific Post Conditions 14

6.3 Sub Flow 3: Update Inbound Agreement 14

6.3.1 Specific Preconditions 14

6.3.2 Steps 14

6.3.3 Specific Post Conditions 14

6.4 Sub Flow 4: Delete Inbound Agreement 15

6.4.1 Specific Preconditions 15

6.4.2 Steps 15

6.4.3 Specific Post Conditions 15

6.5 Sub Flow 5: Extract Inbound Agreements 15

6.5.1 Specific Preconditions 15

6.5.2 Steps 15

6.5.3 Specific Post Conditions 15

7. Extension Points 15

8. Special Requirements 16

8.1 Navigation Requirements 16

8.2 Usability Requirements 16

9. Additional Information 16

10. Changes to Reviewed Use Cases 16

11. Future Use Case Considerations 16

12. Assumptions & Issues 16

13. Elaboration 16

13.1 Grid Managed Data 16

13.2 Paging 16

14. Test Cases 16

14.1 AVS 20a Create Inbound Agreement Service 17

14.2 AVS 20b Retrieve Inbound Agreement Service 17

14.3 AVS 20c Update Inbound Agreement Service 18

14.4 AVS 20d Delete Inbound Agreement Service 18

14.5 AVS 20e Extract Inbound Agreements Service 19

14.6 AVS 20f GUI – Search for Inbound Agreements 19

14.7 AVS 20g GUI – Create/Update/Delete 20

NGI UC for Manage Inbound AVS Agreements

# Brief Description

This use case describes the process to create, retrieve, update and delete Inbound AVS Agreements.

## Background

SITA receive AVS messages from other airlines (OA) on behalf of all SITA subscribers. The SITA administrator must setup AVS agreements for each airline for which AVS messages are expected. An agreement is needed to tell HIAS how to process messages as this is not stated by the message itself. Unlike the AVS outbound agreement there is no need for exception agreements for OA AVS.

Control of code share AVS is excluded from the scope of this agreement. AVS is one facet of the code share agreement, which is setup in Horizon Admin (HA). Processing of inbound AVS must address both the Inbound OA AVS agreement and the code share agreement.

Messages received from a system without an agreement will result in an error notification. To stop these messages, the SITA admin must create an inbound AVS agreement. The agreement must tell HIAS the form of AVS, for example first close or segment, or must tell HIAS to ignore AVS from this sender (Ignore/No AVS).

## References

|  |  |  |
| --- | --- | --- |
| **Ref. ID** | **Reference** | **Version** |
| [1] | NGI BDD for Inbound AVS Agreements | 1.0 |

## Story Mapping

The Use Case breaks into the following stories:

|  |  |  |  |
| --- | --- | --- | --- |
| Tag | Description | Flows | Section |
| AVS.20a | Service: Create Inbound agreement | Sub flow 1 Exception flow 1 | §6.1 §5.1 |
| AVS.20b | Service: Retrieve Inbound agreement | Sub flow 2 Exception flow 1 | §6.2 §5.1 |
| AVS.20c | Service: Update Inbound agreement | Sub flow 3 Exception flow 1 | §6.3 §5.1 |
| AVS.20d | Service: Delete Inbound agreement | Sub flow 4 Exception flow 1 | §6.4 §5.1 |
| AVS.20e | Service: Extract Inbound agreement | Sub flow 5 Exception flow 1 | §6.5  §5.1 |
| AVS.20f | GUI: Search for Inbound agreements | Basic flow 1 | §3.1 |
| AVS.20g | GUI: Create GUI: Update GUI: Delete GUI: Copy | Basic flow 2 Basic flow 3 Basic flow 4 Basic flow 5 Alternate flow 1 Exception flow 2 | §3.2 §3.3 §3.4 §3.5 §4.1 §5.2 |

# Actors

**Primary Actor:** Subscriber Administrator

**Secondary Actor:** SITA Central Site Administrator

# Basic Flow of Events

## Basic Flow 1 – GUI Search and view Inbound Agreement

### Specific Preconditions

1. Actor is successfully logged in.
2. Actor is authorized to extract Inbound AVS Agreement.

### Steps

1. Actor navigates to the Inventory Templates page by selecting inbound AVS agreement from the menu.
2. GUI renders the inbound template search page using Extract Request - BDD (Ref [1]: §2.2).
3. Actor completes the search criteria according to the BDD (Ref [1]: §2.2).
4. Subscriber Administrator selects “Search”
5. GUI creates and submits an extract inbound AVS agreement request using Sub Flow 5 (§6.5).
6. GUI renders a page of inbound agreement template results according to the BDD (Ref [1]: §2.3)
7. Actor selects “Open”
8. GUI creates a new tab and renders the full details of the Inbound Agreement selected according to the BDD (Ref [1]: §2.1).
9. Flow ends

### Specific Post Conditions

1. List of inbound agreements matching the search criteria rendered by the GUI.

## Basic Flow 2 – GUI Create Inbound AVS Agreement

### Specific Preconditions

1. GUI renders the template search page (Basic Flow 1: §3.1).

### Steps

1. Actor selects “Create New”.
2. GUI renders the Create/View Inbound AVS Agreements page according to the BDD (Ref [1]: §2.1).
3. Actor provides information for Inbound AVS Agreement data elements according to the BDD (Ref [1]: §2.1).
4. Actor selects “Create”.
5. GUI submits a request to create an AVS Agreement using Sub Flow 1 (§6.1).
6. GUI renders a successfully created message to the user.
7. Flow ends

### Specific Post Conditions

1. New Inbound AVS Agreement created
2. History record created

## Basic Flow 3 – Update Inbound AVS Agreement

### Specific Preconditions

1. Actor completed Basic Flow 1 – GUI Search and view Inbound Agreement (§3.1)
2. GUI showing at least one result

### Steps

1. Actor selects an agreement from the listed agreements.
2. Actor selects “Open”.
3. GUI creates a new tab and renders the Inbound Agreement already extracted and retained from Basic Flow 1 according to the BDD (Ref [1]: §2.1).
4. Actor updates the inbound AVS agreement according to BDD (Ref [1]: §2.1).
5. Actor selects “Update”.
6. GUI prompts Subscriber Administrator to confirm update.
7. Actor selects “Change”
8. GUI submits a request to update the AVS Agreement using Sub Flow 3 (§6.3)
9. GUI renders a successfully created message to the user.
10. Flow ends

### Specific Post Conditions

1. Inbound AVS agreement updated
2. History record created

## Basic Flow 4 – Delete Inbound AVS Agreement

### Specific Preconditions

1. Actor completed Basic Flow 1 – GUI Search and View Inbound Agreement (§3.1)
2. GUI Presents with results.

### Steps

1. Actor selects agreement from the listed agreements.
2. Actor selects “Delete”.
3. GUI prompts Subscriber Administrator to confirm delete.
4. Subscriber Administrator selects “Delete”.
5. GUI submits request to the AVS Agreements service to delete the agreement using Sub Flow 4 (§6.4).
6. GUI renders a successfully deleted message to the user.
7. GUI removes the deleted agreement from the list rendered in Basic Flow 1, and redisplays the list according to the BDD (Ref [1]: §2.3).
8. Flow ends

### Specific Post Conditions

1. Inbound agreement deleted
2. Agreements search page reloads without the deleted agreement.

## Basic Flow 5 – Copy Inbound AVS Agreement

### Specific Preconditions

1. Actor completed Basic Flow 1 – GUI Search and View Inbound Agreement (§3.1)
2. GUI Presents with results.

### Steps

1. Actor selects agreement from the listed agreements
2. Actor selects “Copy”
3. GUI renders the Create/View Inbound AVS Agreements page according to the BDD (Ref [1]: 2.1/2.2)
4. GUI pre-populates the form with data from the selected agreement
5. Flow continues from 3.2 Basic Flow 2 – GUI Create Inbound AVS Agreement step 3

### Specific Post Conditions

1. N/A

# Alternate Flows

## Alternate Flow 1 – Match single Inbound AVS Agreement

### Specific Preconditions

1. System performed Sub Flow 5: Extract Inbound Agreements in Basic Flow 1 – GUI Search and view Inbound Agreement
2. GUI detects only a single matching agreement.

### Steps

1. Inbound Agreement Service returns to Step 8 of Basic Flow 1 – GUI Search and view Inbound Agreement

### Specific Post Conditions

1. None

# Exception Flows

## Exception Flow 1 – Validation Error

### Specific Preconditions

System has performed one of the following steps:

1. Step 1 in Sub Flow 1: Create Inbound Agreement
2. Step 1 in Sub Flow 2: Retrieve Inbound Agreement
3. Step 1 in Sub Flow 3: Update Inbound Agreement
4. Step 1 in Sub Flow 4: Delete Inbound Agreement
5. Step 1 in Sub Flow 5: Extract Inbound Agreements

### Steps

1. Agreement Service detects one or more business rule violations.
2. Agreement Service retains the information entered.
3. Agreement Service responds with appropriate error messages.
4. Flow ends

### Specific Post Conditions

1. Agreement Service responded with appropriate error messages
2. Agreement state remains unchanged.

## Exception Flow 2 – No Records Found on Match

### Specific Preconditions

System has performed the following step:

1. System has performed Basic Flow 1 – GUI Search and view Inbound Agreement (§3.1) and Sub Flow 5: Extract Inbound Agreements (§6.5).
2. No matching records returned

### Steps

1. GUI detects no matches for Inbound AVS Agreement
2. GUI responds with a message indicating that agreement was not found
3. Flow ends

### Specific Post Conditions

1. Inbound Agreement Service responded with a message indicating Inbound AVS Agreement not found.

# Sub Flows

## Sub Flow 1: Create Inbound Agreement

### Specific Preconditions

1. Actor has selected [Create] to create an AVS agreement from the search page.

### Steps

1. The Agreement Service validates the request according to the NGI BDD for Inbound AVS Agreements.
2. The Agreement Service creates the Inbound AVS Agreement.

The inbound AVS agreement is used by the grid when updating OA availability status in order to know, if to process the update and how it should be processed. Persistence of the AVS agreement must be managed by the grid.

1. The Agreement Service propagates the Inbound AVS Agreement change to all instances of the Flight Manager.

Refer to Design Considerations

1. The Agreement Service creates a history record.
2. The Agreement Service returns a successful indication including the document id.
3. The Sub Flow ends.

### Specific Post Conditions

1. Document Created and saved in database.
2. Change propagated to all grid instances

## Sub Flow 2: Retrieve Inbound Agreement

The retrieve inbound agreement sub flow is used to retrieve a specific document. The “Sub Flow” is not used by the GUI however; the operation is required and used for testing.

### Specific Preconditions

1. None

### Steps

1. The Agreement service validates the request according to the BDD (Ref [1]: §2.1).
2. The Agreement Service uses the document id to retrieve the inbound agreement from storage.
3. The Agreement Service returns the requested document.
4. Sub Flow ends.

### Specific Post Conditions

1. None

## Sub Flow 3: Update Inbound Agreement

### Specific Preconditions

1. Actor requests an update to an existing agreement using Basic Flow 3 – Update Inbound AVS Agreement (§3.3).

### Steps

1. The Agreement Service validates the request according to the BDD (Ref [1]: 2.1/2.2).
2. The Agreement Service retrieves the record to be changed and validates the changes.
3. The Agreement Service updates the document version number, last updated by, and last updates time.
4. The Agreement Service stores the change and updates in all local caches.
5. The Agreement Service records a history item.
6. The Agreement Service returns a successful update.

### Specific Post Conditions

1. Updated AVS Inbound Agreement.

## Sub Flow 4: Delete Inbound Agreement

### Specific Preconditions

1. The Actor requested to delete an Inbound Agreement using Basic Flow 4 – Delete Inbound AVS Agreement.

### Steps

1. The Agreement service validates the request according to the NGI BDD for Inbound AVS Agreements.
2. The Agreement Service deletes all the Inbound AVS agreements from the database and from local caches.

When the global agreement for a given carrier x host is deleted, all exception agreements for that carrier are also deleted.

1. The Agreement Service records a history item.
2. The Agreement service returns a successful indication.

### Specific Post Conditions

1. None

## Sub Flow 5: Extract Inbound Agreements

### Specific Preconditions

1. Actor searches for inbound agreement in Basic Flow 1 – GUI Search and View Inbound Agreement (§3.1).

### Steps

1. The Agreement Service validates the request according to the BDD (Ref [1]: 2.3).
2. The Agreement service retrieves all Inbound AVS agreements that match the search request.
3. The Agreement Service sorts the records by Airline Code.
4. The Agreement Service returns the inbound AVS agreements.

### Specific Post Conditions

1. None

# Extension Points

None

# Special Requirements

## Navigation Requirements

Voyager Non-Functional Requirements  
[https://glsvn01p.atlis.sita.aero/svn/voyager/Documentation/VoyagerNFR/Voyager Supplementary Specification.doc](https://glsvn01p.atlis.sita.aero/svn/voyager/Documentation/VoyagerNFR/Voyager%20Supplementary%20Specification.doc)

## Usability Requirements

Voyager Non-Functional Requirements  
[https://glsvn01p.atlis.sita.aero/svn/voyager/Documentation/VoyagerNFR/Voyager Supplementary Specification.doc](https://glsvn01p.atlis.sita.aero/svn/voyager/Documentation/VoyagerNFR/Voyager%20Supplementary%20Specification.doc)

# Additional Information

None

# Changes to Reviewed Use Cases

None

# Future Use Case Considerations

1. The need for history is defined in this use case, but implementation and testing of history is covered by alternate use cases.

# Assumptions & Issues

None

# Elaboration

## Grid Managed Data

The service implements the grid managed persistence pattern for inventory data. Refer to the HIAS standard service specification. AVS Agreements must be available to all grid instances. Data must be propagated and held locally within the grid.

Prior to this story and the concept of templates, Luxoft had already delivered a variation of the AVS Agreement, details of which are in the AVS.03 story. The service and database schema for this already exists.

This story:

* Changes the service schema  
  i. drops the concept of exception agreements  
  ii. adds a numeric agreement   
  iii. adds the default levels that an availability response should present for open availability
* The database needs one small change, namely to relax the constraint on the agreement type to allow a fourth value. A future change will drop the AVS exception table, however at the time of development this table will be retained in case the requirement for exceptions re-surfaces.

## Paging

1. The GUI and service must implement the paging according to the HIAS standard service.

# Test Cases

Definition of Done (DoD) requires that all of the following tests have been created and pass.

Note that:

1. Test cases specifically exclude handling of history refer to §11.

## AVS 20a Create Inbound Agreement Service

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | Unauthorized | **Unauthorized – No access** Service request to create an agreement, by an unauthorized user | Unauthorized user attempts to create an agreement. User does not have authority. IDM returns an Unauthorized Access exception. No agreement created. |
| 2 | Authorized user | **Invalid request**  Service request to create an agreement but the request is invalid. | Service validates the request and returns an invalid request fault indicating the failure reason. No agreement created. |
| 3 | Authorized User | **Sunny Day** Service request to create an agreement, the request is valid. | Agreement created. Document id returned. History record updated. |
| 4 | Authorized User | **Duplicate agreement**  Service request to create an agreement but where there is already an agreement for the given OA. | Service returns an Invalid Request Fault. Message indicates the duplicate agreement as per BDD (Ref [1]: §3) No (duplicate) agreement created. |

## AVS 20b Retrieve Inbound Agreement Service

The following tests are required for DoD for the Agreement retrieval service operation. Note that the GUI does not use retrieval, but this is a required service used for testing.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | Unauthorized | **Unauthorized – No access**  Service request to retrieve an agreement, by an unauthorized user. | Unauthorized user attempts to retrieve an agreement. User does not have authority. IDM returns ServiceAuthorizationFault. No agreement retrieved. |
| 2 | Authorized user for service, but not for document  Valid request Document exists | **Unauthorized – Wrong access**  Service request to retrieve a document not owned by the user and the user is not the SITA helpdesk. For example, Subscriber MASAL attempts to retrieve a document for a carrier other than MH. | Service returns a ServiceAuthorizationFault.  Service does not return the document |
| 3 | Authorized User | **Invalid request**  Invalid service request made | Invalid request fault raised |
| 4 | Authorized user Valid request Document exists | **Sunny Day**  Service request to retrieve an agreement that already exists using its document id. | Service returns the document |

## AVS 20c Update Inbound Agreement Service

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | Unauthorized to access service | **Unauthorized – No access** Service request to update an agreement, by an unauthorized user, but for a document for which | Unauthorized user attempts to retrieve an agreement. User does not have authority. IDM returns ServiceAuthorizationFault. No agreement retrieved. |
| 2 | Unauthorized to update document | **Unauthorized – Wrong access**  Service request to update a document not owned by the user and the user is not the SITA helpdesk. For example, Subscriber MASAL attempts to retrieve a document for a carrier other than MH. | Service returns a ServiceAuthorizationFault.  Service does not return the document |
| 3 | Authorized user Valid request Document exists | **Attempt to change immutable** Update request includes a change for a document, where the Airline or the destination system has changed. | Service returns an Invalid Request Fault. Message indicates that protected value cannot be changed. No history record updated. |
| 4 | Authorized user | **Invalid request**  Invalid service request made | Invalid request fault raised |
| 5 | Authorized user Valid request Document exists | **Sunny Day**  Request made includes a valid update | Service updates the record, increments version number returns success. History record updated |

## AVS 20d Delete Inbound Agreement Service

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | Unauthorized to access service | **Unauthorized – No access**  Service request to delete an agreement, by an unauthorized user, but for a document for which | Unauthorized user attempts to retrieve an agreement. User does not have authority. IDM returns ServiceAuthorizationFault. Agreement still available post request |
| 2 | Unauthorized to update document | **Unauthorized – Wrong access** Service request to delete a document not owned by the user and the user is not the SITA helpdesk. For example, Subscriber MASAL attempts to retrieve a document for a carrier other than MH. | Service returns a ServiceAuthorizationFault.  Agreement still available post request |
| 4 | Authorized user Valid deletion  Carrier/Dest pair | **Delete agreement** Delete for agreement requested. | Deletion of the agreement occurs. History record updated. |

## AVS 20e Extract Inbound Agreements Service

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | Unauthorized to access service. | **Unauthorized – No access**  Service request to search for agreements, by an unauthorized user. | Unauthorized user attempts to retrieve an agreement. User does not have authority. IDM returns ServiceAuthorizationFault. |
| 2 | Unauthorized to update document | **Unauthorized – Wrong access** Service request to search for documents not owned by the user and the user is not the SITA helpdesk. For example, Subscriber MASAL attempts to retrieve a document for a carrier other than MH. | Service returns a ServiceAuthorizationFault.  . |
| 3 | Authorized user Records exists | **Sunny day – extract all records** Request made for airline with no destination. | Service returns all global and exception records for the specified airline. Records sorted. |
| 4 | Authorized user Records exists | **Sunny Day – too much data #1** Request where there exists more records than can be returned in one request. | Service returns maximum permitted global and exception records for the specified airline. Record set truncated. Records sorted. |
| 5 | Test 4 | **Sunny Day – too much data #2** Second request made using paging parameters in request to retrieve follow on data. | Service returns remaining records. Records sorted. |

## AVS 20f GUI – Search for Inbound Agreements

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | User logged in  User authorized | **Sunny Day – search form** | Search page rendered according to BDD and wireframe |
| 2 | User logged in  User authorized | **Sunny Day – search results** | Search results rendered according to BDD |
| 3 | User logged in  User authorized | **Mandatory data** GUI requires at least one of the airline and system | Search button not enabled until user has selected at least one of the airline and/or system. |
| 4 | User logged in  User authorized | **Ability to search for different agreement types** | Data returned is filtered based on requested agreement types. |

## AVS 20g GUI – Create/Update/Delete

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref** | **Precondition** | **Scenario** | **Post-condition** |
| 1 | User logged in  User authorized | **Create New** User selects a global record from the search results clicks Create New | Airline code, System and effective dates defaulted from master agreement. |
| 2 | User logged in  User authorized | **Delete** User selects a record a clicks deleted | GUI requests confirmation.  Confirmation results in updated display list. Delete button disabled until record selected. |
| 3 | User logged in  User authorized | **Global checkbox changed** Changing the global checkbox, redisplays the entry form as appropriate to the given state. | GUI redisplays form appropriate the type.  No information is lost when checking and un-checking the type. |