



**Unity Programme**

**UK - Release 6**

**Sprint 4**

**MDM**

**Duplicate Cover Check**

**(INT- 25)**

**Interface Contract Document**

**Version 2.6**

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**Document Maintenance**

***Document Owners***

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| Technical Owner(s): Venkata S | |
| Current Version: | 2.6 |
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***Version Control***

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| Version | Date Updated | Revision Author | Summary of Major Changes Made |
| 0.1 | 19-May-2015 | Chethana Panthangi | Initial draft |
| 0.2 | 05-June-2015 | Chethana Panthangi | Wsdl changes |
| 0.3 | 10-June-2015 | Chethana Panthangi | Wsdl changes |
| 0.4 | 15-June-2015 | Chethana Panthangi | Wsdl changes and source system claim center is not part of release 4 |
| 0.5 | 16-June-2015 | Chethana Panthangi | Wsdl changes after review comments from Naveen |
| 0.6 | 16-June-2015 | Narayana Velaga | Update the Service Attribute definitions in Section 3.1.3 & 3.1.4 |
| 0.7 | 16-June-2015 | Narayana Velaga | Added reference to SOAP Wiki in Appendix and updated Section 4.1 |
| 0.8 | 17-June-2015 | Narayana Velaga | Added references to WSSecurity Link in the Section 5.3 as per Comments from Mark |
| 0.9 | 18-June-2015 | Chethana Panthangi | WSDL changed to add Offer name and re aligned the attributes. Updated 3.1.3 and 3.1.4 sections. Section 5.1 added Updated WSDL |
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| 1.1 | 23-June-2015 | Narayana Velaga | Added Duplicate Address Flag in the response. Updated Section 3.1.4 and WSDL updated in Section 5.1 |
| 2.1 | 30-July-2015 | Narayana Velaga | Removed the product line and Assets related tag from the Duplicate cover response and updated the relevant sections |
| 2.2 | 21-Aug-2015 | Sekhar Karnat | Added DPS in the request |
| 2.3 | 20-May-2016 | Sekhar Karnat | Removed OfferVersion from request as per Release 6 requirement |
| 2.4 | 9th June 2016 | Ashok Vemula | Incorporated Mark Bucks Review Comments |
| 2.5 | 25th Feb 2017 | Venkata S | Updated ICD with R6.4 DuplicateCover requirements. |
| 2.6 | 17th Mar 2017 | Venkata S | Updated ICD as per review comments received from Shafiq. |

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**Document Approval**

Virtusa Corporation and HomeServe have reviewed this document and hereby agree that the contents herein are accurate. Any changes to this document must be communicated in writing and signed-off by both parties.

|  |  |
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# Introduction

## Purpose

The purpose of this document is to describe about the duplicate cover check service, which is used when any customer is interested to buy a product from Homeserve. This service is enhancement to the real time Duplicate Customer Check that is delivered in the Unity Release 1 for Ensura. This service can be used during the following scenarios to identify the overlap/duplicates cover against the existing contract if any for insured property.

* Product Upgrade or Downgrade
* New Sale of the product or service
* Contract Renewals
* Auto Import process in Ensura

Duplicate Cover Check Service is used by the calling system to ensure that duplicate policies are not being sold to the customer. **The current calling system in scope for this service are:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Unity Release** | **System** | **SSID** |
| 1 | 4 | Pega | 1 |
| 2 | 4 | Ensura | 4 |

This document outlines “**DuplicateCoverCheck Service**”, interface specifications which will contain the followings,

* High level flow
* Request and Response attributes
* XSDs and WSDLs
* Error Codes

**R6.4 Sprint 4 – R\_0007 Requirement:**

As part of R6.4 eServe enhanced its functionality to reinstate cancelled and expired contacts within 28days and 60days from date of cancellation and expiry respectively. Due to this change eServe cancelled and expired contracts will be treated as “Active” from external system point of view. DuplicateCover service is impacted due this.

* DuplicateCoverCheck: No changes to existing WSDL and XSD but talend job needs to be emended to send cover as true for eServe cancelled and expired contracts within 28 and 60days from date of cancellation and contractenddate respectively when duplicate cover called from Ensura.

Refer section : **5.3.8**

## Distribution List

Approval List

|  |  |  |
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| **Name** | **Organization** | **Role** |
| Mark Buck | HomeServe | Integration Architect |
| Shafiq Ratansi | HomeServe | Solution Architect |

Discussion / Review List

In addition to those on the approval list above comments will be sought from the following people/groups.

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| Naveen Mula | Virtusa | Lead Data Architect |
| Manu Swami | Virtusa | Data Head |
| Mohamed Fahmy | Virtusa | Data Architect |

## Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| MDM | Master Data Management |
| SOAP | Simple Object Access Protocol |
| XML | Extended Markup Language |
| WSDL | Web Services Description Language |
| ESB | Enterprise Service Bus |

# Interface Static Design

## Duplicate Cover Check

Frequency of interaction – Real-time

Protocol – Soap over Https

***High Level Process (Illustration Only):***

* Duplicate cover check is the real-time service which is used to identify the overlap/duplicates cover against the existing contract for insured property.
* Ensura and Pega are the source systems which make use of duplicatecovercheck service.
* Source systems will be checking internally before using duplicatecovercheck service to find if there is any overlap.
* The list of request attributes sent for querying MDM are sent through Talend ESB. The data items used to query MDM are given in the Section 3.1.3
* Talend ESB will process the request and check in MDM for any matching contracts at the property requested. The response details will be as per the details given in the section 3.1.4
* Calling system will consume the response from Talend ESB for further processing to interpret the results which are not covered and out of scope for this document.

## Product Mapping

Product mapping in MDM will be the reference data that is stored in MDM. This is another interface in MDM for Duplicate cover check service to perform and provide the response. This is mapping of product and its metadata across PEGA and Ensura .Details of how this will be store in MDM are indicated in the below flow diagram.



**Data flow overview**

The product mapping table in MDM will have 2 independent ETL process that sources data from PEGA and Ensura extracts. The extract from PEGA will be a BIX interface and the XML will be sent to MDM. Extract from Ensura related to product mapping will be present in the decode file that is covered in the Ensura batch ICD. Refer the ICD for INT-36 in Appendix

## Assumptions

* Request from the calling systems should align with the structure defined in the XSD.
* Calling systems will do the Duplicate Cover check internally before using the MDM Duplicate cover check service
* Duplicate cover check will be performed against the records that are present in the MDM at the point in time.
* Pega should send Capscan cleansed address information in the request.
* For requests from Pega, Address matching will be done using Postcode and DPS, else with CapscanAddressKey if available from Pega, else perform exact match as per the next point.
* For requests from Ensura, the address details are first cleansed with Capscan. Address matching will be done using Postcode and DPS, else with CapscanAddressKey if available from Capscan, else perform exact match as per the next point.
* Address exact match for Ensura/Pega requests will be based on at least Flat Number and/or Building Number and Postcode along with other available request attributes.
* The 'Effective Start Date' value in the request will be checked against the 'Contract End Date' in MDM. For example, if a contract exist and its end date is greater than effective start date then it will be considered as a duplicate
* If 'Contract End Date' is missing for an active policy in MDM then it will be considered for duplicate cover check.
* For duplicate cover check, active contract status (Pending Cancellation, Pending In-Force, In-Force-PreventPay, In-Force, Cancelled, Expired, Suspended) and latest major version will be considered.
* Calling system will consume the response and process the information to interpret the results published.
* Assets and Partners data is not in the scope for Duplicate cover check criteria
* Pega will use the UpdateParty service to update any changes to the contract (Dates, status) for all previous versions.
* BIX extract from PEGA should have the Ensura Product and Claim Center Product Code for product mapping.
* MDM won’t apply any date logic around eServe contracts. Based on contracts status will identify whether eServe contract is active or not.

# Detailed Interface Specification

## DuplicateCoverCheck Service

## File Naming Conventions

Below are the xsd and wsdl file naming conventions

**wsdl namespace and File Naming Conventions:**

* /wsdl/Europe/GB/Customer/DuplicateCoverCheckService/v1/DuplicateCoverCheckService.wsdl

**xsd namespace and file name format:**

* /xsd/Europe/GB/Customer/DuplicateCoverCheckServiceOperations/v1/ DuplicateCoverCheckServiceOperationsType.xsd
* /xsd/Global/Common/CommonService/v1/ CommonServiceType.xsd
* /xsd/Global/Customer/Asset/v1/AssetType.xsd
* /xsd/Global/Customer/v1/CustomerType.xsd
* /xsd/Europe/GB/Address/v1/AddressType.xsd

## WSDL Operations

|  |  |  |  |
| --- | --- | --- | --- |
| **Service** | **Operation** | **Type** | **Associated Schema(s)** |
| DuplicateCoverCheck | DuplicateCoverCheckRequest | Request | /xsd/Europe/GB/Customer/DuplicateCoverCheckServiceOperations/v1/ DuplicateCoverCheckServiceOperationsType.xsd /xsd/Europe/GB/Address/v1/AddressType.xsd |
| DuplicateCoverCheckResponse | Response | /xsd/Europe/GB/Customer/DuplicateCoverCheckServiceOperations/v1/ DuplicateCoverCheckServiceOperationsType.xsd /xsd/Europe/GB/Address/v1/AddressType.xsd  /xsd/Global/Customer/Asset/v1/AssetType.xsd  /xsd/Global/Customer/v1/CustomerType.xsd |
| DuplicateCoverCheckFault | Fault | /xsd/Global/Customer/DuplicateCoverCheckServiceOperations/v1/ DuplicateCoverCheckServiceOperationsType.xsd |
| ServiceAvailability | ServiceAvailabilityRequest | Request | /xsd/Global/Common/CommonService/v1/ CommonServiceType.xsd |
| ServiceAvailabilityResponse | Response | /xsd/Global/Common/CommonService/v1/ CommonServiceType.xsd |
| ServiceAvailabilityFault | Fault | /xsd/Global/Common/CommonService/v1/ CommonServiceType.xsd |

## DuplicateCoverCheck Service Request Attribute Definitions



## DuplicateCoverCheck Service Response Attribute Definitions



## DuplicateCoverCheck Service Error Attribute Definitions

If any Exception/error occurs during the operation, ‘Fault code’ and ‘Fault description’ will be returned as the part of SOAP fault. Refer Section 4.4 Error Handling



**Error Type: Faults that can be handled**

* XSD Schema validation failed
* Mandatory Check on the required fields failed
* Business validation rule failed

The above handled response details will be passed to the normal response in the outcome section. Reason code and description will be as per the details provided in the common Error catalogue for the entire Unity Programme

## ServiceAvailability Service Request Attribute Definitions



## ServiceAvailability Service Response Attribute Definitions



**Note:** Request and Response attributes and lengths will fluctuate during development.

## ServiceAvailability Service Error Attribute Definitions

If any Exception/error occurs during the operation, ‘Fault code’ and ‘Fault description’ will be returned as the part of SOAP fault. Refer Section 4.4 Error Handling



**Error Type: Faults that can be handled**

* XSD Schema validation failed
* Mandatory Check on the required fields failed

# Non-Functional Design

## Service SOAP Headers

HomeServe has specific standards for headers. These headers are detailed in the HomeServe confluence link mentioned in appendix, examples are given for both requests and responses in the wiki. A key component of these headers is the ability to track a message from consumer through to end system and back again using the TransactionReference originated at the consumer.

Refer to “SOAP Header Standards” in wiki here: <http://confluence.hgb.hs.int:8090/display/DEV/SOAP+Messaging+Development+Practices>

## Security

Authentication with syncope will be enabled for this interface, it will be expected for the consuming system to provide the relevant username and password, as defined in SynCope, for any calls to the service.

The protocol will be SOAP over HTTPS, requests will be secured with **Username & Password** as per the Homeserve InfoSec based security policies, namely WS-Security UsernameToken usage in the SOAP headers.

Sample Header

<wsse:Security xmlns:wsse="http://schemas.xmlsoap.org/ws/2003/06/secext">

<wsse:UsernameToken xmlns:wsu="http://schemas.xmlsoap.org/ws/2003/06/utility" wsu:Id="sample">

<wsse:Username>sample</wsse:Username>

<wsse:Password Type="wsse:PasswordText">oracle</wsse:Password>

<wsu:Created>2004-05-19T08:44:51Z</wsu:Created>

</wsse:UsernameToken>

</wssw:Security>

The above sample is predefined basing on the schema referred in section ***5.3.4***

## Performance

## Volumetric

Below mentioned volumes are as per 6.3, need to be updated for 6.4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Agents = 400 Peak Volume (Per Hour)** | **Agents = 1200 Peak Volume (Per Hour)** | **BBDM** | **Web (Future State)** | **Total Transactions** |
| 1,991 | 5,972 | 40,000 |  | 45,972 |



## SLA (Service Response Time)

At a high level the expected response time for each MDM service is <= 5 seconds. The actual response time will depend on the infrastructure provided by Homeserve

## Deployment

All services will be deployed and monitored using Talend ESB module. The service artefacts will be available in Nexus repository and using Talend Administrator Centre (TAC), these artifacts will be deployed in Talend ESB runtime.

## Error Handling & Notification

To assist client systems with exception handling, all functional/business logic related errors will be handled by ESB and MDM as part of SOAP service response with an appropriate Error code and Error Description will be sent as per the Enterprise Error Catalogue. Notification will be configured within TAC to send an alert to service delivery team whenever service is not available.

## Housekeeping Policies

Actual request and response messages will be logged in Talend Administrator Console (ESB Job Conductor) using Service Activity Monitoring (SAM) feature. This will be used during Integration Testing / UAT to debug the messages. However, in production it can be switched off if any implications on system’s performance or response time.

# Appendix

## WSDL & XSD

**WSDL of DuplicateCoverCheckService:**

Zip file attached below has WSDL file for DuplicateCoverCheckService. File location is wsdl.Europe.GB.Customer.DuplicateCoverCheckService.v1 and WSDL file name is DuplicateCoverCheckService.wsdl.



These WSDLS and corresponding XSDS are source controlled in Mercurial at below location.

http://mercurial.hgb.hs.int/hg/hgweb.cgi/GlobalInterfaceContracts/

## MDM Entity Level Data Model

***R6.4 Physical Data Models -> MDM***

[http://mercurial.hgb.hs.int:8080/UnityDataModel/Data%20Model/index.htm](https://apac01.safelinks.protection.outlook.com/?url=http://mercurial.hgb.hs.int:8080/UnityDataModel/Data%2520Model/index.htm&data=02%7c01%7csravyaa%40virtusapolaris.com%7c64edb6beea7543f6b6cd08d46073c360%7c0d85160c589944caacc8db1501b993b6%7c0%7c0%7c636239497697140789&sdata=gi1ysssOEeRll/src7NZdFcuzlA35Al%2Bx4AO0CqkFT8%3D&reserved=0" \o "https://apac01.safelinks.protection.outlook.com/?url=http://mercurial.hgb.hs.int:8080/UnityDataModel/Data%2520Model/index.htm&data=02%7c01%7csravyaa%40virtusapolaris.com%7c64edb6beea7543f6b6cd08d46073c360%7c0d85160c589944caacc8db1501b993b6%7c0%7c0%7c636239497697140789&sdata=gi1ysssOEeRll/src7NZdFcuzlA35Al%2Bx4AO0CqkFT8%3D&reserved=0" \t "_blank)

## References

## Duplicate Customer Check ICD

<https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/Programme%20Documentation/R6_Sprint4_INT21_MDM_DuplicateCustomerCheckService_ICD.docx?d=w062b608433f14ad09f56c9160052339a>

## Duplicate Customer Check Design

*https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/Programme%20Documentation/R6\_Sprint4\_INT25\_MDM\_DuplicateCoverCheck\_IDD.docx?d=w08f0b17ea4eb457e84a8025a93920535*

## HomeServe SOAP Standards

[*http://confluence.hgb.hs.int:8090/display/DEV/SOAP+Messaging+Development+Practices*](http://confluence.hgb.hs.int:8090/display/DEV/SOAP+Messaging+Development+Practices)

## WS-Security Schema

[*http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd*](http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd)

## Source Systems Catalogue

[*https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/\_layouts/15/WopiFrame.aspx?sourcedoc={F9916697-43F7-4C99-8DFC-523A7AD19D3D}&file=Unity%20Metadata%20Catalogue.xlsx&action=default*](https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/_layouts/15/WopiFrame.aspx?sourcedoc=%7bF9916697-43F7-4C99-8DFC-523A7AD19D3D%7d&file=Unity%20Metadata%20Catalogue.xlsx&action=default)

## Unity Error Catalogue:

[*https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/\_layouts/15/WopiFrame.aspx?sourcedoc={CB592CF8-1159-4741-B2A8-36165F0480BC}&file=Unity%20Error%20Catalogue.xlsx&action=default*](https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/_layouts/15/WopiFrame.aspx?sourcedoc=%7bCB592CF8-1159-4741-B2A8-36165F0480BC%7d&file=Unity%20Error%20Catalogue.xlsx&action=default)

## Product Mapping ICD

<https://serveusa.sharepoint.com/sites/HomeServe/GlobalResources/GlobalProjects/Ensura/Programme%20Documentation/R6_Sprint2_INT36%2637_MDM_ProductMapping_ICD.docx?d=wc23a6b24fcd84e08847403b4cf30a0fc>

## DuplicateCover Scenarios for Cancelled and Expired Contracts



## Review Comments

