**Health Care System**

**Software Requirements Document**

**V 1.0**



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# Introduction

## About this document

### Purpose & Scope of the document

The purpose of the software requirements document is to systematically capture requirements for the project and the system “Blue Care Health Plan Inc.” to be developed. Functional requirements of this system are captured in this document. It also serves as the input for the project scoping.

The scope of this document is limited to addressing the requirements from a user, quality, and non-functional perspective. It is recommended that design aspects are not added in this document

### Intended Audience

Project Team

## About the Software System

The primary objective of the project is to create a database with required data validations as mentioned. The database is in turn used for generating welcome letters in xml format for each subscriber.

The following are the modules in this proposed system

1. Group
2. Sub Group
3. Subscriber

### Scope of the system

The scope of the system is explained through its modules as follows

* **Group** – This module is to analyze the Group information provided and load them into the database in the corresponding Group table.
* **Sub Group** – This module is to analyze the Sub Group information provided and load them into the database in the corresponding Sub Group table with only the matching groups in the Group table that is previously loaded.
* **Subscriber** – This module is to analyze the Subscriber information provided and load them into the database in the corresponding Subscriber table with only the matching groups in the Group table and sub groups in the subgroup table that were previously loaded.

### Exclusions

1. The system will operate only on the modules discussed above and will not include any additional functionality.

### System Perspective

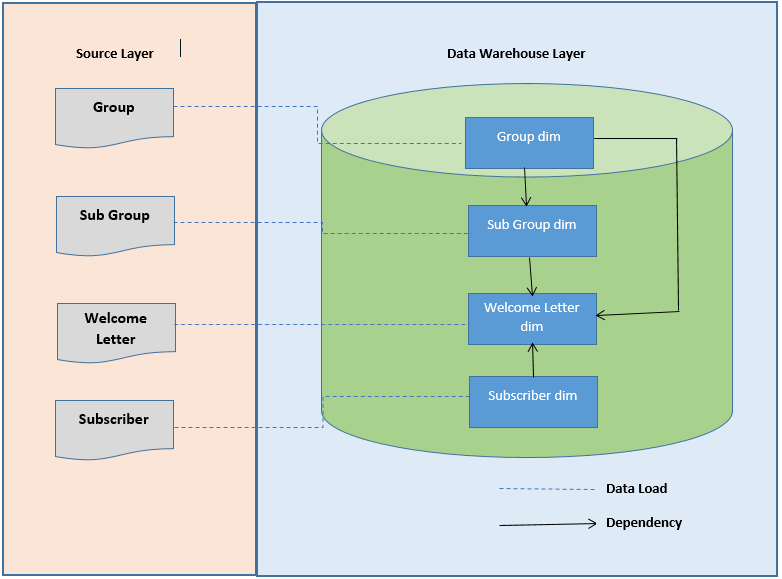
The system is a data warehouse developed to manage the information of different subscribers enrolled for healthcare schemes by the company.

### Architecture diagram

#### Logical Architecture:

The Logical Architecture defines the Processes (the activities and functions) that are required to provide the required [User Services](http://www.iteris.com/itsarch/html/user/userserv.htm). Many different [Processes](http://www.iteris.com/itsarch/html/pspec/pspecs.htm) must work together and share information to provide a User Service. The Processes can be implemented via software, hardware, or firmware. The Logical Architecture is independent of technologies and implementations.

HealthCare has 3 dimension tables and one file generation component.



### Impact of the System

The data warehousing system is being developed to enhance the decision support and generating customized reports for HealthCare.

### Assumptions, Risks / Constraints

**Assumptions:** Only group, sub group and subscriber tables are considered.

### Design Constraints – from the template

Create Target tables in the database and import them into Informatica as Target tables.

Create the DDL for tables as per the constraints mentioned in the source and Target data objects.

### Source File Structure

GROUP FIXED WIDTH:

|  |  |  |
| --- | --- | --- |
| **FIELD\_NAME** | **START\_POS** | **END\_POS** |
| GROUP\_ID | 1 | 8 |
| GROUP\_NAME | 9 | 24 |
| EFF\_DT | 25 | 34 |
| TERM\_DT | 35 | 44 |
| STREET | 45 | 64 |
| CITY | 65 | 80 |
| STATE | 81 | 96 |
| ZIP | 97 | 101 |



GROUP COMMA DELIMITED:

|  |  |
| --- | --- |
| **FIELD\_NAME** | **LENGTH** |
| GROUP\_ID | 8 |
| GROUP\_NAME | 16 |
| EFF\_DT | 10 |
| TERM\_DT | 10 |
| STREET | 20 |
| CITY | 16 |
| STATE | 16 |
| ZIP | 5 |



SUBGROUP:

|  |  |
| --- | --- |
| **FIELD\_NAME** | **LENGTH** |
| SUBGRP\_ID | 4 |
| SUBGRP\_NAME | 30 |
| EFF\_DT | 10 |
| TERM\_DT | 10 |
| GROUP\_ID | 8 |



SUBSCRIBER:

|  |  |
| --- | --- |
| **FILED\_NAME** | **LENGTH** |
| SUB\_ID | 9 |
| LAST\_NAME | 30 |
| FIRST\_NAME | 30 |
| GENDER | 1 |
| BIRTH\_DT | 10 |
| SUBGRP\_ID | 4 |
| GRP\_ID | 8 |
| EFF\_DT | 10 |
| TERM\_DT | 10 |
| ELIG\_IND | 1 |



### Target Table Structure:

GROUP:

|  |  |  |
| --- | --- | --- |
| **FIELD\_NAME** | **TARGET DATATYPE** | **TABLE CONSTRAINTS** |
| GRP\_SK | NUMBER(10) | NOT NULL |
| GROUP\_ID | VARCHAR2(8) | PRIMARY\_KEY |
| GROUP\_NAME | VARCHAR2(30) | NOT NULL |
| EFF\_DT | DATE | NOT NULL |
| TERM\_DT | DATE | NOT NULL |
| STREET | VARCHAR2(35) |  |
| CITY | VARCHAR2(15) |  |
| STATE | VARCHAR2(20) |  |
| ZIP | NUMBER(5) | NOT NULL |

SUBGROUP:

|  |  |  |
| --- | --- | --- |
| **FIELD\_NAME** | **DATATYPE** | **CONSTRAINT** |
| SUBGRP\_SK | NUMBER(10) | NOT NULL |
| SUBGRP\_ID | VARCHAR2(4) | PRIMARY\_KEY |
| SUBGRP\_NAME | VARCHAR2(30) | NOT NULL |
| EFF\_DT | DATE | NOT NULL |
| TERM\_DT | DATE | NOT NULL |
| GROUP\_ID | VARCHAR2(8) | PRIMARY\_KEY |

SUBSCRIBER:

|  |  |  |
| --- | --- | --- |
| **FIELD\_NAME** | **DATA TYPE** | **CONSTRAINTS** |
| SUB\_SK | NUMBER(10) | NOT NULL |
| SUB\_ID | VARCHAR2(9) | PRIMARY KEY |
| LAST\_NAME | VARCHAR2(30) |  |
| FIRST\_NAME | VARCHAR2(30) | NOT NULL |
| GENDER | VARCHAR2(1) | NOT NULL |
| BIRTH\_DT | DATE | NOT NULL |
| SUBGRP\_ID | VARCHAR2(4) | NOT NULL |
| GRP\_ID | VARCHAR2(8) | NOT NULL |
| EFF\_DT | DATE | NOT NULL |
| TERM\_DT | DATE | NOT NULL |
| ELIG\_IND | VARCHAR2(1) | NOT NULL |

### System Requirements

## Functional Requirements

### Group

|  |  |
| --- | --- |
| DW – Illness  Req-2.1.1 |  |
| Functional Requirements | 1. Rename the input file as Group\_Fixed\_<Associate\_Id>.txt and Group\_Comma\_<Associate\_Id>.csv.  2. Create a table in sql plus by name Group\_<Associate\_Id>.  3. Validate the data from the input file and load only valid records into the target table according to the constraints mentioned in the target table.  4. Load only the members who are currently effective. (i.e) SYSDATE BETWEEN EFFT\_DT AND TERM\_DT.  5. Populate leading zeroes in GROUP\_ID field while populating into the target table.  6. GRP\_SK is the surrogate key. |

### Sub Group

|  |  |
| --- | --- |
| DW – Diagnosis  Req-2.1.2 |  |
| Functional Requirements | 1. Rename the input file as SUBGRP\_<Associate\_Id>.txt.  2. Create table in sql plus by name SUBGRP\_<Associate\_Id> with the above structure.  3. Validate the data from the input file and load only valid records into the target table according to the constraints mentioned in the target table.  4. Populate leading zeroes in the fields GROUP\_ID and SUBGRP\_ID while loading into the table.  5. Also validate the Group Id against the Group table and load only matching data into the target table.  6. Load the non matching values into Target file with the same structure as source and name the file as SUBGRP\_Join\_Errors\_<Associate\_Id>.txt  7. SUBGRP\_SK is the surrogate key. |

### 

### Subscriber

|  |  |
| --- | --- |
| DW – Language  Req-2.1.3 |  |
| **Functional Requirements** | 1. Rename the input file as SUBSCRIBER\_<Associate\_Id>.csv  2. Create table in sql plus by name SUBSCRIBER\_<Associate\_Id> with the above structure.  3. Load only the members who are currently effective. (i.e) SYSDATE BETWEEN EFFT\_DT AND TERM\_DT.  4. Load subscribers with Elig\_Ind as ‘Y’ in the Target table and with Elig\_Ind as ‘N’ into Target file with the same structure as source and name the file as SUBSCRIBER\_Errors\_<Associate\_Id>.txt  5. Reject records if the Subscriber\_Id has less than 9 characters.  6. Populate leading zeroes in the fields GROUP\_ID and SUBGRP\_ID while populating data into the Target table.  7. Validate the data from the input file and load only valid records into the target table according to the constraints mentioned in the target table.  8. Also validate the Group Id and Subgrp\_Id against the Subgrp table and load only matching data into the target table.  9. SUB\_SK is the surrogate key. |

### Welcome Letter

|  |  |
| --- | --- |
| DW – Language  Req-2.1.3 |  |
| **Functional Requirements** | 1. Fetch all valid records from the Group, Subgrp and Subscriber tables based on the below join conditions mentioned:  GROUP.GROUP\_ID = SUBGRP.GROUP\_ID  AND GROUP.GROUP\_ID = SUBSCRIBER.GRP\_ID  AND SUBSCRIBER.SUBGRP\_ID = SUBGRP.SUBGRP\_ID  2. Populate the below fields as per the data objects |

### SOURCE-TARGET MAPPING

|  |  |
| --- | --- |
| **Target XML** | **Source Column** |
| GroupName | GROUP.GROUP\_ID |
| Street | GROUP.STREET |
| City | GROUP.CITY |
| State | GROUP.STATE |
| Zip | GROUP.ZIP |
| SubgrpName | SUBGRP.SUBGRP\_NAME |
| LastName | SUBSCRIBER.LAST\_NAME |
| FirstName | SUBSCRIBER.FIRST\_NAME |

The XSD is attached below. Import the XSD as target into Informatica and populate the required fields using the Source Target mapping given above.



# Annexure

NA

# Terms & Conditions

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# Change Log

Please note that this table needs to be maintained even if a Configuration Management tool is used.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version Number | Changes made | | | |
| V1.0 |  | | | |
| V1.1 | *<If the change details are not explicitly documented in the table below, reference should be provided here>* | | | |
| Page no | Changed by | Effective date | Changes effected |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |
| V1.2 | *<If the change details are not explicitly documented in the table below, reference should be provided here>* | | | |
| Page no | Changed by | Effective date | Changes effected |
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