

**Vulnerability Tool Requirement**

Copyright © 2016 Risk Management Solutions, Inc. All Rights Reserved

Risk Management Solutions, Inc. CONFIDENTIAL INFORMATION

This document contains proprietary information of Risk Management Solutions, Inc. This information is highly confidential. Use, duplication and disclosure of the information contained in this document are restricted by Nondisclosure agreement. The information contained in this document may not be reproduced or shared with any third parties without the explicit prior written consent of Risk Management Solutions, Inc.

Risk Management Solutions, Inc.   
7575 Gateway Blvd.  
Newark, CA 94560  
Phone: 510-505-2500  
Fax: 510-505-2501

Risk Management Solutions, Inc. (RMS) presents the information in this document for internal review by its customers. No part of this document may be disclosed or reproduced in any form without prior consent from Risk Management Solutions, Inc.

Test Plan Revision Summary & Reference

Department: Model Certification

Author: Mohammad Razavi

Duration: June 2016– TDB

Responsible Parties:

|  |  |  |
| --- | --- | --- |
| Activity | Person(s) involved | Status |
| Write-up | Mohammad Razavi | Ongoing |
| Review | Ching-Yee Chang , Nervdeshwar Pandey, Srinivas Thupakula | TDB |

Revision History:

|  |  |  |
| --- | --- | --- |
| **Testplan Version** | **Date** | **Summary of Changes** |
| 0.1 | 06/23/2016 | Initial version |
|  |  |  |

Contents

[Introduction 4](#_Toc454961028)

[Stored data 4](#_Toc454961029)

[Test cases 5](#_Toc454961030)

[Test-1: tables availability 5](#_Toc454961031)

[Test-2: empty tables 5](#_Toc454961032)

[Test-3: Comparison of Number of Rows in corresponding tables 5](#_Toc454961033)

[Test-4:Test vgeo and eqvgeo tables 5](#_Toc454961034)

[Test-5: Test cghs and eqcghsus tables 5](#_Toc454961035)

[Test-6: Test Imap and eqimapus tables 5](#_Toc454961036)

[Test-7: Test vdc0 table 5](#_Toc454961037)

[Test-8: Test imap and vinv 5](#_Toc454961038)

[Tool requirements 5](#_Toc454961039)

[User inputs for input.yml 5](#_Toc454961040)

# Introduction

The objective of the vulnerability tool is to test the integrity of the vulnerability database and to verify that the data is properly transferred between RiskLink tables and Next Generation (NG) tables.

# Stored data

Three sets of tables are used in this tool which include RiskLink tables, NG tables, and Mapping tables. Table 1 shows the list of tables that are necessary for the vulnerability tool.

**Table-1: List of Required Tables for Utilizing Vulnerability Tool**

|  |  |  |
| --- | --- | --- |
| **RiskLink Tables** | **NG Tables** | **Mapping Tables** |
| eqvllus | vll | Map\_HazardType |
| eqcghsus | cghs | Map\_HazardSCALE |
| eqfliinvus | fliinv | Map\_COVERAGE |
| eqimapus | imap | Map\_MAPCCLSSIF |
| eqLandMDRus | LandMDR | Map\_MAPCCTier1 |
| eqLiqMDRus | LiqMDR | Map\_MAPCCTier2 |
| eqmdscus | mdsc | Map\_MAPCCTier3 |
| eqodscus | odsc | Map\_InvOcc |
| eqvbius | vbi | Map\_CvKey |
| eqvbimodus | vbimod | Map\_BRTVKey |
| eqvbrdrus | vbrdr | Map\_BRDRKey |
| eqvbrtvus | vbrtv |  |
| eqvccus | vcc |  |
| eqvcvus | vcv |  |
| eqvdc0us | vdc0 |  |
| eqvdsus | vds |  |
| eqvgeous | vgeo |  |
| eqvhsrus | vhsr |  |
| eqvinvus | vinv |  |
| eqvinvaghazus | vinvaghaz |  |
| eqvlifus | vlif |  |
| eqvlifelinebius | vlifelinebi |  |
| eqvlifelinebidcus | vlifelinebidc |  |
| eqvoccus | vocc |  |
| eqvparamus | vparam |  |
| eqvrsus | vrs |  |
| eqvvrggeous | vvrggeo |  |

# Test cases

## Test-1: tables availability

Tests if all tables listed in Table-1 of this document are included in the input database.

## Test-2: empty tables

Reports empty tables.

## Test-3: Comparison of Number of Rows in corresponding tables

Compare the number of rows in each RislLink Table with its corresponding table in the NG and report any dissimilarity.

## Test-4:Test vgeo and eqvgeo tables

1. Checks and reports duplicate postal codes in vgeo table
2. Checks and reports duplicate district numbers
3. Checks for the number of distinct states in vgeo table
4. Check if records with the same GEO\_RECNUM have the same values in vgeo and eqvgeous tables

## Test-5: Test cghs and eqcghsus tables

Checks if the records with same cghs\_ID have equivalent Hazard\_Type, Hazard\_Scale, and Coverage. It uses the mapping tables to find the equivalent values. It reports any dissimilarity between two tables.

## Test-6: Test Imap and eqimapus tables

Compares equivalent records between imap and eqimapus tables and reports dissimilarities. It uses INV\_Recnum as the key for comparison.

## Test-7: Test vdc0 table

1. Check if all damage curves are monotonically increasing
2. Check if the x-axis on all damage curves are monotonically increasing
3. Check if curves with the same CGHS\_ID have the same number or records

## Test-8: Test imap and vinv

1. Check existence of PDC\_NUM in vinv if same MODIF\_PDC exists in imap for a given INV\_RECNUM

# Tool requirements

## User inputs for input.yml