

Disaster Recovery Factory

13526 Provider, PrismPro DR Document

Version 1.1

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This section will serve as a method for tracking this document. Any updates should be recorded below in the following tables.

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REVISION RECORD

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1.0	All	Initial document creation	Len Humbird	8/31/07
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Table of Contents

1.0	Introduction	4
1.1	Purpose	4
1.2	Scope	4
1.2.1	In Scope	4
1.2.2	Out of Scope	4
1.3	Definitions, Acronyms, and Abbreviations	4
1.4	References	5
1.5	Assumptions	6
1.6	Application and Contact Information	7
2.0	Environment Recovery	7
2.1	Overview	7
2.2	Server Requirements	7
2.2.1	Recovery Order Requirements	8
2.3	Database Requirements	8
2.4	Network Requirements	8
2.5	Firewall Requirements	8
2.6	Storage Requirements	8
2.7	Middleware Requirements	9
2.8	Integration/Other Components Requirements	9
2.8.1	Predecessors	9
2.8.2	Successors	9
2.9	Performance Requirements	9
2.10	Security Requirements	10
2.11	Batch Requirements	10
2.12	Audit Requirements	10
2.13	Recoverability Requirements	10
2.14	Data Retention and Backup Requirements	10
2.14.1	Production	10
2.14.2	Hot Site	10
2.15	Architecture Requirements	11
3.0	Application Recovery Process	12
4.0	Application Special Considerations	12
5.0	Supplemental Information	13
6.0	Appendixes	13

Application Recovery Document

The objective of the Disaster Recovery (DR) Application Recovery Document is to create and document an application recovery plan, to be used in the event of a major disaster (e.g. complete loss of a data center). This recovery process will be implemented at the IBM hot site facility utilizing our off site backup tapes for recovery.

Evergreen Process will be the term and process of ensuring all DR Application Recovery Documents will be reviewed and updated at least annually. This will also include notification by the Configuration Management Database (CMDB) process in which the Disaster Recovery Coordinator (DRC) is informed that changes have been made to this application.

1.0 Introduction

1.1 Purpose

This document provides instructions on how to restore PrismPro and verify that it is operational following a disaster recovery.

PrismPro is a predictive risk modeling, disease management, decision support for medical management. It is used to identify high-risk plan members, rank illness severity, and facilitate intervention strategies.

PrismPro is a database-driven web application. End users connect and interact via web browser.

1.2 Scope

1.2.1 In Scope

- PrismPro application, database and respective hardware platforms.

1.2.2 Out of Scope

- Other related ViPS products deployed at Regence: MCSource, MedExtract, MedMeasures.
- Business Continuity Planning (BCP)
- In house Operational Recovery
- Application recovery prioritization

1.3 Definitions, Acronyms, and Abbreviations

Acronym	Definition
BCP	Business Continuity Planning
B2B	Business to Business.
Business Rules Processing Engine	The main component of PrismPro. The main component of PrismPro A Windows based application used to calculate risk measures for members, and identifies potential care management programs. It also generates statistical aggregation for groups of members. It applies Business Rules to the source data and loads the result (indicators, pointers) - to the database. It applies the case/indicator/identification rules to the 12 months of Claims and Enrollment history for current members that has been extracted from the MCSource Datamart.
DameWare Remote Control	Windows software similar to Microsoft's RDP, providing remote terminal and remote desktop connectivity. This is being used for remote connectivity to the Application Rules Processing Engine. This is supported by DameWare Development LLC.
Datamart	A database containing a snapshot of claims and enrollment history data. It is intended to help Medical Management staff strategize based on the EBM (Evidence Based Medicine) analyses of current members health status.

Acronym	Definition
DR	Disaster Recovery (DR) - (1) Responsible for being prepared to recover technology systems and data in a severe incident or operational outage according to recovery objectives and priorities as set by the business. (2) Publish recovery policy and recovery plans that are usable to effectively recover Regence technology systems and are also usable by Regence Sales organizations to attract and retain members.
DRC	Disaster Recovery Coordinator
DTS	Data Transformation Services. A free application similar to DataStage but is bundled with MS SQL Server.
ETL	Extract Transformation & Load.
Evergreen or Evergreen Process	Evergreen Process will be the term and process of ensuring all DR Application Recovery Documents will be reviewed and updated at least annually. This will also include notification by the Configuration Management Database (CMDB) process in which the Disaster Recovery Coordinator (DRC) is informed that changes have been made to this application.
Hot-Site or hot site	Remote recovery site provided by IBM
MDAC	Microsoft Data Access Components. A software framework used for accessing a variety of data sources on Windows-based platforms.
Mksysb	An AIX command which creates a bootable, installable image of the operating system (root volume group) onto tape or image file. An AIX system backup is called a mksysb image. This image reflects the currently running kernel.
ODBC	Open Database Connectivity. A specification which provides a standard software API method for using database management systems (DBMS).
PrismPro	A predictive risk modeling, disease management, decision support for medical management. It is used to identify high-risk plan members, rank illness severity, and facilitate intervention strategies.
RDP	Remote Desktop Protocol. A Microsoft communication protocol that allows users to connect to computers running Microsoft Terminal Services.
ViPS	ViPS, Inc. is the vendor for PrismPro. A healthcare and data management vendor.

1.4 References

Document Name	Version	Location	Description of Reference
Standard DR Documentation			
Regence Backup & Recovery Strategy	1.3		General approach and strategy to meet disaster recovery requirements.
(Windows) Hot Site Recovery for Microsoft Servers.doc	N/A		Microsoft Windows Server Disaster Recovery guidelines
Storage Basic Standards	1.0		Guidelines for creating and maintaining storage for Oracle and Sybase
Hot Site Recovery Steps document	N/A		Contains EMC recovery steps.
TSM Backup Servers	1.0		Disaster recovery of the TSM backup servers
Control-M Disaster Recovery doc	1.0		Disaster recovery of the Control-M procedure
Network Servers document	1.0		Disaster recovery of the network servers
Standard Firewall recovery document	1.0		Crossbeam firewall recovery document
Shark	N/A		Storage recovery document

Document Name	Version	Location	Description of Reference
(SQL) SQL Database RECOVERY.doc	N/A		SQL database recovery.
Application-Specific Documentation			
11176 Provider MCSource DR Document.doc	1.0		ViPS, Inc. MCSource Disaster Recovery document.
13527 Provider MedExtract / MedMeasures DR Document.doc	1.0		ViPS, Inc. MedExtract and MedMeasures Disaster Recovery document
PRISMPro 4.1 Release Notes.pdf	4.1		ViPS, Inc. product documentation – Release Notes
PRISMPro 4.1 Concepts Guide.pdf	4.1		ViPS, Inc. product documentation – Concepts Guide
PRISMPro 4.1 Technical Architecture Guide.pdf	4.1		ViPS, Inc. product documentation – Architectural Guide
PRISMPro 4.1 Datamart Guide.pdf	4.1		ViPS, Inc. product documentation – Datamart Guide
PRISMPro 4.1 Processing Engine Installation Guide.pdf	4.1		ViPS, Inc. product documentation – Processing Engine
PRISMPro 4.1 Processing Engine User's Guide.pdf	4.1		ViPS, Inc. product documentation – Processing Engine
PRISMPro 4.1 Reporting System Administrator's Guide.pdf	4.1		ViPS, Inc. product documentation – Reporting System
PRISMPro 4.1 Reporting System Installation Guide.pdf	4.1		ViPS, Inc. product documentation – Reporting System
PRISMPro 4.1 Reporting System User's Guide.pdf	4.1		ViPS, Inc. product documentation – Reporting System

N/A – No version numbers were assigned to this document.

-- -- Document has not yet been created.

1.5 Assumptions

- The Regence network is operational.
- DameWare Remote Control has the current work-around for the RDP technology requirement across the WAN.
- Oracle & the Oracle Client Environment Net8/Net9 services are up available, with the required database entries.

1.6 Application and Contact Information

Application Name	Application Primary Function
PrismPro (or ImpactPro)	Disease and case management identification & disease stratification tool.
Application Acronym	Business Area(s) Supported
PrismPro	Medical Operations, WEG
Primary Application Group	Primary Application Support Group
Provider	RITS SDS Internal Applications - (Tacoma)
Vendor Contact (If Applicable)	
<p>ViPS, Inc.</p> <p>ViPS is the developer of the PrismPro software. ViPS contact info: On-hours (Monday through Friday 8:00 AM - 3:00 PM PST): xxxxxxxxxxxxxxxxxxxxxx Off-hours non-emergency support (Monday through Friday 3:00 PM - 6:00 PM PST): xxxxxxxxxxxxxxxxxxxxxx Off-hours emergency support for PrismPro production cycle issues: xxxxxxxxxxxxxxxxxxxxxx. Off-hours production on-call cell/beeper number: xxx-xxx-xxxx Email Support for PrismPro: xxx-xxx-xxxx</p>	

Primary IT Programmer (Supervisor)	Alternate IT Programmer (Lead)
XXXXXXXX XXXXXXXX	XXXXXXXX XXXXXXXX
Work Phone	Work Phone
xxx-xxx-xxxx	xxx-xxx-xxxx
Cell Phone	Cell Phone
xxx-xxx-xxxx	xxx-xxx-xxxx
Home Phone	Home Phone
xxx-xxx-xxxx	xxx-xxx-xxxx

2.0 Environment Recovery

2.1 Overview

Refer to section 1.4 Reference, of this document for the recovery documentation and information gathered from the Technical Teams participating in the Disaster Recovery Plan Factory.

2.2 Server Requirements

Element Type	LPAR or Server Name	OS and Patch Level	Minimal/Basic Hardware Platform Processors / Speed Memory	Description
MS Web Server	MSLCPRISM01 10.22.33.215	Win 2003 SP1	HP Proliant DL385 2 CPU AMD Opteron, 2.6GHz, 4GB memory.	Runs on MS IIS. Requires .NET 1.1
MS DB Server	MSLCPRISM02 10.22.33.216	Win 2003 Enterprise. Ed. SP1,	HP Proliant DL585 2.6GHz 2P Dual Core AMD Opteron 885, 6GB memory.	MS SQL Server MDAC 2.8 Dbase client.
MS App Server	MSLCPRISM03 10.22.6.136	Win 2003 SP1	HP Proliant DL385 G2 2.6GHz Dual-Core AMD Opteron 285, 3GB memory	Business Rules Processing Engine.

2.2.1 Recovery Order Requirements

1. Restore the database server.
2. Restore the application server.
3. Restore the web server.

2.3 Database Requirements

Database Information

Component	Value
Database Server	MSLCPRISM02
Database Platform	MS SQL Server 2000 - 8.00.2040
Schema	MSLCPRISM02/PRISM
Application Server	MSLCPRISM03
Web Server	MSLCPRISM01
Default Character Sets:	US Default: SQL_Latin1_General_CP1_CI_AS
Environment specific databases (Oracle)	N/A
Security requirements	SQL SERVER & WINDOWS

Database Security

INSTANCE	GRANTED ROLE	PERMISSIONS	GRANTEE
PRISM			

2.4 Network Requirements

N/A. See section 2.1 Server Requirements.

DNS Entries Required

DNS Name	IP Address	Description
N/A		

2.5 Firewall Requirements

Regence provides B2B access for ViPS support personnel. They have extensive administration access to all PrismPro production servers and databases.

The firewall rules are available on a need to know basis, and are available only upon request from the Network Management (network.regence.com). These rules are strictly confidential and are not to be distributed.

From Server	To Server	Port#	Description
N/A			

2.6 Storage Requirements

NAS Mounts Points

N/A – PrismPro does not use NAS.

NAS Shared Volumes		
Local Host	Local Mount Point	NAS Share
N/A		

Storage Capacity

Server Name	Device Type	Storage Quantity	Note
MSLCPRISM01 (PrismPro web server)	Internal Internal	Drive C: 10 GB Drive D: 125 GB	
MSLCPRISM02 (PrismPro database server)	Internal Internal SAN SAN SAN	Drive C: 10 GB Drive D: 400 GB Drive E: 92.5 GB Drive G: 92.5 GB Drive H: 75.5 GB	
MSLCPRISM03 (PrismPro application server)	Internal Internal	Drive C: 10 GB Drive D: 126 GB	

Other Storage Requirements

Component	Value	Note
N/A		

2.7 Middleware Requirements

Component	Value	Note
<i>Does it require LDAP?</i>	No	
<i>Does it require WebSphere?</i>	No	
<i>Does it require MQ Series?</i>	No	
<i>SSL Certificate(s) Required?</i>	Yes	Public certificates; handled automatically.

2.8 Integration/Other Components Requirements

Component	Value	Location	Note
<i>See below</i>			

2.8.1 Predecessors

ViPS MCSource DI or DSS databases for each supported state:

State	DI	DSS
UT:	w037	w038
OR:	w041	w042
ID:	w048	w049
WA:	w050	w051

2.8.2 Successors

N/A – PrismPro is an end-user application.

2.9 Performance Requirements

- Supports 75+ users
Reference: <http://mslcweb01.regence.com:83/tip/portal>
- Availability: 7am - 7pm PST, Mon - Fri.

Response times:

- Rules Engine Cycle - 15 Hours or less (Post ETL)
- On-line queries – 2 minutes or less
- On-line Page navigation - 45 seconds or less
- Logging into system – 30 seconds or less

2.10 Security Requirements

Component	Value	Note
N/A		

2.11 Batch Requirements

The regular jobs are manually run due to outside dependencies. PrismPro jobs are currently in DTS. Control-M jobs will be implemented at a future time.

Member and Claims ETL jobs for each of the MCSource Databases are run sequentially. After the completion of the ETL jobs, the Rules Engine is run manually by the administrator.

At 24 hours prior to the estimated end of the last MCSource DWI job stream, each of the PrismPro ETL job streams for each state are started. This is done sequentially, based on the availability for each state. Generally, Idaho is run first, followed by Utah, then Washington and Oregon.

Batch Scheduling Information

Batch Job name	Predecessor Jobs and Replication Markers	Successor Jobs	Jobs That Can't Run Concurrently	Server or LPAR
N/A				

2.12 Audit Requirements

N/A – there are no audit requirements for PrismPro.

2.13 Recoverability Requirements

PrismPro is identified a Tier 2 application.

Tier	Recovery Time Objective (RTO)	Recovery Point Objective (RPO)
0	24 hours	24 hours
1	72 hours	24 hours
2	96 hours	24 hours
3	3 days– 45 days	1 day – 7 days
4	Over 45 days	1 day - 7 days
5	N/A	24 hours

2.14 Data Retention and Backup Requirements

2.14.1 Production

- Control-M is used for server reboot and monthly loads.
- The last 12 months of data are retained at all times.
- Backups are performed every Sunday.

2.14.2 Hot Site

The hot site configuration is identical to the production site.

2.15 Architecture Requirements

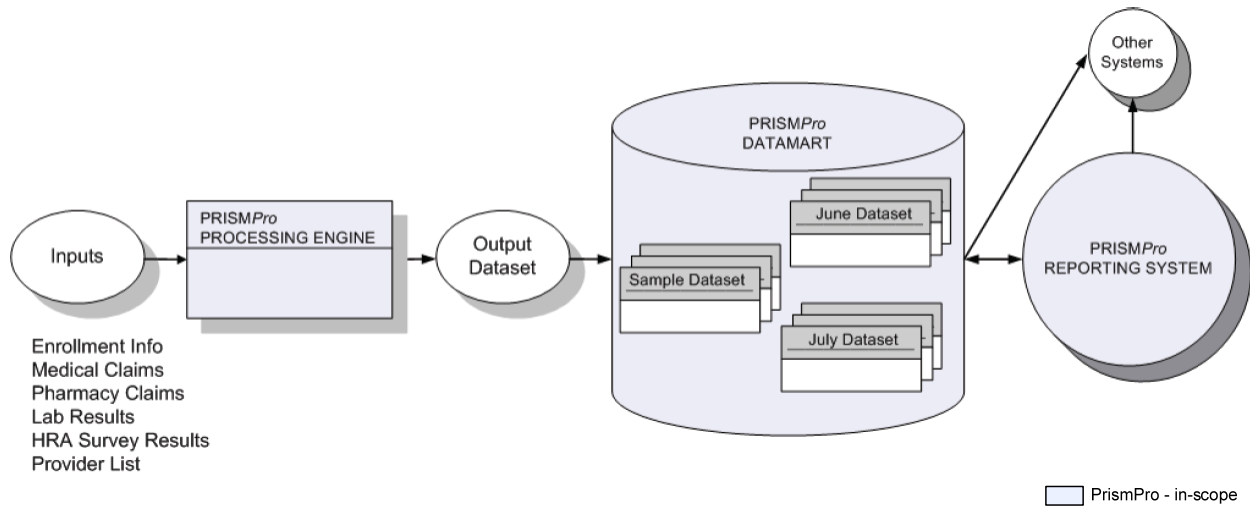


Figure 1. PrismPro System Components.

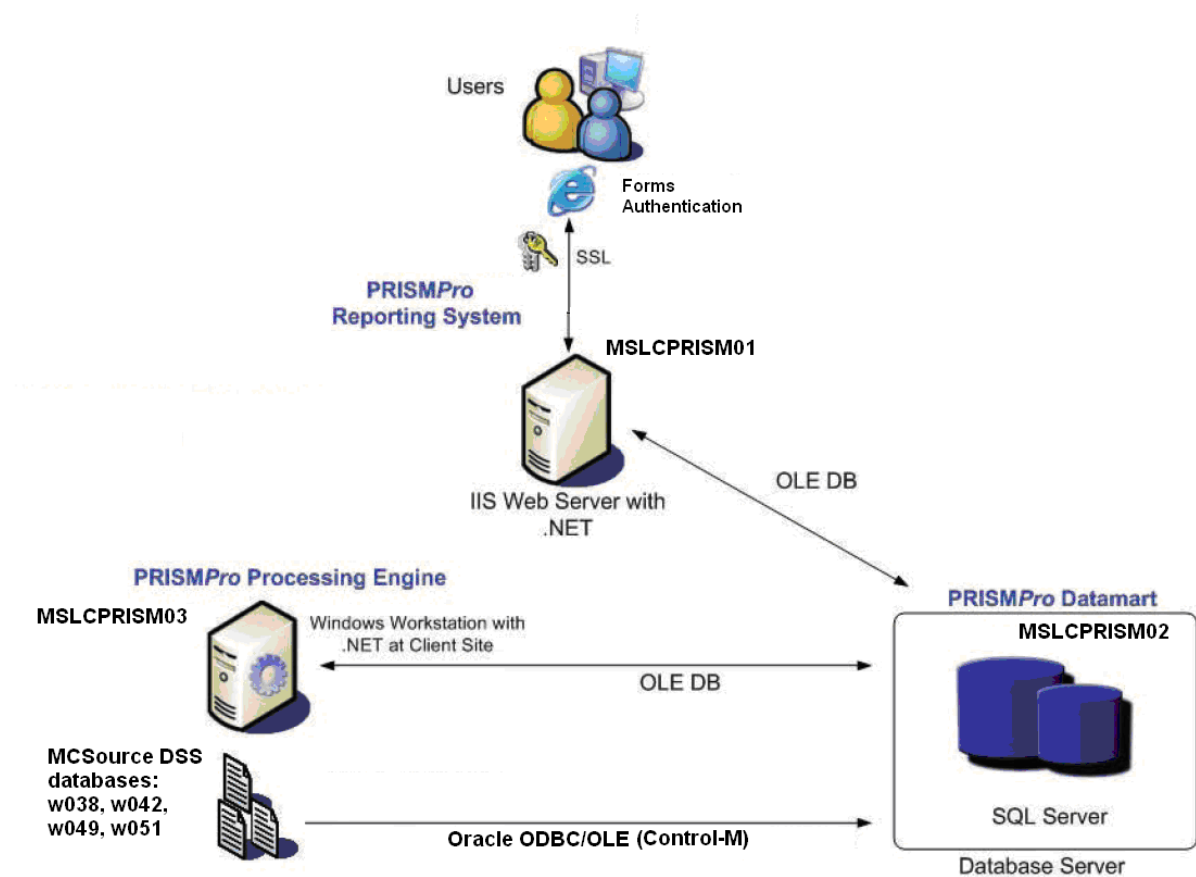


Figure 2. PrismPro Technical Architecture

3.0 Application Recovery Process

Client Side Recovery

This section describes the recovery process for the PrismPro application on the client PC.

Requestor Reboots PC. Verify that the Internet Explorer 5.5 is installed and working properly.

Server Side Recovery

Initial step:

- Restore Backups for all 3 servers.
- Verify that MS SQL Sever Database up and available. (MSLCPRISM02)
- Verify that MS IIS Services are running (MSLCPRISM01)
- Verify that the Published Application DataSet in the Application was restored from the Database Backup
- Maintain as necessary – Application DataSet Availability in the Application with the Database Backup

Validation of database:

- Run a standard end of Rules Cycle ETL Report SQL Script
- Contact core-team business analyst to run validation scripts that they run for every monthly cycle load. They can check results against prior validation reports.

Extreme case:

- If question that PrismPro environment corrupted, the possibility of running an 'Rules Engine Cycle' exists. This would ensure that all software and options are set up correctly. No new input data fed to cycles – simply Clone the most recent DataSet, and Run a Rules Engine Cycle.

System and Database backups on a weekly schedule.

If a process cycle was interrupted prior to Starting the Rules Engine Cycle the load cycle would be repeated from the start.

If a process cycle was interrupted in the Rules Engine Cycle, but the Database Backup contains the updated ETL Tables the load cycle could be repeated starting from the Rules Engine Cycle (Post Raw Data ETL).

4.0 Application Special Considerations

4.1 RDP vs. DameWare

All PrismPro servers must be accessible and manageable via RDP technology. However the Application Rules Processing Engine Software is not certified, and is not compatible with Microsoft's RDP. This will cause the application to randomly crash. DameWare Remote Control has been tested at Regence, and has been the current work-around for RDP technology across the WAN.

DameWare Remote Control is available on the Regence Menu System to users who require it.

4.2 Client Requirements

PrismPro requires the following configuration for client PCs (in addition to the standard Regence PC configuration).

- Regence WAN connectivity is established.
- .NET 1.1 is installed.
- MDAC is installed
- Oracle Client (OBDC/OLE) is installed.
- MS IE version 5.5 is installed, with JavaScript enabled.
- Optional: A local or network printer is accessible.
- The PrismPro icon is available on the Regence Menu System (RMS).

5.0 Supplemental Information

Knowledge Resource Requirements	
Resource	Skill Sets
Network	Understand Regence network configuration.
Telecom	
Security	
Platform	
Storage	Tivoli, SAN
Database	MS SQL data analysis and administration concepts.
E-mail	Lotus Notes
Desktop	DameWare Remote Control, WebEx

Also see section *1.4 References* for a list of PDF files on the PrismPro product from ViPS, Inc.

6.0 Appendixes

6.1 Application Rules Engine License Key

An updated key may be available from RITS Development Team or from the Vendor (via email). The current key is stored on the Rules Engine Server, in D:\Program Source\Vendor_Version41_Disk1\Regence0803107.lic