State Prescription Monitoring Program (SPMP)  
 Phase II

System Design Document



PSO\*7\*451

Department of Veterans Affairs

October 2015

Version 1.0

Revision History

| Date | Version | Description | Author |
| --- | --- | --- | --- |
| 10/27/2015 | 1.0 | Based on the AERB suggestions:  Completed Sections 2.1, 2.2, 2.5, 3, and 4.2 with the required information (Sections 2.1, 2.2, 3, and 4.2 contained no information, Section 2.5 contained no requirements).  Placed information provided in the presentation slides into the SDD in the relevant sections. |  |
| 09/28/2015 | 0.1 | Initial Draft |  |

Artifact Rationale

The System Design Document (SDD) is a dual-use document that provides the conceptual design as well as the as-built design. This document will be updated as the product is built, to reflect the as-built product. Per the Project Management Accountability System (PMAS) Guide, the SDD as a conceptual design is required prior to the Milestone 1 Review. (Sections 1, 2, 3, 4, 5, 7, 9 need to be populated, as applicable.) The as-built design for each delivery must be incorporated prior to the Milestone 2 Review. (The entire document needs to be populated or updated, as applicable.)

Instructions

| Activity | New Capability (1) | Feature Enhancement (2) |
| --- | --- | --- |
| **Field Deployment (A)** | No | Yes |
| **Cloud/Web Deployment (B)** | No | No |
| **Mobile Application (C)** | No | No |

Table of Contents

[1. Introduction 1](#_Toc433729220)

[1.1. Purpose of the SDD 1](#_Toc433729221)

[1.2. Identification 1](#_Toc433729222)

[1.3. Scope 1](#_Toc433729223)

[1.4. Constraining Policies, Directives and Procedures 2](#_Toc433729224)

[1.5. User Characteristics 2](#_Toc433729225)

[1.6. Relationship to Other Documents and Plans 2](#_Toc433729226)

[1.7. Definitions, Acronyms, and Abbreviations 2](#_Toc433729227)

[1.8. References 3](#_Toc433729228)

[2. Background 4](#_Toc433729229)

[2.1. Overview of the System 4](#_Toc433729230)

[2.2. Overview of the Business Process 4](#_Toc433729231)

[2.3. Business Benefits 5](#_Toc433729232)

[2.4. Assumptions and Constraints 5](#_Toc433729233)

[2.4.1. Design Assumptions 5](#_Toc433729234)

[2.4.2. Design Constraints 5](#_Toc433729235)

[2.4.3. Design Trade-offs 5](#_Toc433729236)

[2.5. Overview of the Significant Requirements 6](#_Toc433729237)

[2.5.1. Overview of Significant Functional Requirements 6](#_Toc433729238)

[2.5.2. Overview of Functional Workload / Performance Requirements 6](#_Toc433729239)

[2.5.3. Overview of Operational Requirements 6](#_Toc433729240)

[2.5.4. Overview of the Technical Requirements 6](#_Toc433729241)

[2.5.5. Overview of the Security or Privacy Requirements 7](#_Toc433729242)

[2.5.6. Overview of System Criticality and High Availability Requirements 7](#_Toc433729243)

[2.5.7. Single Sign-on Requirement 7](#_Toc433729244)

[2.5.8. Requirement for Use of Enterprise Portals 7](#_Toc433729245)

[2.5.9. Special Device Requirements 7](#_Toc433729246)

[2.6. Legacy System Retirement 7](#_Toc433729247)

[3. Conceptual Design 8](#_Toc433729248)

[3.1. Conceptual Application Design 8](#_Toc433729249)

[3.1.1. Application Context 9](#_Toc433729250)

[3.1.2. High-Level Application Design 9](#_Toc433729251)

[3.1.3. Application Locations 9](#_Toc433729252)

[3.2. Conceptual Data Design 9](#_Toc433729253)

[3.2.1. Project Conceptual Data Model 9](#_Toc433729254)

[3.2.2. Database Information 9](#_Toc433729255)

[3.2.3. User Interface Data Mapping 10](#_Toc433729256)

[3.2.3.1. Application Screen Interface 10](#_Toc433729257)

[3.2.3.2. Application Report Interface 10](#_Toc433729258)

[3.2.3.3. Unmapped Data Element 10](#_Toc433729259)

[3.3. Conceptual Infrastructure Design 10](#_Toc433729260)

[3.3.1. System Criticality and High Availability 10](#_Toc433729261)

[3.3.2. Special Technology 10](#_Toc433729262)

[3.3.3. Technology Locations 10](#_Toc433729263)

[3.3.4. Conceptual Infrastructure Diagram 10](#_Toc433729264)

[3.3.4.1. Location of Environments and External Interfaces 10](#_Toc433729265)

[3.3.4.2. Conceptual Production String Diagram 11](#_Toc433729266)

[4. System Architecture 12](#_Toc433729267)

[4.1. Hardware Architecture 12](#_Toc433729268)

[4.2. Software Architecture 12](#_Toc433729269)

[4.3. Network Architecture 12](#_Toc433729270)

[4.4. Service Oriented Architecture / ESS 12](#_Toc433729271)

[4.5. Enterprise Architecture 12](#_Toc433729272)

[5. Data Design 13](#_Toc433729273)

[5.1. DBMS Files 13](#_Toc433729274)

[5.2. Non-DBMS Files 13](#_Toc433729275)

[5.2.1. SPMP ASAP RECORD DEFINITION file (#58.4) – RTC # 13](#_Toc433729276)

[5.2.2. SPMP STATE PARAMETERS file (#58.41) – RTC #s 14](#_Toc433729277)

[5.3. Data View 15](#_Toc433729278)

[6. Detailed Design 16](#_Toc433729279)

[6.1. Hardware Detailed Design 16](#_Toc433729280)

[6.2. Software Detailed Design 16](#_Toc433729281)

[6.2.1. Conceptual Design 16](#_Toc433729282)

[6.2.1.1. Product Perspective 16](#_Toc433729283)

[6.2.1.1.1. User Interfaces 16](#_Toc433729284)

[6.2.1.1.2. Hardware Interfaces 16](#_Toc433729285)

[6.2.1.1.3. Software Interfaces 16](#_Toc433729286)

[6.2.1.1.4. Communications Interfaces 16](#_Toc433729287)

[6.2.1.1.5. Memory Constraints 16](#_Toc433729288)

[6.2.1.1.6. Special Operations 16](#_Toc433729289)

[6.2.1.2. Product Features 16](#_Toc433729290)

[6.2.1.3. User Characteristics 17](#_Toc433729291)

[6.2.1.4. Dependencies and Constraints 17](#_Toc433729292)

[6.2.2. Specific Requirements – Outpatient Pharmacy (PSO) 17](#_Toc433729293)

[6.2.2.1. Routines (Entry Points) 17](#_Toc433729294)

[6.2.2.1.1. PSO451PI (Post-Install) 17](#_Toc433729295)

[6.2.2.1.2. PSOASAP 18](#_Toc433729296)

[6.2.2.1.3. PSOASAP0 20](#_Toc433729297)

[6.2.2.1.4. PSOSPMSP 22](#_Toc433729298)

[6.2.2.1.5. PSOSPMUT 23](#_Toc433729299)

[6.2.2.1.6. PSOSPMU1 26](#_Toc433729300)

[6.2.2.1.7. PSOSPML3 27](#_Toc433729301)

[6.2.2.1.8. PSOSPML7 31](#_Toc433729302)

[6.2.2.2. Mail Groups 33](#_Toc433729303)

[6.2.2.2.1. PSO SPMP Notifications 33](#_Toc433729304)

[6.2.2.3. Protocols 34](#_Toc433729305)

[6.2.2.3.1. PSO SPMP3 CLONE ASAP VERSION 34](#_Toc433729306)

[6.2.2.3.2. PSO SPMP3 CUSTOMIZE ASAP SEGMENT 35](#_Toc433729307)

[6.2.2.3.3. PSO SPMP3 CUSTOMIZE ASAP DATA ELEMENT 36](#_Toc433729308)

[6.2.2.3.4. Security Keys 37](#_Toc433729309)

[6.2.2.3.4.1. PSO SPMP 37](#_Toc433729310)

[6.2.2.3.5. Options 38](#_Toc433729311)

[6.2.2.3.5.1. PSO SPMP SSH KEY MANAGEMENT 38](#_Toc433729312)

[6.3. Network Detailed Design 39](#_Toc433729313)

[6.4. Service Oriented Architecture (SOA) / Enterprise Shared Services (ESS) Detailed Design 39](#_Toc433729314)

[7. External System Interface Design 40](#_Toc433729315)

[8. Human-Machine Interface 41](#_Toc433729316)

[9. Security and Privacy 42](#_Toc433729317)

[9.1. Security 42](#_Toc433729318)

[9.2. Privacy 42](#_Toc433729319)

[Attachment A – Approval Signatures 43](#_Toc433729320)

[A. Additional Information 44](#_Toc433729321)

[A.1. Requirements Traceability Matrix (RTM) 44](#_Toc433729322)

# Introduction

The State Prescription Monitoring Program (SPMP) Enhancement project was established to enhance the SPMP module under the Outpatient Pharmacy VistA application ensuring all VA sites are successful in transmitting data to their state’s Prescription Data Monitoring Program (PDMP).

## Purpose of the SDD

This Software Design Document (SDD) describes the specific technical software modifications and new components in sufficient detail so the VistA software can be modified to address the issues and enhancements identified in the project’s Requirements Specification Document (RSD).

## Identification

This document describes the new software components and modifications to the Outpatient Pharmacy VistA application.

## Scope

The scope of this project is to improve the current capabilities released by the original SPMP project (Patch PSO\*7\*408) allowing all VA sites to transmit data to their states PDMP using the American Society for Automation in Pharmacy (ASAP) format.

Table : Scope Inclusions

| Includes |
| --- |
| Create a mechanism for the sites to perform local customization to the content of the message that is sent to the states. |
| Address a misleading message “File Successfully Transmitted” for sites running on a Linux environment. |
| Enhance the current handling of the SSH security keys. |
| Review the maximum field lengths for all alphanumeric values and truncate if necessary. |
| Identify software logic to identify a non-Veteran patient as the dependent of a Veteran and transmit their data to the states as well. Currently, only patients marked as Veterans have their prescriptions sent to the states. |

Table : Scope Exclusion

| Excludes |
| --- |
| None. |

## Constraining Policies, Directives and Procedures

None.

## User Characteristics

This project will modify existing VistA functionality which has been in operation for quite some time. Current users are familiar with the applications involved in this project.

| Name | Description | Responsibilities |
| --- | --- | --- |
| Primary Users | Pharmacists and Pharmacy Technicians | Responsible for accurately and timely dispensing outpatient and inpatient medications. |
| Primary Users | Pharmacy Automated Data Processing Application Coordinators (ADPAC) | Responsible for the accuracy of Pharmacy applications supporting data (e.g., Drug file, Administration Schedule files, etc.), among other responsibilities. |

## Relationship to Other Documents and Plans

This document includes all the software changes necessary to address all the requirements described in the project’s RSD located at:

<http://domain.ext.domain.ext/warboard/anotebk.asp?proj=1849&Type=Active>

## Definitions, Acronyms, and Abbreviations

| **Term** | **Definition** |
| --- | --- |
| CPRS | Computerized Patient Record System |
| FY | Fiscal Year |
| PMP | Prescription Monitoring Program |
| SPMP | State Prescription Monitoring Program |
| SPDMP | State Prescription Data Monitoring Program |
| PDMP | Prescription Data Monitoring Program |
| SSH | Secure Shell |
| PSI | Patient Safety Issue |
| ASAP | American Society for Automation in Pharmacy |
| ADPAC | Pharmacy Automated Data Processing Application Coordinators |
| RDM | Requirements Development and Management |
| RSD | Requirements Specification Document |
| RTC | Rational Team Concert |
| TSPR | Technical Services Project Repository |
| VHA | Veterans Health Administration |
| VistA | Veterans Health Information Systems and Technology Architecture |

| Term | Definition |
| --- | --- |
| Strength | Strength identifies the numeric amount of medication that is provided by one unit-of-use for the identified product. |

## References

**Technical Services Project Repository (TSPR)**

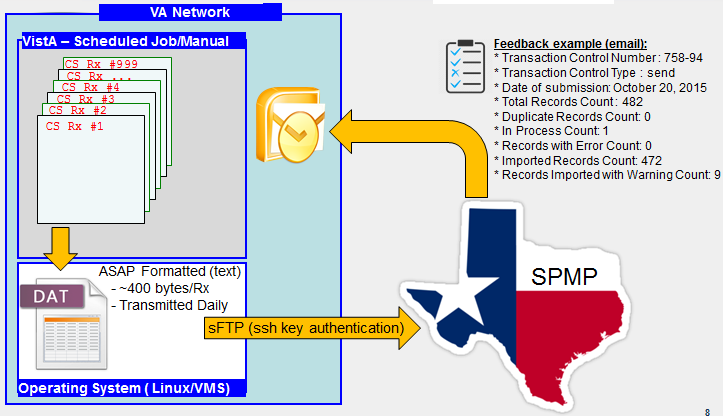
<http://domain.ext.domain.ext/warboard/anotebk.asp?proj=1849&Type=Active>

# Background

## Overview of the System

The system features described in this document are not considered new features, but enhancements to the current Outpatient Pharmacy VistA application. The **Figure 1** below shows an overview of the current transmission process from the VA to the states and the feedback sent back by the state to the VA via regular email.

**Figure 1: SPMP transmission to the states**



## Overview of the Business Process

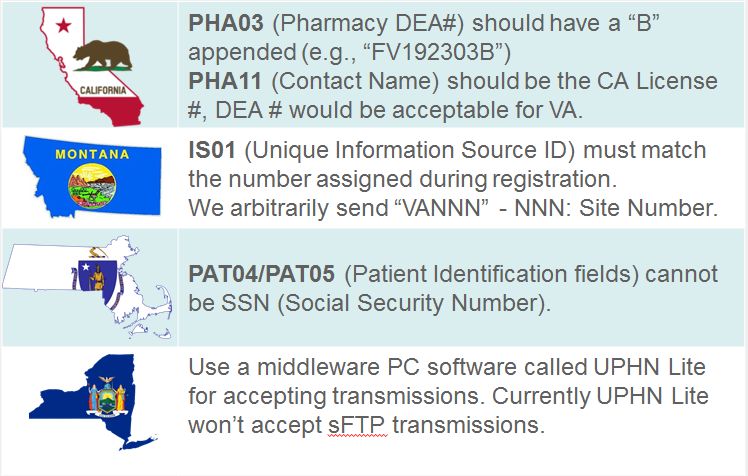
VA started successfully transmitting data to SPMPs around April 2013 (OK, TN, KY, NC, AR) from 6 different sites.

As of October 26st, 2015 VA has been successfully transmitting to 33 states on a daily basis.

Once configured, the transmissions require minimal end-user intervention. Usually they have to work on a handful of few records rejected by the state for different reasons (Prescriber’s DEA expired, Patient Address missing, etc.).

Besides other smaller technical issues, the main goal of this project is to address state specific issues that have prevented VA from transmitting to their SPMP databases. Figure 2 below lists a few examples:

**Figure 2 – State Specific Issues Examples**



## Business Benefits

In reporting controlled substance prescription data to the states’ PDMPs, VA is helping to improve medical treatment in the communities in which their centers are located. Furthermore, PDMPs are an essential resource in mitigating the prescription drug abuse epidemic throughout the country.

## Assumptions and Constraints

### Design Assumptions

Only existing VistA functionality is being enhanced and existing defects are being addressed. No new software or modules are being created as part of this project.

### Design Constraints

None.

### Design Trade-offs

No new functionality is being designed, only existing functionality is being enhanced and existing defects are being addressed.

## Overview of the Significant Requirements

No new functionality is being designed—only existing functionality is being enhanced and existing defects are being addressed. Such modifications are related to current transmissions of Controlled Substance prescription information to the states PDMPs.

### Overview of Significant Functional Requirements

Refer to the RSD for the specific functionality being modified by this project:

<http://domain.ext.domain.ext/warboard/anotebk.asp?proj=1849&Type=Active>

Some of the main requirements for this enhancement project include the following:

* Address state specific requirements have prevented transmissions to all SPMPs (e.g., CA, MO, TX, MA).
* Allow future ASAP versions to be created and manually modified to fulfill future ASAP requirements.
* Improve the security surrounding the handling of the Private SSH key used for the transmissions.
* Address the issues that inaccurately display “File Successfully Transmitted” message for Linux Operating System.
* Parameterize the transmission of .UP file and subsequent renaming to .DAT/.TXT. Some SPMPs require files to be transmitted straight with the .DAT/.TXT extension.
* The Appriss (SPMP vendor) username has a @, which was not accounted for in the original solution and will have to be considered for this enhancement.
* There is a need to capture the VMS Log for failed transmissions to help troubleshoot transmission problems.

### Overview of Functional Workload / Performance Requirements

No existing workload or performance will be affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Overview of Operational Requirements

No existing operational requirements will be affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Overview of the Technical Requirements

No existing technical requirements will affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Overview of the Security or Privacy Requirements

No existing security or privacy requirements will affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Overview of System Criticality and High Availability Requirements

No existing critical and high availability requirements will affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Single Sign-on Requirement

No existing single sign-on requirements will affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Requirement for Use of Enterprise Portals

No existing use of enterprise portals requirements will be affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

### Special Device Requirements

No existing special device requirements will be affected by this project. Additionally, no new requirements will be necessary for the execution of this project.

## Legacy System Retirement

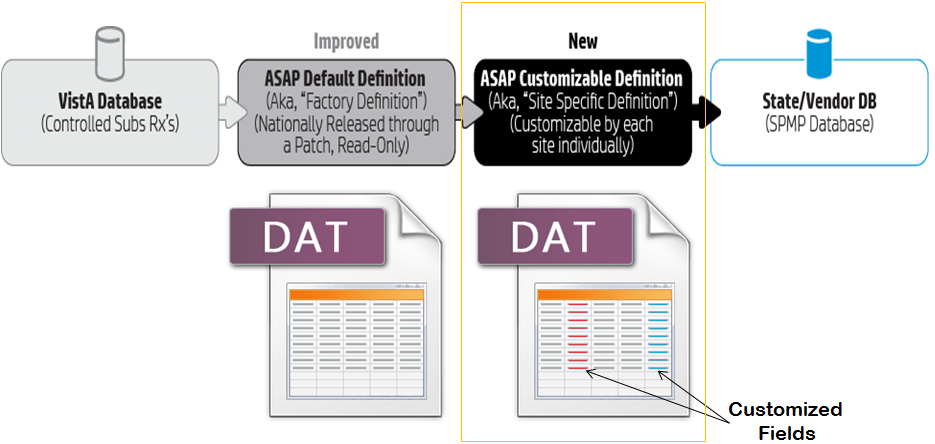
No Legacy Systems are being retired by this project. On the contrary, the existing Legacy Pharmacy applications are being further enhanced by this project.

# Conceptual Design

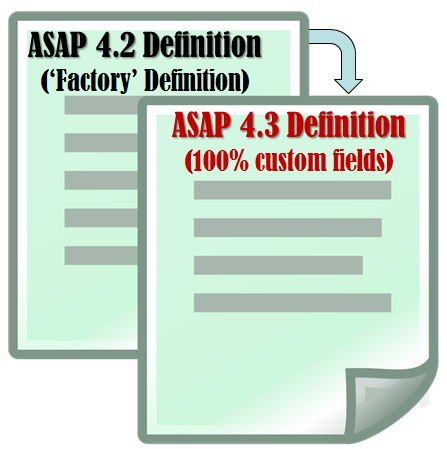
## Conceptual Application Design

The modifications to the current VistA functionality described in this document will further enhance and improve the Outpatient Pharmacy application by improving existing functionality as well as addressing some existing software issues. Two major improvements to the current functionality will enable VA to report to SPMPs with unique requirements and prepare the software to handle future releases of ASAP standards without require a new project to be established.

**Figure 3** illustrates the customization functionality that will be added to the existing SPMP module in the Outpatient Pharmacy VistA application. **Figure 4** illustrate the cloning of an existing supported ASAP version into a completely new ASAP version that may be eventually released by the ASAP organization in the future. The new cloned ASAP Version can be customized as well, like the Default Version.

**Figure 3 – Current ASAP Definition Customization**

**Figure 4 – ASAP Version Cloning**



### Application Context

The context of this project is to enhance further the SPMP module within the Outpatient Pharmacy VistA application to allow all VA sites to transmit controlled substance prescription data to their SPMP.

### High-Level Application Design

The existing Outpatient Pharmacy VistA application will be enhanced to improve the reporting of controlled substance prescription data to the SPMPs.

### Application Locations

All applications involved are existing VistA applications, which are currently running in all VA Medical Center sites.

## Conceptual Data Design

### Project Conceptual Data Model

No new data design is being introduced as part of this project. A very limited number of fields are being created or modified in existing files as listed in the Non-DBMS Files section below to support the enhancements described in this document.

### Database Information

None.

### User Interface Data Mapping

None.

#### Application Screen Interface

None.

#### Application Report Interface

None.

#### Unmapped Data Element

None.

## Conceptual Infrastructure Design

The modifications performed by this project will neither introduce nor modify existing infrastructure design.

### System Criticality and High Availability

The modifications performed by this project will not introduce or modify any process related to system criticality or high availability.

### Special Technology

None.

### Technology Locations

None.

### Conceptual Infrastructure Diagram

#### Location of Environments and External Interfaces

Not applicable to this project.

#### Conceptual Production String Diagram

Not applicable to this project.

# System Architecture

## Hardware Architecture

There will be no special requirements regarding new or existing hardware architecture.

## Software Architecture

The existing files used for storing ASAP Default Definitions will be used to also store ASAP Customized Definitions. When retrieving the ASAP Standard message definition for a transmission, the software will load all the Default Definitions first and then it will overwrite any customized ASAP segment or data element with the user customized definition before transmitting the data to the SPMP, as illustrated in **Figure 3** above.

## Network Architecture

There will be no special requirements regarding new or existing network architecture.

## Service Oriented Architecture / ESS

None.

## Enterprise Architecture

There will be no special requirements regarding new or existing Enterprise Architecture.

# Data Design

## DBMS Files

No DBMS files are involved in this project. Only non-DBMS files, which are described below.

## Non-DBMS Files

This system uses VistA FileMan files (based on Caché globals). New files and modifications to existing files are listed in this section.

### SPMP ASAP RECORD DEFINITION file (#58.4) – RTC #

This is an existing file. The following new fields will be added to this file to support the enhancements described in this document.

STANDARD DATA DICTIONARY #58.4 -- SPMP ASAP RECORD DEFINITION FILE

STORED IN ^PS(58.4,

DATA NAME GLOBAL DATA

ELEMENT TITLE LOCATION TYPE

-------------------------------------------------------------------------------

**New fields:**

58.4001,.02 DATA ELEMENT DELIMITER CHAR 0;2 FREE TEXT

INPUT TRANSFORM:K:$L(X)>1!($L(X)<1) X

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Answer must be 1 character in length.

DESCRIPTION: This is the character used to separate the ASAP

Data Elements.

58.4001,.03 SEGMENT TERMINATOR CHAR 0;3 FREE TEXT

INPUT TRANSFORM:K:$L(X)>1!($L(X)<1) X

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Answer must be 1 character in length.

DESCRIPTION: This is the character used to separate the ASAP

Segments.

58.4001,.04 END OF SEGMENT CONTROL CHAR(S) 0;4 FREE TEXT

INPUT TRANSFORM:K:$L(X)>15!($L(X)<1) X

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Answer must be 1-15 characters in length.

DESCRIPTION: This is the argument of a Mumps WRITE statement

for marking the end of a segment in the data

export file. Examples: $C(11) - Line Feed,

$C(13) - Carriage Return, $C(13,11) - Line Feed

& Carriage Return, etc.

58.40011,.06 LEVEL 0;6 SET

'MH' FOR MAIN HEADER;

'PH' FOR PHARMACY HEADER;

'PA' FOR PATIENT DETAIL;

'RX' FOR PRESCRIPTION DETAIL;

'PT' FOR PHARMACY TRAILER;

'MT' FOR MAIN TRAILER;

LAST EDITED: SEP 28, 2015

HELP-PROMPT: Indicate the level where the segment is placed

in the ASAP definition.

DESCRIPTION: This is the level where the segment is placed

within the ASAP definition.

58.400111,.08 ELEMENT VALUE VAL;1 FREE TEXT

INPUT TRANSFORM:K:$L(X)>200!($L(X)<1) X

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Answer must be 1-200 characters in length.

DESCRIPTION: This is the argument of a Mumps WRITE statement

for retrieving the value of the data element.

**Data update:**

The following entry below will be created, probably via post-install. This entry will be the place holder for all customized ASAP definition data. Record #1 is used for the default definition.

^PS(58.4,2,0)="CUSTOM ASAP RECORD DEFINITION"

**Audit:**

The field ELEMENT VALUE (#.08) described above will be audited.

### SPMP STATE PARAMETERS file (#58.41) – RTC #s

This is an existing file. New fields will be added to this file and some fields will be modified to support the enhancements described in this document.

STANDARD DATA DICTIONARY #58.41 -- SPMP STATE PARAMETERS FILE

STORED IN ^PS(58.41,

(VERSION 7.0)

DATA NAME GLOBAL DATA

ELEMENT TITLE LOCATION TYPE

-------------------------------------------------------------------------------

**Modified field:**

58.41,7 STATE SFTP SERVER IP ADDRESS FILE;4 FREE TEXT

INPUT TRANSFORM: K:$L(X)>~~30~~60!($L(X)<5) X

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Answer must be 5-~~30~~60 characters in length.

DESCRIPTION: This is the secure FTP IP address of the State

Prescription Monitoring Program (SPMP) server

where the export file will be transmitted to.

58.41,8 STATE SFTP SERVER USERNAME FILE;5 FREE TEXT

INPUT TRANSFORM: K:$L(X)>~~30~~50!($L(X)<1) X

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Answer must be 1-~~30~~50 characters in length.

DESCRIPTION: This is the secure FTP username at the State

Prescription Monitoring Program (SPMP) server

where the export file will be transmitted to.

**New field:**

58.41,17 RENAME FILE AFTER UPLOAD FILE1;3 SET

'0' FOR NO;

'1' FOR YES;

LAST EDITED: SEP 29, 2015

HELP-PROMPT: Anwer YES if the export file should be renamed

after being uploaded or NO if not.

DESCRIPTION: This field indicates whether the export file

should be created and uploaded with a .DAT/.TXT

directly or if the file should be created with

a .UP extension and once the upload completes

the file would be renamed to .DAT/.TXT.

58.41,18 SFTP SSH KEY FORMAT EXPORT;2 SET

'1' FOR OpenSSH;

'2' FOR SSH2;

LAST EDITED: SEP 30, 2015

HELP-PROMPT: Choose the sFTP SSH key format used to transmit

data to the state.

DESCRIPTION: This is the format of the Secure File Transfer

Protocol (sFTP) SSH (or Secure Shell) public

and private keys used to transmit data to the

state.

**Audit:**

The following fields will be audited:

SFTP SSH PRIVATE KEY TEXT (#100)

SFTP SSH PUBLIC KEY TEXT (#200)

## Data View

None.

# Detailed Design

## Hardware Detailed Design

There will be no special requirements regarding new or existing hardware capability. Existing hardware resources will not be impacted by the changes in this project.

## Software Detailed Design

### Conceptual Design

#### Product Perspective

This project includes changes to existing State Prescription Monitoring Program (SPMP) module with the VistA Outpatient Pharmacy application.

##### User Interfaces

No new user interfaces are being created or changed by this project.

##### Hardware Interfaces

No new hardware interfaces are being created or changed by this project.

##### Software Interfaces

No new software interfaces are being created or changed by this project.

##### Communications Interfaces

No new communication interfaces are being created or changed by this project.

##### Memory Constraints

No memory constraints are being introduced by this project.

##### Special Operations

No special operations are required by this project.

#### Product Features

Existing features of the State Prescription Monitoring Program (SPMP) module within the Outpatient Pharmacy VistA application are being enhanced as part of this project in accordance with New Service Request (NSR) 20150701 – <http://domain.extdomain/nsrd/Tab_GeneralInfoView.asp?RequestID=20150701>

#### User Characteristics

The existing users that will be affected by these enhancements are pharmacists and pharmacy technicians that work on dispensing medication through the Outpatient Pharmacy VistA applications.

#### Dependencies and Constraints

There are no known dependencies or constraints related to this project.

### Specific Requirements – Outpatient Pharmacy (PSO)

#### Routines (Entry Points)

##### PSO451PI (Post-Install)

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSO451PI | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 615432 | | | |
| **Related Options** | N/A | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| N/A (new post-install routine) |

| Modified Logic (Changes are in bold) |
| --- |
| This post-install routine will perform the following updates:  PSO451PI ;BIRM/MFR - PSO\*7\*451 Post-install routine ;10/26/15  ;;7.0;OUTPATIENT PHARMACY;\*\*451\*\*;DEC 1997;Build 100  ; EN ; - Entry Point  ; **APPRISS ; Fix Appriss Parameters**  ;  S STATE=0  F  S STATE=$O(^PS(58.41,STATE)) Q:'STATE  D  . I $$UP^XLFSTR($$GET1^DIQ(58.41,STATE,7))["PRODPMPSFTP" D  . . ;<Fix Parameters>  ; **SEC ; Enable READ access for all 3 files below**  N SECURITY  S SECURITY("RD")=""  D FILESEC^DDMOD(58.4,.SECURITY)  D FILESEC^DDMOD(58.41,.SECURITY)  D FILESEC^DDMOD(58.42,.SECURITY)  Q  ; **MAILGRP ; Change Mail Group PSO SPMP NOTIFICATIONS to PUBLIC**  N DIC,X,Y,DA,DIE,DR  S DIC=3.8,X="PSO SPMP NOTIFICATIONS" D ^DIC I '($G(Y)>0) Q  S DIE=3.8,DA=+Y,DR="4///PU" D ^DIE  Q |

##### PSOASAP

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOASAP | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 223767 | | | |
| **Related Options** | View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| N/A (new routine) |

| Modified Logic (Changes are in bold) |
| --- |
| This routine will be created to “house” all of the ASAP default definition (a.k.a, “Factory Definition”) for **all** ASAP versions, except ASAP 1995. The line tags in this routine will account for **all** SEGMENT\_DATA ELEMENT combinations in all the ASAP versions 3.0 and above.  Example:  **PSOASAP** ;BIRM/MFR - American Society for Automation in Pharmacy (ASAP) Field Values ;09/30/15  ;;7.0;OUTPATIENT PHARMACY;\*\*451\*\*;DEC 1997;Build 100  ;  ; \*\*\* TH Segment \*\*\* TH01() ; ASAP Version (3.0, 4.0, 4.1, 4.2)  S PSOTTCNT=$G(PSOTTCNT)+1  Q PSOASVER  ; TH02() ; Transaction Control Number  Q +$$SITE^VASITE()\_"-"\_+$G(BATCHIEN)  ; TH03() ; ASAP 3.0 : Transaction Control Number  ; ASAP 4.0+: Transaction Type (Always "01" - Send/Request Transaction)  I PSOASVER="3.0" Q +$$SITE^VASITE()\_"-"\_+$G(BATCHIEN)  Q "01"  ;  ...   ; \*\*\* TP Segment \*\*\* TP01() ; Detail Segment Count  S PSOTTCNT=$G(PSOTTCNT)+1  S PSOTPCNT=$G(PSOTPCNT)+1  Q PSOTPCNT  ;  ; \*\*\* TT Segment \*\*\* TT01() ; Transaction Control Number (Same as TH02)  S PSOTTCNT=$G(PSOTTCNT)+1  Q $$TH02()  S NDFCL=0 D ^%ZIS S:POP>0 NDFCL=1 D:POP>0 ^%ZISC Q:NDFCL>0  U IO K ^TMP("NDFAU",$J),^TMP($J) W @IOF  S LIST="^.01^.05^5^3^1^21^2^15^6^19^8^**32**" ;list of fields  S NDFAF=$QS($Q(^DIA(50.68,"C",NDFS-.1)),4)-1 |

##### PSOASAP0

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOASAP0 | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 223767 | | | |
| **Related Options** | View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| This routine is used as the main routine for retrieving field values for ASAP fields. |

| Modified Logic (Changes are in bold) |
| --- |
| This routine will be used as a secondary routine for retrieving ASAP values. The reason is that the new PSOASAP routine will now be the main routine for such task. PSOASAP will invoke PSOASAP0 for more complex calculation, like in the example below. All the other line tags that are now invoked by PSOASAP will be removed from this routine. The computation in PSOTTCNT and PSOTPCNT will be moved to PSOASP. The motivation is to keep PSOASAP as small as possible (under the 25K limit) given that it will have to host all default ASAP field value retrievals.  **Change #1:**  **Example of more complex field value retrieval**  PHA01() ; National Provider Identifier ~~S PSOTTCNT=$G(PSOTTCNT)+1  S PSOTPCNT=$G(PSOTPCNT)+1~~  N NPINST,NPINUM  S NPINST=$$GET1^DIQ(59,RXSITE,101,"I") I 'NPINST Q ""  S NPINUM=+$$NPI^XUSNPI("Organization\_ID",NPINST,DT)  Q $S(NPINUM>0:NPINUM,1:"")  **Change #2:**  The PHA03 line tag will be modified to first try to find a DEA for the NPI INSTITUTION linked to the Pharmacy. If one cannot be found, it will continue to be used the RELATED INSTITUTION field.  PHA03() ; Pharmacy DEA Number  N PHA03,INST  ; NPI Institution  S PHA03=””,INST=$$GET1^DIQ(59,RXSITE,101,"I")  I INST S PHA03=$$WHAT^XUAF4(INST,52)  I PHA03=”” S INST=$$GET1^DIQ(59,RXSITE,100,"I")  I INST S PHA03=$$WHAT^XUAF4(INST,52)  Q PHA03 |

##### PSOSPMSP

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOSPMSP | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 223820 | | | |
| **Related Options** | View/Edit SPMP State Parameters [PSO SPMP STATE PARAMETERS] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| This routine is the main driver for entering the SPMP transmission parameters. |

| Modified Logic (Changes are in bold) |
| --- |
| The following changes will be made to this option:   1. A new parameter called RENAME FILE AFTER UPLOAD will be prompt as seen below:   FILE EXTENSION              : .DAT//  **RENAME FILE AFTER UPLOAD    : YES// ?**  **Indicate whether the file should be uploaded as .DAT directly or if**  **the file should be uploaded as .UP and once the upload completes**  **the file would be renamed to .DAT.**  **Choose from:**  **NO  -  File will be uploaded as .DAT (no renaming)**  **YES -  File will be uploaded as .UP and renamed to .DAT**   1. The 2 parameters below will be removed from this option as the ssh keys will be handled by a separate option.   SFTP PRIVATE KEY TEXT : <hidden>  SFTP PUBLIC KEY TEXT : <hidden>   1. The term “RSA” will be replaced with “SSH”, which is more appropriate for the field below.   SFTP TRANSMISSION MODE : AUTOMATIC [~~RSA~~SSH KEYS] |

##### PSOSPMUT

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOSPMUT | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 223827 | | | |
| **Related Options** | View/Export Single Prescription [PSO SPMP SINGLE RX VIEW/EXPORT]  View/Export Batch [PSO SPMP BATCH VIEW/EXPORT]  Export Batch Processing [PSO SPMP BATCH PROCESSING] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| This routine is a utility routine invoked for the main tasks related to transmitting the data to the state. |

| Modified Logic (Changes are in bold) |
| --- |
| The following changes will be made to this option:   1. The current method for determining whether the data file was successfully transmitted or not is not quite efficient and in several cases it displays the “Successfully Transmitted” message when in reality the file was not transmitted at all. This happens more often in Linux because log files can be capture in this OS. The new approach will consist of introducing a local delete in the sFTP script and once the transmission complete, the software will be check for the file locally. If it exists, it will indicate that the sFTP script did not run completely, likely indicating a failed transmission. If the file does not exist locally it likely indicates a successful transmission. Below is an illustration of the new method:   C:\Users\kogani\Documents\_Projects\CAS\SPMP Enhancements\RTEP\SPMP_Transmission_Workflow.jpg   1. VistA creates the data file containing prescription information and the transmission supporting files (sFTP script, ssh keys) at the OS layer 2. VistA executes the sFTP script file to transfer the data file to the state. The first command executed is “put”, which pushes the data file to the remote server. Once the file is transmitted successfully, a second command “rename” is issued to rename the file from .UP to .DAT at the remote server. If successful, the third command “lrm” will delete the local data file, which will be the mechanism used to identify whether the previous two commands were successful or not. 3. If either “put” or the “rename” commands executed in step 2 fail the sFTP aborts execution. Therefore, the presence of the local data file is a strong indication the script errored out . 4. The user is either notified in the foreground on the foreground for manual transmission and a Mailman message is generated and sent to the PSO SPMP NOTIFICATIONS mail group for background scheduled transmissions. 5. This routine will have to be modified to take into account customized ASAP fields as well as the new parameterized fields relevant to the ASAP message, such as DATA ELEMENT DELIMITER CHAR (#.02), SEGMENT TERMINATOR CHAR (#.03), END OF SEGMENT CONTROL CHAR(S) (#.04),LEVEL (#.06) and DATA ELEMENT (#.08) in the SPMP ASAP DEFINITION file (#58.4). The LOADASAP line tag will be re-designed to return the exact format of the ASAP message with the value for each individual Data Element. 6. The line of code below will have to be modified to include the “–o Port” directive because Linux sites with port # other than 22 are currently timing out at this point:   **; The command below will add the IP Address to the list of known hosts (if not already there)**  I $$OS^%ZOSV()="UNIX",$$UP^XLFSTR($$VERSION^%ZOSV(1))["CACHE" D  . X "S PV=$ZF(-1,""ssh -o BatchMode=yes -o StrictHostKeyChecking=no -o Port="\_PSOPORT\_" -o LogLevel=quiet "\_PSOSTIP\_""")"   1. The file creating as .UP and subsequent renaming to .DAT or .TXT after the transmission is complete will be changed to take into account the new parameter RENAME FILE AFTER UPLOAD. If this parameter is set to YES, the current functionality will be applied, if set to NO then the file will be created with the final extension (.DAT or .TXT) and no renaming command will be included in the sFTP script. |

##### PSOSPMU1

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOSPMU1 | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 615423 | | | |
| **Related Options** | View/Export Single Prescription [PSO SPMP SINGLE RX VIEW/EXPORT]  View/Export Batch [PSO SPMP BATCH VIEW/EXPORT]  Export Batch Processing [PSO SPMP BATCH PROCESSING] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| This routine is another utility routine invoked for the main tasks related to transmitting the data to the state. There are 3 places in this routine where the sFTP command is constructed.  When constructing the sFTP command statement this routine uses the following syntax:  **sftp …username@serverip** |

| Modified Logic (Changes are in bold) |
| --- |
| The username will have to be indicated through the –o User sFTP directive, as shown below:  **sftp …-o User=username serverip** |

##### PSOSPML3

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOSPML3 | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 223767, 223778 | | | |
| **Related Options** | View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| This routine is the main driver for the View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] option. |

| Modified Logic (Changes are in bold) |
| --- |
| A few modifications will be made to this routine:   1. The prompt for the ASAP Version will be modified to allow for selection of “cloned” ASAP versions. Currently the values for this prompt are hard-coded.    S ASAPVER=0  K DIR S DIR("A")="ASAP Version",DIR(0)="SO^1995:Version 1995;3.0:Version 3.0;4.0:Version 4.0;4.1:Version 4.1;4.2:Version 4.2"  S DIR("?")="American Society for Automation in Pharmacy (ASAP) Version"  D ^DIR I (X="")!$D(DIRUT)!$D(DTOUT) G EXIT  S ASAPVER=Y  The values for cloned versions will be stored in this node:  **Cloned ASAP versions**  ^PS(58.4,2,"VER",NN,0)="X.X"  The values for default versions are currently stored in this node:  **Default ASAP versions**  ^PS(58.4,1,"VER",NN,0)="X.X"   1. This routine will be changed to display the names of data elements even though they are marked as “NOT USED”   **ASAP Standard Version 4.2** Oct 02, 2015@09:49:52 Page: 1 of 4  TH Transaction Header  **TH01 - Version / Release Number**  **TH02 - Transaction Control Number**  **TH03 - Transaction Type**  **TH04 – Response ID (NOT USED)**  **TH05 - Creation Date**   1. This routine will host the code for customizing ASAP Segments and Data Elements as well as ASAP Version cloning, as seen in the interface example below.   **ASAP Standard Version 4.2** Oct 02, 2015@09:53:46 Page: 1 of 4  TH Transaction Header  **TH01 - Version / Release Number**  **TH02 - Transaction Control Number**  **TH03 - Transaction Type**  TH04 - NOT USED  **TH05 - Creation Date**  **TH06 - Creation Time**  **TH07 - File Type**  TH08 - NOT USED  **TH09 - Data Segment Terminator Character**  TT Transaction Trailer  **TT01 - Transaction Control Number**  **TT02 - Segment Count**  PHA Pharmacy Header  **PHA01 - National Provider Identifier (NPI)**  **PHA02 - NCPDP/NABP Provider ID**  **PHA03 - DEA Number**  **PHA04 - Pharmacy Name**  **PHA05 - Address Information - 1**  **PHA06 - Address Information - 2**  + Enter ?? for more actions \_  **CLO** Clone ASAP Version **SEG** Custom Segment **DAT** Custom Data Element DET Show/Hide Details  **Select Item(s): Next Screen// CLO** Clone ASAP Version  From ASAP Version: 4.2 **(Read only)**  To ASAP Version: **4.3**    Confirm cloning of ASAP 4.2 into ASAP 4.3? N// **YES**    Cloning ASAP Version...OK!  ============================================================================  **Select Item(s): Next Screen// SEG** Custom Segment  Select SEGMENT ID: **PLN**  Are you adding 'PLN' as a new SEGMENT ID (the 9TH for this VERSION)? No// Y SEGMENT NAME: **Third-Party Plan**  PARENT SEGMENT: **PAT**  REQUIREMENT: **R REQUIRED**  POSITION: **3**  LEVEL: **?**  Indicate the level where the segment is placed within the ASAP definition.  Choose from:  MH MAIN HEADER  PH PHARMACY HEADER  PA PATIENT DETAIL  RX PRESCRIPTION DETAIL  PT PHARMACY TRAILER  MT MAIN TRAILER  LEVEL: **PA** PATIENT DETAIL  ============================================================================  **Select Item(s): Next Screen// DAT** Custom Data Element  ELEMENT ID: **XYZ01 XYZ Segment does not exist**  ELEMENT ID: **DSP20 Last DSP Data Element is #17, enter DSP18**  ELEMENT ID: **PLN01**  Are you adding 'PLN01' as a new ELEMENT ID (the 1st for this SEGMENT)? No// Y  ELEMENT NAME: **Reporting Status**  DATA FORMAT: **N** NUMERIC  MAXIMUM LENGTH: **2**  POSITION: **1**  REQUIREMENT: **O** OPTIONAL  DESCRIPTION:  1>**Not Required; use depends on business application.**  2> **01 Add**  3> **02 Change**  4> **03 Delete**  EDIT Option:  ELEMENT VALUE: **“01” There would be an extensive help text here to explain all the options for customizing a field**  **If the ASAP field above was an existing (default) one it would have the following default:**  ELEMENT VALUE: **$$PLN01^PSOASAP()// “MY OWN VALUE”**   1. Customized Data Elements will be marked with an asterisk (\*) in front of it, as seen below:   TH06\*- Creation Time  TH07 - File Type  TH08\*- NOT USED  TH09 - Data Segment Terminator Character  TT Transaction Trailer  TT01 - Transaction Control Number  TT02 - Segment Count  PHA Pharmacy Header  PHA01 - National Provider Identifier (NPI)  PHA02\* - NCPDP/NABP Provider   1. After selecting an ASAP version, this routine will prompt the user for 3 new fields:   Select one of the following:  1995 Version 1995  3.0 Version 3.0  4.0 Version 4.0  4.1 Version 4.1  4.2 Version 4.2  ASAP Version: 4.2 Version 4.2  DATA ELEMENT DELIMITER CHAR: \*//  SEGMENT TERMINATOR CHAR: ~//  END OF SEGMENT CONTROL CHAR(S): $C(11)// |

##### PSOSPML7

| Routines | Activities | | | |
| --- | --- | --- | --- | --- |
| **Routine Name** | PSOSPML7 | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **RTC** | 223823 | | | |
| **Related Options** | Manage Secure Shell (SSH) Keys [PSO SPMP SSH KEY MANAGEMENT] | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  | N/A | N/A |

| Routines | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Dictionary (DD) References** | N/A | | | | |
| **Related Protocols** | N/A | | | | |
| **Related Integration Control Registrations (ICRs)** | N/A | | | | |
| **Data Passing** | Input | Output Reference | Both | Global Reference | Local |
| **Input Attribute Name and Definition** | Name:  Definition: | | | | |
| **Output Attribute Name and Definition** | Name:  Definition: | | | | |

| Current Logic |
| --- |
| New routine. |

| Modified Logic (Changes are in bold) |
| --- |
| This routine will be the driver for the new option that will be used for handling SSH keys. The new option interface is shown below:  Manage Secure Shell (SSH) Keys [PSO SPMP SSH KEY MANAGEMENT]  Select STATE: OKLAHOMA//  **[No SSH key set found for Oklahoma]**  Action: ?             Choose an Action:                 V - View Public SSH Key               N - Create a new SSH Key Set               D - Delete SSH Key Set               H – Help with SSH Keys  Action: V Create a new SSH Key Set  **[No SSH key set found for Oklahoma]**  Action: D   Delete SSH Key Set  **[No SSH key set found for Oklahoma]**  Action: N Create a new SSH Key Set  SSH Key Encryption: ?             Choose the Encryption Type:                 RSA - RSA Encryption               DSA - DSA Encryption  SSH Key Encryption: RSA   RSA Encryption  Confirm SSH key generation for OKLAHOMA? Y// YES  Generating key (Please Wait)...Done!    OKLAHOMA’s Public Key content (does not include dash lines):  ----------------------------------------------------------------------  ssh-rsa AAAAB3NzaC1kc3MAAAEBAI3C+JA8mc7EedJXCwWZwBSz9SbUIf9oSwlBtZi+Ff  TbVw+VdkbuaqYcl/Zm6AfP1MMy2x7l+a4H/KV92gE+FNrUJ/Br3OiYy4gHzw06OjnRW3bg  dnVUUMfOREEzzYObmIKE+6fM4webkeDjx3Krgg9x6jhkUwfAHDjJ/yFsIUkRizZ1ynNhnX  ym2mcRL4y53aNF8TFhMm0WAZX34EQesGqbmp3es8dUXSUvGb/kxKg+23jOWqAx+xICnXjr  H4yHZnU1fcUEPdFX/tyOnDW0gpQQY+pV4RKKoE/dWhmAaGDy93VguQyU7N2z2bzLic+J1Z  2VAXJq1yrF1o8AAAAVAN5TJ9CpUuBWl9YwHYYOpU5R5sLLAAABAB95KrVOVoDUKlznJDOx  7D2hE835xQGxeJA/j3L7r0wpHyPftT1HsF4NewyfdjV4Z9tNwUaPdhbWcGdo6S2FBFZt/1  s6eqTokOjRWcR7ZFEum+k2DTA4p51ilII+NtVg8kSnjgYKsmbBAhG+p/791pGJWNtfKJ6H  VMmJ7lS0ym/x3mhT1nkpS2qS5xOE56jN2kkKREmLV+ZX77ZFO2BsIaK/TkNdsrmwc402CC  o7b9UyvfMtz/mu0xZKWKpEKcVtvjP98IVIrBR6lw==  ----------------------------------------------------------------------  Action: V  View Public SSH Key  OKLAHOMA’s Public Key content (does not include dash lines):  ----------------------------------------------------------------------  ssh-rsa AAAAB3NzaC1kc3MAAAEBAI3C+JA8mc7EedJXCwWZwBSz9SbUIf9oSwlBtZi+Ff  TbVw+VdkbuaqYcl/Zm6AfP1MMy2x7l+a4H/KV92gE+FNrUJ/Br3OiYy4gHzw06OjnRW3bg  dnVUUMfOREEzzYObmIKE+6fM4webkeDjx3Krgg9x6jhkUwfAHDjJ/yFsIUkRizZ1ynNhnX  ym2mcRL4y53aNF8TFhMm0WAZX34EQesGqbmp3es8dUXSUvGb/kxKg+23jOWqAx+xICnXjr  H4yHZnU1fcUEPdFX/tyOnDW0gpQQY+pV4RKKoE/dWhmAaGDy93VguQyU7N2z2bzLic+J1Z  2VAXJq1yrF1o8AAAAVAN5TJ9CpUuBWl9YwHYYOpU5R5sLLAAABAB95KrVOVoDUKlznJDOx  7D2hE835xQGxeJA/j3L7r0wpHyPftT1HsF4NewyfdjV4Z9tNwUaPdhbWcGdo6S2FBFZt/1  s6eqTokOjRWcR7ZFEum+k2DTA4p51ilII+NtVg8kSnjgYKsmbBAhG+p/791pGJWNtfKJ6H  VMmJ7lS0ym/x3mhT1nkpS2qS5xOE56jN2kkKREmLV+ZX77ZFO2BsIaK/TkNdsrmwc402CC  o7b9UyvfMtz/mu0xZKWKpEKcVtvjP98IVIrBR6lw==  ----------------------------------------------------------------------  Action: D   Delete SSH Key Set  **WARNING: You may be deleting SSH Keys that are currently in use.**  Enter your Current Signature Code: \*\*\*\*\*\*\*\*  Confirm? N// YES  Deleting SSH Keys...Done!  Action: N - Create a new SSH Key Set  **WARNING: You may be overwriting SSH Keys that are currently in use.**  Enter your Current Signature Code: \*\*\*\*\*\*\*\*  SSH Key Encryption: ?             Choose the Encryption Type:                 RSA - RSA Encryption               DSA - DSA Encryption  SSH Key Encryption: RSA   RSA Encryption  Confirm SSH key generation for OKLAHOMA? Y// YES  Generating key (Please Wait)...Done! |

#### Mail Groups

##### PSO SPMP Notifications

| Mail Groups | Activities | | | |
| --- | --- | --- | --- | --- |
| **Mail Group Name** | PSO SPMP NOTIFICATIONS | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **Related Options** |  | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  |  |  |

| Mail Groups | Instructions | |
| --- | --- | --- |
| **Data Dictionary (DD) References** |  | |
| **Related Protocols** |  | |
| **Mail Group Description** | This mail group is used for sending messages about failed SPMP transmissions. It was originally released as “Private” and will be modified by this project to “Public”. | |
| **Self-Enrollment Allowed** | Yes | No |
| **Type** | Public | Private |

#### Protocols

##### PSO SPMP3 CLONE ASAP VERSION

| Protocols | Activities |
| --- | --- |
| **Protocol Name** | PSO SPMP3 CLONE ASAP VERSION |
| **Enhancement Category** | New  Modify  Delete  No Change |
| **Associated Protocols** |  |
| **Data Passing** | Input  Output  Both  Global Reference  Local Reference |
| **Item Text Description** | Clone ASAP Version |
| **Protocol Type** | Action  Menu  Protocol  Protocol Menu  Limited Protocol  Extended Action  Dialog  Other |
| **Associated Routine** |  |

| Current Entry Action Logic |
| --- |
| N/A (new) |

| Modified Entry Action Logic (Changes are in bold) |
| --- |
| CLONE^PSOSPML3  This protocol will be used for the CLO action in the View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] option, as shown below:  + Enter ?? for more actions \_  **CLO** Clone ASAP Version **SEG** Custom Segment **DAT** Custom Data Element DET Show/Hide Details  **Select Item(s): Next Screen// CLO** Clone ASAP Version  From ASAP Version: 4.2 **(Read only)**  To ASAP Version: **4.3**    Confirm cloning of ASAP 4.2 into ASAP 4.3? N// **YES**    Cloning ASAP Version...OK! |

| Current Exit Action Logic |
| --- |
| N/A |

| Modified Exit Action Logic (Changes are in bold) |
| --- |
| N/A |

##### PSO SPMP3 CUSTOMIZE ASAP SEGMENT

| Protocols | Activities |
| --- | --- |
| **Protocol Name** | PSO SPMP3 CUSTOMIZE ASAP SEGMENT |
| **Enhancement Category** | New  Modify  Delete  No Change |
| **Associated Protocols** |  |
| **Data Passing** | Input  Output  Both  Global Reference  Local Reference |
| **Item Text Description** | Customize Segment |
| **Protocol Type** | Action  Menu  Protocol  Protocol Menu  Limited Protocol  Extended Action  Dialog  Other |
| **Associated Routine** |  |

| Current Entry Action Logic |
| --- |
| N/A (new) |

| Modified Entry Action Logic (Changes are in bold) |
| --- |
| CUSSEG^PSOSPML3  This protocol will be used for the SEG action in the View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] option, as shown below:  + Enter ?? for more actions \_  **CLO** Clone ASAP Version **SEG** Custom Segment **DAT** Custom Data Element DET Show/Hide Details  **Select Item(s): Next Screen// SEG** Custom Segment  Select SEGMENT ID: **PLN**  Are you adding 'PLN' as a new SEGMENT ID (the 9TH for this VERSION)? No// Y SEGMENT NAME: **Third-Party Plan**  PARENT SEGMENT: **PAT**  REQUIREMENT: **R REQUIRED**  POSITION: **3**  LEVEL: **?**  Indicate the level where the segment is placed within the ASAP definition.  Choose from:  MH MAIN HEADER  PH PHARMACY HEADER  PA PATIENT DETAIL  RX PRESCRIPTION DETAIL  PT PHARMACY TRAILER  MT MAIN TRAILER  LEVEL: **PA** PATIENT DETAIL |

##### PSO SPMP3 CUSTOMIZE ASAP DATA ELEMENT

| Protocols | Activities |
| --- | --- |
| **Protocol Name** | PSO SPMP3 CUSTOMIZE ASAP DATA ELEMENT |
| **Enhancement Category** | New  Modify  Delete  No Change |
| **Associated Protocols** |  |
| **Data Passing** | Input  Output  Both  Global Reference  Local Reference |
| **Item Text Description** | Customize Data Element |
| **Protocol Type** | Action  Menu  Protocol  Protocol Menu  Limited Protocol  Extended Action  Dialog  Other |
| **Associated Routine** |  |

| Current Entry Action Logic |
| --- |
| N/A (new) |

| Modified Entry Action Logic (Changes are in bold) |
| --- |
| CUSELM^PSOSPML3  This protocol will be used for the DAT action in the View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] option, as shown below:  + Enter ?? for more actions \_  **CLO** Clone ASAP Version **SEG** Custom Segment **DAT** Custom Data Element DET Show/Hide Details  **Select Item(s): Next Screen// DAT** Custom Data Element  ELEMENT ID: **XYZ01 XYZ Segment does not exist**  ELEMENT ID: **DSP20 Last DSP Data Element is #17, enter DSP18**  ELEMENT ID: **PLN01**  Are you adding 'PLN01' as a new ELEMENT ID (the 1st for this SEGMENT)? No// Y  ELEMENT NAME: **Reporting Status**  DATA FORMAT: **N** NUMERIC  MAXIMUM LENGTH: **2**  POSITION: **1**  REQUIREMENT: **O** OPTIONAL  DESCRIPTION:  1>**Not Required; use depends on business application.**  2> **01 Add**  3> **02 Change**  4> **03 Delete**  EDIT Option:  ELEMENT VALUE: **“01” There would be an extensive help text here to explain all the options for customizing a field**  **If the ASAP field above was an existing (default) one it would have the following default:**  ELEMENT VALUE: **$$PLN01^PSOASAP()// “MY OWN VALUE”** |

##### Security Keys

###### PSO SPMP

| Security Keys | Activities | | | |
| --- | --- | --- | --- | --- |
| **Security Key Name** | PSO SPMP ADMIN | | | |
| **Enhancement Category** | New | Modify | Delete | No Change |
| **Related Options** |  | | | |

| Related Routines | Routines “Called By” | Routines “Called” |
| --- | --- | --- |
|  |  |  |

| Security Keys | Activities | | | | |
| --- | --- | --- | --- | --- | --- |
| **Data Passing** | Input | Output | Both | Global Reference | Local Reference |
| **Security Key Description** | This security key will be used to lock options related to the State Prescription Monitoring Program (SPMP) module. | | | | |
| **Subordinate Keys** |  | | | | |
| **Mutually Exclusive Keys** |  | | | | |
| **Granting Condition Logic** |  | | | | |

| Current Logic |
| --- |
| New key. |

| Modified Logic (Changes are in bold) |
| --- |
| Initially, the following options will be locked by this key:  Manage Secure Shell (SSH) Keys [PSO SPMP SSH KEY MANAGEMENT]  View/Edit SPMP State Parameters [PSO SPMP STATE PARAMETERS]  View ASAP Definitions [PSO SPMP VIEW ASAP DEFINITIONS] |

| Security Keys | Activities |
| --- | --- |
| **Hierarchical Precedence** |  |

##### 

##### Options

###### PSO SPMP SSH KEY MANAGEMENT

| Options | Activities | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Option Name** | PSO SPMP SSH KEY MANAGEMENT | | | | | | | | | | |
| **Enhancement Category** | New | Modify | | | | Delete | | | No Change | | |
| **Associated Menu Options that will invoke this reference** |  | | | | | | | | | | |
| **Data Passing** | Input | | Output | | Both | | | Global Reference | | | Local Reference |
| **Menu Text Description** | Manage Secure Shell (SSH) Keys | | | | | | | | | | |
| **Option Type** | Edit | | | Print | | | Menu | | | Inquire | |
| Action | | | Run Routine | | | Other | | |  | |
| **Associated Routine** | PSOSPML7 | | | | | | | | | | |
| **Option Definition** |  | | | | | | | | | | |

| Current Entry Action Logic |
| --- |
| N/A |

| Modified Entry Action Logic (Changes are in bold) |
| --- |
| EN^PSOSPML7 |

| Current Exit Action Logic |
| --- |
| N/A |

| Modified Exit Action Logic (Changes are in bold) |
| --- |
| N/A |

## Network Detailed Design

No Network detailed design is required for the enhancements within this project. All modifications will be made to existing VistA screens. Network impacts will continue to be monitored during the requirements elaboration process and documented in future versions of the SDD.

## Service Oriented Architecture (SOA) / Enterprise Shared Services (ESS) Detailed Design

This project contains no Service Oriented Architecture (SOA) / ESS impacts. All modifications will be within existing VistA/M code which do not make use of SOA or ESS. This section of the document is not applicable to this project.

# External System Interface Design

No external system interface design has been identified for the enhancements within this project. This section of the document is not applicable to this project.

# Human-Machine Interface

No Human-machine interface requirements have been identified for this project. This section of the document is not applicable to this project.

# Security and Privacy

## Security

The screens accessed by the enhancements within this project use standard VA log-on securities, which require access and verify codes. Users can access specified options, provided they are designated users and hold the required “key(s),” which limits their access to particular options. No security modification is changed with this project.

## Privacy

At the time of this publishing, no privacy considerations or concerns have been raised for this project. Privacy considerations will continue to be monitored during the requirements elaboration process and documented in future versions of the SDD.

Attachment A – Approval Signatures

This section is used to document the approval of the System Design Document. The review should be conducted face to face where signatures can be obtained ‘live’ during the review. If unable to conduct a face-to-face meeting then it should be held via LiveMeeting and concurrence captured during the meeting. The Scribe should add /es/name by each position cited. Example provided below.

The Chair of the governing Integrated Project Team (IPT), Business Sponsor, IT Program Manager, and Project Manager are required to sign.

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date

Program Manager / IPT Chair

Product Development

Signed: \_\_­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

, Pharm D Date

Business Sponsor

Associate Chief Consultant for

Clinical Informatics and Pharmacy Re-engineering for

, RPh, MHSA, Chief Consultant

Pharmacy Benefits Management

VHA Office of Patient Care Services

1. Additional Information
   1. Requirements Traceability Matrix (RTM)

Please Refer to the baselined version of the RTM for the specific functionality being modified by this project, which is located in the TSPR:

<http://domain.ext.domain.ext/warboard/anotebk.asp?proj=1849&Type=Active>