Suicide High Risk Patient Enhancements (SHRPE 2.0)

PRCA*4.5*379

Deployment, Installation, Back-Out, and Rollback Guide (DIBRG)

Department of Veterans Affairs

August 2021

Version 1.0

Revision History

Date	Version	Description	Author
08/18/2021	1.0	Initial release	Liberty IT Solutions

Table of Contents

List of Tables

1 Introduction

This document describes the Deployment, Installation, Back-out, and Rollback Plan for new products going into the Department of Veterans Affairs (VA) Enterprise. The plan includes information about system support, issue tracking, escalation processes, and roles and responsibilities involved in all those activities. Its purpose is to provide clients, stakeholders, and support personnel with a smooth transition to the new product or software, and should be structured appropriately, to reflect particulars of these procedures at a single or at multiple locations.

Per the Veteran-focused Integrated Process (VIP) Guide, the Deployment, Installation, Back-out, and Rollback Plan is required to be completed prior to Critical Decision Point 2 (CD2).

1.1 Scope

This document describes how to deploy and install the Veterans Information Systems and Technology Architecture (VistA) Accounts Receivable patch PRCA*4.5*379, as well as how to back-out the product and rollback to a previous version or data set. This document is a companion to the project charter and management plan for this effort.

The SHRPE product makes enhancements to the Accounts Receivable application to implement a new billing Consolidated Patient Account Center (CPAC) High Risk Veteran Reconciliation Report [PRCA HRFS RECONCILIATION RPT] report that allows Veterans' Health Administration (VHA) CPAC users to view first party charges for patients with the High Risk for Suicide (HRFS) flag in order to improve efficiency and accountability in revenue operations.

The PRCA*4.5*379 patch adds new routines RCHRFS, RCHRFS1, RCHRFS2, and RCHRFSUT that implement CPAC High Risk Veteran Reconciliation Report [PRCA HRFS RECONCILIATION RPT].

Additionally, this patch makes changes to the First Party Veteran Charge Report (VCR). When using the option PRCA FP VETERAN CHRG RPT to display the VCR, after selecting the other filter prompts, the prompt that asked to display LETTERS has been changed. The patch modifies two routines RCVCR1 and RCVCR2 to implement these changes.

1.2 Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the VistA Accounts Receivable patch PRCA*4.5*379 will be deployed and installed, as well as specific instructions for how it is backed out and rolled back, if necessary. The plan also identifies resources, a communication plan, and a rollout schedule.

1.3 Dependencies

This patch modifies routines implemented by previous Accounts Receivable application patch and therefore PRCA*4.5*373 must be installed before PRCA*4.5*379.

1.4 Constraints

This patch should be installed in all VA VistA production sites. This patch is intended for a fully patched VistA system. Its installation will not noticeably impact the production environment.

2 Roles and Responsibilities

Table 1: DIBRG Roles and Responsibilities

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
1	VA Office of Information and Technology (OIT), VA OIT Health Services Portfolio & Project Management Office (PMO)	Deployment	Plan and schedule deployment (including orchestration with vendors).	Planning
2	Local Individual Veterans Administration Medical Center (VAMC)	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.	Planning
3	Field Testing (Initial Operating Capability – (IOC)), Health Services Portfolio Testing & VIP Release Agent Approval	Deployment	Test for operational readiness.	Testing
4	Health Services Portfolio and Field Operations	Deployment	Execute deployment.	Deployment
5	VIP Release Agent	Installation	Plan and schedule installation.	Deployment
6	VIP Release Agent	Installation	Obtain authority to operate and that certificate authority security documentation is in place.	Deployment
7	The VA's SHRPE team	Installations	Coordinate knowledge transfer with the team responsible for user training.	Deployment
8	VIP release Agent, Health Services Portfolio & the development team	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out).	Deployment
9	SHRPE Team	Post-Deployment	Hardware, Software, and System Support.	Warranty

3 Deployment

The deployment is planned as a national rollout. This section provides the schedule and milestones for the deployment.

3.1 Timeline

The duration of deployment and installation is 30 days. A detailed schedule will be provided during the build.

3.2 Site Readiness Assessment

This section discusses the locations that will receive the PRCA*4.5*379 patch deployment.

3.2.1 Deployment Topology (Targeted Architecture)

The VistA Accounts Receivable patch PRCA*4.5*379 should be installed in all VA VistA production sites.

3.2.2 Site Information (Locations, Deployment Recipients)

The test sites for IOC testing are:

West Palm Beach VA Medical Center (West Palm Beach, FL)

North Florida/South Georgia Veterans Health System (Gainesville, Florida)

Washington VA Medical Center (Washington, DC)

Upon national release, all VAMCs are expected to install this patch prior to or on the compliance date. The PRCA*4.5*379 patch is distributed as a mailman patch message from FORUM. The patch documentation can be downloaded from the VA Software Documentation Library site.

3.2.3 Site Preparation

No site-specific preparations are needed for this patch (Table 2). The VA sites should follow the standard procedure they are using now for installation of VistA patches.

Table 2: Site Preparation

Site/Other	Problem/Change Needed	Features to Adapt/Modify to New Product	Actions/Steps	Owner
N/A	N/A	N/A	N/A	N/A

3.3 Resources

There are no additional resources required for installation of the patch.

3.3.1 Facility Specifics

There are no facility-specific features required for deployment of this patch (Table 3).

Table 3: Facility Specific Features

Site	Space/Room	Features Needed	Other
N/A	N/A	N/A	N/A

3.3.2 Hardware

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

Table 4 describes hardware specifications required at each site prior to deployment.

Table 4: Hardware Specifications

Required Hardware	Model	Version	Configuration	Manufacturer	Other
Existing VistA system	N/A	N/A	N/A	N/A	N/A

3.3.3 Software

Table 5 describes the software specifications required at each site prior to deployment.

Table 5: Software Specifications

Required Software	Make	Version	Configuration	Manufacturer	Other
Fully patched Accounts Receivable package within VistA	N/A	4.5	N/A	N/A	N/A
PRCA*4.5*373	N/A	Nationally released version	N/A	N/A	N/A

Please see Table 1: DIBRG Roles and Responsibilities for details about who is responsible for preparing the site to meet these software specifications.

3.3.4 Communications

The sites that are participating in field testing IOC will use the "Patch Tracking" message in Outlook to communicate with the SHRPE team, the developers, and Services Portfolio personnel.

3.3.4.1 Deployment/Installation/Back-Out Checklist

The Release Management team will deploy the patch PRCA*4.5*379, which is tracked nationally for all VAMCs in the National Patch Module (NPM) in FORUM. FORUM automatically tracks the patches as they are installed in the different VAMC production systems.

One can run a report in FORUM to identify when the patch was installed in the VistA production at each site. A report can also be run to identify which sites have not currently installed the patch in their VistA production system. Therefore, this information does not need to be manually tracked in Table 6.

Table 6: Deployment/Installation/Back-Out Checklist

Activity	Day	Time	Individual Who Completed Task
Deploy	N/A	N/A	N/A
Install	N/A	N/A	N/A
Back-Out	N/A	N/A	N/A

4 Installation

4.1 Pre-Installation and System Requirements

PRCA*4.5*379, a patch to the existing VistA Accounts Receivable 4.5 package, is installable on a fully patched Massachusetts General Hospital Utility Multi-Programming System (MUMPS) VistA system and operates on top of the VistA environment provided by the VistA infrastructure packages. The latter provides utilities that communicate with the underlying operating system and hardware, thereby providing Accounts Receivable application independence from variations in hardware and operating system.

4.2 Platform Installation and Preparation

Refer to the PRCA*4.5*379 Patch Description on the NPM in FORUM for the detailed installation instructions. These instructions would include any pre-installation steps, if applicable.

4.3 Download and Extract Files

The PRCA*4.5*379 patch is distributed as a mailman patch message from FORUM.

Refer to the PRCA*4.5*379 documentation on the NPM to find related documentation that can be downloaded.

4.4 Database Creation

The patch is applied to an existing MUMPS VistA database.

4.5 Installation Scripts

Refer to the PRCA*4.5*379 Patch Description in the NPM for installation instructions.

4.6 Cron Scripts

No Cron scripts are needed for the PRCA*4.5*379 installation.

4.7 Access Requirements and Skills Needed for the Installation

Access to the National VA Network, as well as the local network of each site to receive PRCA patches, is required to perform the installation, as well as authority to install patches.

Knowledge of, and experience with, the Kernel Installation and Distribution System (KIDS) software is required. For more information, see Section V, Kernel Installation and Distribution System, in the Kernel 8.0 & Kernel Toolkit 7.3 Systems Management Guide.

4.8 Installation Procedure

Refer to the PRCA*4.5*379 Patch Description in the NPM in FORUM for detailed installation instructions.

4.9 Installation Verification Procedure

After installation, the user verifies installation results by using the “Install File Print” menu option in the “Utilities” submenu of the KIDS.

Also, refer to the PRCA*4.5*379 documentation on the NPM for detailed installation instructions. These instructions include any post-installation steps, if applicable.

4.10 System Configuration

No system configuration changes are required for this patch.

4.11 Database Tuning

No reconfiguration of the VistA database, memory allocations, or other resources is necessary.

5 Back-Out Procedure

Back-out pertains to a return to the last known good operational state of the software and appropriate platform settings.

Note: If a site decides to back-out this patch, the site should contact the Enterprise Service Desk (ESD) to submit a ticket; the development team will assist with the process.

The Back-Out Procedure consists of:

- Removing four new routines RCHRFS, RCHRFS1, RCHRFS2, and RCHRFSUT
- Restoring routines RCVCR1 and RCVCR2 to its original pre-patch condition
- Removing the new menu option [PRCA HRFS RECONCILIATION RPT]

However, the code introduced by PRCA*4.5*379 can be utilized by other patches, that follow PRCA*4.5*379, and therefore the required research should be performed to back-out the patch correctly. The back-out is to be performed by persons with programmer-level access, and in conjunction with the SHRPE Team.

5.1 Back-Out Strategy

Although it is unlikely due to care in collecting, elaborating, and designing approved user stories, followed by multiple testing stages such as the Developer Unit Testing, Component Integration Testing, Software Quality Assurance (SQA) Testing, and User Acceptance Testing (UAT), a back-out decision due to major issues with this patch could occur. A decision to back out could be made during site Mirror Testing, Site Production Testing, or after National Release to the field VAMCs. The best strategy decision is dependent on the severity of the defects and the stage of testing during which the decision is made.

5.1.1 Mirror Testing or Site Production Testing

If during Mirror testing or Site Production Testing, a new version of a defect correcting test patch is produced, retested, and successfully passes development team testing, it will be resubmitted to the site for testing. If the patch produces catastrophic problems, a new version of the patch can be used to restore the build components to their pre-patch condition.

5.1.2 After National Release but During Designated Support Period

The decision to back out a specific release needs to be made in a timely manner. Catastrophic failures are usually known early in the testing process—within the first two or three days. Sites are encouraged to perform all test scripts to ensure new code is functioning in their environment, with their data. A back-out should only be considered for critical issues or errors. The normal or an expedited, issue-focused patch process can correct other bugs.

The general strategy for SHRPE VistA functionality rollback will likely be to repair the code with another follow-on patch.

If any issues with SHRPE VistA software are discovered after it is nationally released and within the 90-day warranty period window, the SHRPE development team will research the issue and provide guidance for any immediate, possible workaround. After discussing the defect with VA

and receiving their approval for the proposed resolution, the SHRPE development team will communicate guidance for the long-term solution.

The long-term solution will likely be the installation of a follow-up patch to correct the defect, a follow-up patch to remove the SHRPE updates, or a detailed set of instructions on how the software can be safely backed out of the production system.

5.1.3 After National Release and Warranty Period

After the support period, the VistA Maintenance Program would produce the new patch, either to correct the defective components or restore the build components to their original pre-patch condition.

5.2 Back-Out Considerations

It is necessary to determine if a wholesale back-out of the patch PRCA*4.5*379 is needed or if a better course of action is needed to correct through a new version of the patch (if prior to national release) or a subsequent patch aimed at specific areas modified or affected by the original patch (after national release). A wholesale back-out of the patch will still require a new version (if prior to national release) or a subsequent patch (after national release). If the back-out is post-release of patch PRCA*4.5*379, this patch should be assigned the status of "Entered in Error" in FORUM's NPM.

5.2.1 Load Testing

No load testing is required for patch PRCA*4.5*379.

5.2.2 User Acceptance Testing

The results will be provided upon the completion of the UAT.

5.3 Back-Out Criteria

Back-out criteria includes any of the following:

- The project is canceled
- The requested changes implemented by PRCA*4.5*379 are no longer desired by VA OIT
- The patch produces catastrophic problems

5.4 Back-Out Risks

By backing out the PRCA*4.5*379 patch, the local facility will not be able to use the new CPAC High Risk Veteran Reconciliation Report [PRCA HRFS RECONCILIATION RPT] report that allows VHA's CPAC users to view first party charges for patients with the High Risk for Suicide flag in order to improve efficiency and accountability in revenue operations.

5.5 Authority for Back-Out

The order would come from: Portfolio Director, VA Project Manager, and Business Owner. Health Services Portfolio will work to identify the problem and assisting with implementation. This should be done in consultation with the development team and project stakeholders.

5.6 Back-Out Procedure

The rollback plan for VistA applications is complex and not a "one size fits all" solution. The general strategy for a VistA rollback is to repair the code with a follow-up patch. The development team recommends that sites log a ticket if it is a nationally released patch.

The PRCA*4.5*379 patch contains the following build components:

- Four new routines RCHRFS, RCHRFS1, RCHRFS2, and RCHRFSUT.

  The new routines can be removed by the back-out patch that needs to be designed for this.

  Note: The routines can be modified by another patch that follows the PRCA*4.5*379 and released after the installation of the PRCA*4.5*379. Removing routines might cause issues.

- The new menu option [PRCA HRFS RECONCILIATION RPT].

  The new menu option can be removed by the back-out patch that needs to be designed for this.

  Note: The new menu option can be used or modified by another patch that follows the PRCA*4.5*379 and released after the installation of the PRCA*4.5*379. Removing the new menu option in this case might cause issues.

- The pre-existing routines RCVCR1 and RCVCR2.

  The correct version of two routines can be restored by the back-out patch that needs to be designed for this.

  Note: These routines can be modified by another patch that follows the PRCA*4.5*379 and released after the installation of the PRCA*4.5*379. Restoring the wrong version in this case might cause issues.

5.7 Back-Out Verification Procedure

If the special back-out patch is used, then successful back-out is confirmed by verification that the back-out patch was successfully installed.

6 Rollback Procedure

Rollback pertains to data. This patch adds a new report that displays the data, it doesn't change data on the site. Therefore, data rollback is not relevant for this patch.

6.1 Rollback Considerations

Not applicable.

6.2 Rollback Criteria

Not applicable.

6.3 Rollback Risks

Not applicable.

6.4 Authority for Rollback

Not applicable.

6.5 Rollback Procedure

Not applicable.

6.6 Rollback Verification Procedure

Not applicable.

7 Appendix A: Acronyms

Table 7: Acronyms List

Acronym	Meaning
CD2	Critical Decision Point #2
CPAC	Consolidated Patient Account Center
DIBRG	Deployment, Installation, Back-Out, and Rollback Guide
ESD	Enterprise Service Desk
HRFS	High Risk for Suicide
IOC	Initial Operating Capability
IT	Information Technology
KIDS	Kernel Installation and Distribution System
MUMPS	Massachusetts General Hospital Utility Multi-Programming System
N/A	Not Applicable
NPM	National Patch Module
OIT	Office of Information & Technology
PMO	Project Management Office
SHRPE	Suicide High Risk Patient Enhancements
SQA	Software Quality Assurance
UAT	User Acceptance Testing
VA	Department of Veterans Affairs
VAMC	Veterans Administration Medical Centers
VCR	Veteran Charge Report
VHA	Veterans' Health Administration
VIP	Veteran-focused Integrated Process
VistA	Veterans Health Information Systems and Technology Architecture