Suicide High Risk Patient Enhancements (SHRPE 2.0)

IB\*2.0\*688

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



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# 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 single or 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).

## Scope

This document describes how to deploy and install the Veterans Information Systems and Technology Architecture (VistA) Registration patch IB\*2.0\*688, 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.

This patch introduces the Application Programmer Interfaces (API) to provide Integrated Billing (IB) data to Presumptive Psychosis (PP) and Other Than Honorable (OTH) billing reports designed within the Registration application. The Integration Control Registration #7202 was entered to allow the Registration application to use the API in Integration Billing application. The API is used by DG\*5.3\*1034 (Registration) patch for its reports.

IB\*2.0\*688 (Integrated Billing) is bundled with DG\*5.3\*1034 (Registration) in host file IB\_2\_0\_P688.KID.

## Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the VistA Registration patch IB\*2.0\*688 will be deployed and installed, as well as specific instructions for how it is to be backed out and rolled back, if necessary. The plan also identifies resources, a communication plan, and a rollout schedule.

## Dependencies

This patch IB\*2.0\*688 does not have any dependencies.

## 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.

# Roles and Responsibilities

Table 1: DIBRG Roles and Responsibilities

| **ID** | **Team** | **Phase / Role** | **Tasks** | **Project Phase (See Schedule)** |
| --- | --- | --- | --- | --- |
| 1 | VA Office of Information & Technology (OI&T), VA OI&T Health Product Support, & Project Management Office (PMO) | Deployment | Plan and schedule deployment (including orchestration with vendors). | Planning |
| 2 | Local Individual Veterans Administration Medical Centers (VAMC) | Deployment | Determine and document the roles and responsibilities of those involved in the deployment. | Planning |
| 3 | Field Testing (Initial Operating Capability (IOC)), Health Product Support Testing, & VIP Release Agent Approval | Deployment | Test for operational readiness. | Testing |
| 4 | Health Product Support and Field Operations | Deployment | Execute deployment. | Deployment |
| 5 | VAMCs | 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 | N/A for this patch as we are using only the existing VistA system | Installation | Validate through facility Point of Contact (POC) to ensure that Information Technology (IT) equipment has been accepted using asset inventory processes. | Deployment |
| 8 | The VA’s SHRPE team | Installations | Coordinate knowledge transfer with the team responsible for user training. | Deployment |
| 9 | VIP release Agent, Health Product Support & 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 |
| 10 | SHRPE Team | Post-Deployment | Hardware, Software, and System Support. | Warranty |

# Deployment

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

## Timeline

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

## Site Readiness Assessment

This section discusses the locations that will receive the IB\*2.0\*688 patch deployment.

### Deployment Topology (Targeted Architecture)

The VistA Registration patch IB\*2.0\*688 should be installed in all VA VistA production sites.

### Site Information (Locations & Deployment Recipients)

The test sites for IOC testing are:

* Edward Hines Jr VA Hospital (Hines, Illinois) (578)
* West Palm Beach VA Medical Center (West Palm Beach, Florida) (548)
* Palo Alto VA Medical Center (Palo Alto, California) (640)

Upon national release, all VAMCs are expected to install this patch prior to or on the compliance date. The software will be distributed in FORUM.

### 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 |

## Resources

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

### 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 |

### 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 |

### 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 Registration package within VistA | N/A | 5.3 | N/A | N/A | N/A |

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

### 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 product support personnel.

#### Deployment/Installation/Back-Out Checklist

The Release Management team will deploy the patch IB\*2.0\*688, 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 (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 |

# Installation

## Pre-Installation and System Requirements

IB\*2.0\*688, a patch to the existing VistA Integrated Billing 2.0 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 Registration independence from variations in hardware and operating system.

## Platform Installation and Preparation

Refer to the IB\*2.0\*688 Patch Description on the NPM in FORUM for the detailed installation instructions. These instructions would include any pre-installation steps, if applicable.

## Download and Extract Files

Refer to the IB\*2.0\*688 documentation on the NPM to find related documentation that can be downloaded.

The combined build for DG\*5.3\*1034 and IB\*2.0\*688 will be distributed as a host file IB\_2\_0\_P688.KID and can be downloaded from the VA Software Documentation Library site.

## Database Creation

The patch is applied to an existing MUMPS VistA database.

## Installation Scripts

Refer to the IB\*2.0\*688 Patch Description in the NPM for installation instructions.

## Cron Scripts

No Cron scripts are needed for the IB\*2.0\*688 installation.

## 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 DG 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](http://www.va.gov/VDL/documents/Infrastructure/Kernel/krn8_0sm.docx).

## Installation Procedure

Refer to the IB\*2.0\*688 Patch Description in the NPM in FORUM for detailed installation instructions.

## 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 IB\*2.0\*688 documentation on the NPM for detailed installation instructions. These instructions include any post-installation steps, if applicable.

## System Configuration

No system configuration changes are required for this patch.

## Database Tuning

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

# Back-Out Procedure

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

Back-out of IB\*2.0\*688 cannot be done independently of DG\*5.3\*1034 backout DG\*5.3\*1034 is dependent on the code provided by IB\*2.0\*688 code. 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.

Technically the Back-Out Procedure for IB\*2\*688 consists of removing the new routine IBEFSMUT but again this cannot be done without backing-out of DG\*5.3\*1034 first. Therefore, it is strongly recommended to contact the development team, and they will consider all options including creation of the back-out patch.

The back-out process is to be performed by persons with programmer-level access, and in conjunction with the SHRPE Team.

## 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.

### 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.

### After National Release but During the 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, and 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 the 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.

### 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.

## Back-Out Considerations

It is necessary to determine if a wholesale back-out of the patch IB\*2.0\*688 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) of the dependent patch DG\*5.3\*1034. If the back-out is post-release of patch IB\*2.0\*688, this patch should be assigned the status of “Entered in Error” in Forum’s NPM.

### Load Testing

No load testing is required for patch IB\*2.0\*688.

### User Acceptance Testing

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

## Back-Out Criteria

Back-out criteria includes the following: the project is canceled, the requested changes implemented by IB\*2.0\*688 are no longer desired by VA OI&T, or the patch produces catastrophic problems.

## Back-Out Risks

By backing out the IB\*2.0\*688 patch, users at the local facility will not be able to use the two new Registration reports implemented by the patch:

* Presumptive Psychosis Reconciliation Report DG PRESUMP. PSYCH. RECON RPT, which assists users in identifying Presumptive Psychosis patients.
* Former OTH Patient Eligibility Change Report [DG OTH FSM ELIG. CHANGE REPORT, which assists users in reviewing past encounters of Former Service Member (FSM) for potential back-billing charges.
* Former OTH Patient Detail Report [DG OTH FSM DETAIL REPORT], which assists billing user in reviewing Former Service Member's past checked out encounter and prescription details to determine if potential back-billing is necessary.

Since these reports that utilize IB\*2.0\*688 are implemented by the DG\*5.3\*1034, the back-out of patch IB\*2.0\*688 will require the backout of the DG\*5.3\*1034.

## Authority for Back-Out

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

## 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 IB\*2.0\*688 patch contains the following build component:

* The new routine IBEFSMUT

This new routine can be deleted by the back-out patch only if the code for DG\*5.3\*1034 was backed out before this.

Note: This new routine can be used if modified by another patch that follows the IB\*2.0\*688 and released after the installation of the IB\*2.0\*688. Removing this routine might cause issues. That is why it is strongly recommended to contact the development team and ask for recommendations.

## 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.

# Rollback Procedure

Rollback pertains to data. This patch adds two new reports to the existing Integrated Billing menu. These reports per se don’t change data on the site, they only reflect data. Therefore, data rollback is not relevant for this patch.

## Rollback Considerations

Not applicable.

## Rollback Criteria

Not applicable.

## Rollback Risks

Not applicable.

## Authority for Rollback

Not applicable.

## Rollback Procedure

Not applicable.

## Rollback Verification Procedure

Not applicable.

# Appendix A: Acronyms

Table 7: Acronyms List

| **Acronym** | **Meaning** |
| --- | --- |
| API | Application Programmer Interfaces |
| CD2 | Critical Decision Point #2 |
| DIBRG | Deployment, Installation, Back-Out, and Rollback Guide |
| ESD | Enterprise Service Desk |
| FSM | Former Service Member |
| IB | Integrated Billing |
| 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 |
| OI&T | Office of Information & Technology |
| OTH | Other Than Honorable |
| PMO | Project Management Office |
| POC | Point of Contact |
| PP | Presumptive Psychosis |
| SHRPE | Suicide High Risk Patient Enhancements |
| SQA | Software Quality Assurance |
| UAT | User Acceptance Testing |
| VA | Department of Veterans Affairs |
| VAMC | Veterans Administration Medical Centers |
| VIP | Veteran-focused Integrated Process |
| VistA | Veterans Health Information Systems and Technology Architecture  |