Medical Care Collection Fund (MCCF) Electronic Data Interchange (EDI) Transaction Applications Suite (TAS) Phase 1

Integrated Billing IB\*2.0\*576

Version 1.0

Deployment, Installation, Back-Out, and Rollback Guide



March 2017

Department of Veterans Affairs

Office of Information and Technology (OI&T)

**Revision History**

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| March 2017 | 1.0 | Initial Version | Vito D’Amico |
|  |  |  |  |

**Artifact Rationale**

This document describes the Deployment, Installation, Back-out, and Rollback Plan for new products going into the 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 (CD #2), with the expectation that it will be updated throughout the lifecycle of the project for each build, as needed.

Table of Contents

[1 Introduction 1](#_Toc471980673)

[1.1 Purpose 1](#_Toc471980674)

[1.2 Dependencies 1](#_Toc471980675)

[1.3 Constraints 1](#_Toc471980676)

[2 Roles and Responsibilities 1](#_Toc471980677)

[3 Deployment 2](#_Toc471980678)

[3.1 Timeline 2](#_Toc471980679)

[3.2 Site Readiness Assessment 2](#_Toc471980680)

[3.2.1 Deployment Topology (Targeted Architecture) 2](#_Toc471980681)

[3.2.2 Site Information (Locations, Deployment Recipients) 2](#_Toc471980682)

[3.2.3 Site Preparation 3](#_Toc471980683)

[3.3 Resources 3](#_Toc471980684)

[3.3.1 Facility Specifics 3](#_Toc471980685)

[3.3.2 Hardware 3](#_Toc471980686)

[3.3.3 Software 3](#_Toc471980687)

[3.3.4 Communications 4](#_Toc471980688)

[3.3.4.1 Deployment/Installation/Back-Out Checklist 4](#_Toc471980689)

[4 Installation 4](#_Toc471980690)

[4.1 Pre-installation and System Requirements 4](#_Toc471980691)

[4.2 Platform Installation and Preparation 5](#_Toc471980692)

[4.3 Download and Extract Files 5](#_Toc471980693)

[4.4 Database Creation 5](#_Toc471980694)

[4.5 Installation Scripts 5](#_Toc471980695)

[4.6 Cron Scripts 5](#_Toc471980696)

[4.7 Access Requirements and Skills Needed for the Installation 5](#_Toc471980697)

[4.8 Installation Procedure 5](#_Toc471980698)

[4.9 Installation Verification Procedure 5](#_Toc471980699)

[4.10 System Configuration 5](#_Toc471980700)

[4.11 Database Tuning 6](#_Toc471980701)

[5 Back-Out Procedure 6](#_Toc471980702)

[5.1 Back-Out Strategy 6](#_Toc471980703)

[5.2 Back-Out Considerations 6](#_Toc471980704)

[5.2.1 Load Testing 6](#_Toc471980705)

[5.2.2 User Acceptance Testing 6](#_Toc471980706)

[5.3 Back-Out Criteria 7](#_Toc471980707)

[5.4 Back-Out Risks 7](#_Toc471980708)

[5.5 Authority for Back-Out 7](#_Toc471980709)

[5.6 Back-Out Procedure 7](#_Toc471980710)

[5.7 Back-out Verification Procedure 8](#_Toc471980711)

[6 Rollback Procedure 8](#_Toc471980712)

[6.1 Rollback Considerations 8](#_Toc471980713)

[6.2 Rollback Criteria 8](#_Toc471980714)

[6.3 Rollback Risks 8](#_Toc471980715)

[6.4 Authority for Rollback 8](#_Toc471980716)

[6.5 Rollback Procedure 9](#_Toc471980717)

[6.6 Rollback Verification Procedure 9](#_Toc471980718)

# Introduction

This document describes how to deploy and install the IB\*2.0\*576 as well as how to back-out the product and rollback to a previous version or data set.

## Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the IB\*2.0\*576 will be deployed and installed, as well as how it is to be backed out and rolled back, if necessary. The plan also identifies resources, communications plan, and rollout schedule. Specific instructions for installation, back-out, and rollback are included in this document.

## Dependencies

IB\*2.0\*371 and IB\*2.0\*547 must be installed **before** IB\*2.0\*576.

## Constraints

This patch is intended for a fully patched VistA system.

# Roles and Responsibilities

**Table 1: Deployment, Installation, Back-out, and Rollback Roles and Responsibilities**

| **ID** | **Team** | **Phase / Role** | **Tasks** | **Project Phase (See Schedule)** |
| --- | --- | --- | --- | --- |
| 1 | VA OI&T, VA OI&T Health Product Support & PMO (Leidos) | Deployment | Plan and schedule deployment (including orchestration with vendors) | Planning |
| 2 | Local VAMC and CPAC processes | 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 | Individual Veterans Administration Medical Centers (VAMCs) | Installation | Plan and schedule installation | Deployment |
| 6 | VIP Release Agent | Installation | Ensure 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 POC to ensure that IT equipment has been accepted using asset inventory processes |  |
| 8 | VA’s eBusiness team | Installations | Coordinate 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 | No changes to current process – we are using the existing VistA system | 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 deployment and installation is scheduled to run for 30 days, as depicted in the master deployment schedule[[1]](#footnote-1).

## Site Readiness Assessment

This section discusses the locations that will receive the IB\*2.0\*576 deployment.

### Deployment Topology (Targeted Architecture)

This patch IB\*2.0\*576 is to be nationally released to all VAMCs.

### Site Information (Locations, Deployment Recipients)

The test sites for IOC testing are: TBD

* These sites will not be defined here until the sites have signed the Memorandum of Understanding (MOUs) and testing has completed as sometimes a site has to stop testing prior to the end of IOC.

Upon national release all VAMCs are expected to install this patch within the compliance date.

### Site Preparation

The following table describes preparation required by the site prior to deployment.

**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

### Facility Specifics

The following table lists facility-specific features required for deployment.

**Table 3: Facility-Specific Features**

| **Site** | **Space/Room** | **Features Needed** | **Other** |
| --- | --- | --- | --- |
| N/A | N/A | N/A | N/A |

### Hardware

The following table 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 |

Please see the Roles and Responsibilities table in Section 2 for details about who is responsible for preparing the site to meet these hardware specifications.

### Software

The following table describes software specifications required at each site prior to deployment.

**Table 5: Software Specifications**

| **Required Software** | **Make** | **Version** | **Configuration** | **Manufacturer** | **Other** |
| --- | --- | --- | --- | --- | --- |
| Fully patched Integrated Billing package within VistA | N/A | 2.0 | N/A | N/A | N/A |
| IB\*2.0\*371 | N/A | Nationally released version | N/A | N/A | N/A |
| IB\*2.0\*547 | N/A | Nationally released version | N/A | N/A | N/A |

Please see the Roles and Responsibilities table in Section 2 above for 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 eBilling eBusiness team, the developers, and product support personnel.

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

The Release Management team will deploy the patch IB\*2.0\*576, which is tracked in the NPM in Forum, nationally to all VAMCs. 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, and by whom. A report can also be run, to identify which sites have not installed the patch in their VistA production system as of that moment in time.

Therefore, this information does not need to be manually tracked in the chart below.

**Table 6: 3.3.4.1 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\*576, a patch to the existing VistA Integrated Billing 2.0 package, is installable on a fully patched M(UMPS) VistA system and operates on the top of the VistA environment provided by the VistA infrastructure packages. The later provides utilities which communicate with the underlying operating system and hardware, thereby providing Integrated Billing independence from variations in hardware and operating system.

## Platform Installation and Preparation

Refer to the IB\*2.0\*576 documentation on the National Patch Module (NPM) on 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\*576 documentation on the NPM for where to find related documentation that can be downloaded. IB\*2.0\*576 will be transmitted via a PackMan message and can be pulled from the NPM. It is not a host file, and therefore does not need to be downloaded separately.

## Database Creation

IB\*2.0\*576 has a few modifications to the VistA database. All changes can be found on the NPM documentation for this patch.

## Installation Scripts

No installation scripts are needed for IB\*2.0\*576 installation.

## Cron Scripts

No Cron scripts are needed for IB\*2.0\*576 installation.

## Access Requirements and Skills Needed for the Installation

The following staff will need access to the PackMan message containing the IB\*2.0\*576 patch or Forum’s NPM for downloading the nationally released IB\*2.0\*576 patch. The software is to be installed by the site’s or region’s designated: VA OI&T IT OPERATIONS SERVICE, Enterprise Service Lines, Vista Applications Division[[2]](#footnote-2).

## Installation Procedure

Refer to the IB\*2.0\*576 documentation on the NPM for the detailed installation instructions.

## Installation Verification Procedure

Refer to the IB\*2.0\*576 documentation on the NPM for the detailed installation instructions. These instructions would 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 Strategy

Although it is unlikelya back-out decision due to major issues with this patch could occur during site Mirror Testing, Site Production Testing or after National Release to the field (VAMCs). The strategy would depend on during which of these stages the decision is made.

If during Mirror testing or Site Production Testing, unless the patch produces catastrophic problems, the normal VistA response would be for a new version of the test patch correcting defects to be produced, retested and upon successfully passing development team testing would be resubmitted to the site for testing. This project, however, has prepared a set of back-out patch instructions if necessary, as in the case that the project is canceled or the implemented design is found to be so wrong and detrimental to the site’s delivery of services to veterans that the software must be removed.

If the defect(s) were not discovered until after national release but during the designated support period, a new patch will be entered into the National Patch Module on Forum and go through all the necessary milestone reviews etc. as a patch for a patch. It is up to VA OI&T and product support whether this new patch would be defined as an emergency patch or not. After the support period, the VistA Maintenance Program would produce the new patch, either to correct the defective components or to back-out the patch.

In the case of patch IB\*2.0\*576, a new patch would not be necessary for back out purposes as the site will have a backup that they created during the initial install.

## Back-Out Considerations

It is necessary to determine if a wholesale back-out/rollback of the patch IB\*2.0\*576 is necessary or if a better course is 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). If the back-out is post-release of patch IB\*2.0\*576, this patch should be assigned status of “Entered in Error” in Forum’s NPM.

### Load Testing

N/A. The back-out process would be executed at normal, rather than raised job priority, and is expected to have no significant effect on total system performance. Subsequent to the reversion, the performance demands on the system would be unchanged.

### User Acceptance Testing

Concerning the Onset Date Correction user story, the following acceptance criteria should be anticipated:

* The system should not automatically populate the onset date with the service date for professional claims.
* The system should populate onset date with Occurrence code 11 when entered or Occurrence code 10 when entered and if 11 does not exist.
* The system should populate FL14 on the CMS 1500 with onset date with Occurrence code 11 when entered or Occurrence code 10 if entered and if 11 does not exist.
* The system should populate FL15 on the CMS 1500 with accident date with Occurrence code (1,2,3,4 or 5) when entered.
* The system should populate 2300DTP03 on the 837-P with onset date of Occurrence code 11 when entered or Occurrence code 10 if entered and if 11 does not exist.
* The system should populate 2300DTP03 on the 837-P with accident date of Occurrence code 1,2,3,4 or 5 when entered.

Concerning the Missing MRW Legend Indicator user story, the following acceptance criteria should be anticipated:

* The system should generate the MRW based upon the user criteria.
* The system should display all the data available for the MRW based upon the user criteria.
* The system should display indicators in front of or after the bill numbers appearing on the MRW.
* The system should display the legend below the listing on the MRW.
* The system should display two items in the legend. They include:
  + !=Data Mismatch/MSE, and
  + \*=Review in Process.

Concerning the Printing of CMS 1500 user story, the following acceptance criteria should be anticipated:

* The system should display all the data available for the bill on the various billing screens.
* The system should allow the user to edit Section 1, Bill Type, Timeframe of Bill field on screen 7 by entering either a 7 (Replacement Claim) or an 8 (Void/Cancel Prior Claim).
* The system should allow the user to enter the original claim reference number (ICN/DCN) on billing screen 10 or the system auto populates the original claim reference number (ICN/DCN) when the COPY/CLONE function is used.
* The system should allow the user to authorized the bill.
* The system should allow the user to print the bill locally.
* The Printed claim form should populate FL22 with the appropriate bill frequence code in the first part of FL22 (Resubmission Code) and the original claim reference number (ICN/DCN) in the second part of FL22 (Original Reference Number).

Concerning the Payer Zip Code Field Adjustment user story, the following acceptance criteria should be anticipated:

* The user is able to enter or update the ZIP code for a third party payer in the appropriate VistA IB screen for each of the affected payer addresses.
* The user should not be able to enter 0000 or 9999 in the last 4 bytes of the ZIP code fields.
* The user is able to file the payer information when complete.
* The system should verify that the zip code is a 9 character numeric value.
* If the zip code value is not valid, the system should not save the value and, in turn, should provide the user with an error message stating the issue with the ZIP code.
* If the value is valid the system should store the payer ZIP code appropriately.

## Back-Out Criteria

The project is canceled or the requested changes implemented by IB\*2.0\*576 are no longer desired by VA OI&T and the Integrated Billing eBusiness team.

## Back-Out Risks

**Before national release:** There are no current identified risks of backing out IB\*2.0\*576 prior to national release.

**After national release:** If the IB\*2.0\*576 patch is to be backed out after it is nationally released it may do so according to this document **only** if none of the following statements are true. If any of the following statements are true, refer to the sub bullets below for proper guidelines.

* Subsequent patch(es) that is currently under development is dependent upon any aspect changed by IB\*2.0\*576.
  + Inform the teams responsible for the subsequent patch(es) of the request to backout the patch so they can make any necessary changes to their software and schedule. With coordination of these teams for the subsequent patch(es), proceed with the backout.
* Subsequent patch(es) that is nationally released or has the status of ‘completed/not released’ is dependent upon any aspect changed by IB\*2.0\*576.
  + Back-out procedures may not be executed. This requires a new patch to address the concern.

## Authority for Back-Out

The order would come from: release coordinator (product support), portfolio director and health product support.

## Back-Out Procedure

A few things need to be done in order to back out this IB\*2.0\*576 patch. They are as follows:

* Restore the routines to their previous state
* Recompile the Billing Screen Input Templates
* Restore several entries used by the Forms Output Utility [IBCE OUTPUT FORMATTER]
* Restore the modified IB ERROR file.

This will need to be done by the site’s designated IT support.

Restore the routines to their previous state

The user was instructed to execute the menu option “Backup a Transport Global” [XPD BACKUP] when the patch was initially installed (the very 1st time if installed multiple times). To restore the routines, perform the following steps:

* Locate the MailMan message that was created as part of the “Backup a Transport Global” step.
* While viewing the MailMan message, extract the KIDS build, using the “Xtract PackMan” action.
* Then select the “INSTALL/CHECK MESSAGE” action to restore the modified routines.

Recompile the Billing Screen Input Templates

<NEED SOMETHING TO PUT HERE…IS THERE A UTILITY TO DO THIS?>

Restore several entries used by the Forms Output Utility [IBCE OUTPUT FORMATTER]

The FORMAT and/or EXTRACT CODE will need to be restored for the following entries in the following files:

* For the IB FORM SKELETON DEFINITION file (#364.6) restore the following entries:
  + 1476 - CI3A-6
* For the IB FORM FIELD CONTENT file (#364.7) restore the following entries:
  + 1015 - GEN-7
  + 1175 - CL1-5
  + 1176 - CI3A-6
  + 1550 - OI6-6.9

Restore the modified IB ERROR File

Restore error # IB099 to its previous state.

## Back-out Verification Procedure

It is expected that the IT support can use FileMan (“Data Dictionary Utilities” → “List File Attributes” options) to verify that the 3 triggers were deleted from the CURRENT BILL PAYER SEQUENCE (.21) field in the BILL/CLAIMS (#399) file. In addition, the IT Support can use FileMan (the “Inquire to File Entries” option) to confirm that the various IB OUTPUT FORMATTER entries were restored correctly.

# Rollback Procedure

Rollback pertains to data. Since patch IB\*2.0\*576 impacts some Data Dictionary fields in the Integrated Billing package, the back-out procedure includes instructions of how to remove and restore specific Data Dictionary and Output Templates fields of information, so no additional procedures are necessary to roll back the VistA software.

## 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.

Template Revision History

| Date | Version | Description | Author |
| --- | --- | --- | --- |
| March 2016 | 2.2 | Changed the title from Installation, Back-Out, and Rollback Guide to Deployment and Installation Guide, with the understanding that Back-Out and Rollback belong with Installation. | VIP Team |
| February 2016 | 2.1 | Changed title from Installation, Back-Out, and Rollback Plan to Installation, Back-Out, and Rollback Guide as recommended by OI&T Documentation Standards Committee | OI&T Documentation Standards Committee |
| December 2015 | 2.0 | The OI&T Documentation Standards Committee merged the existing *“Installation, Back-Out, Rollback Plan”* template with the content requirements in the OI&T End-user Documentation Standards for a more comprehensive Installation Plan. | OI&T Documentation Standards Committee |
| February 2015 | 1.0 | Initial Draft | Lifecycle and Release Management |

1. Project schedule (right click and select open hyperlink to access)

   <http://vaww.oed.portal.va.gov/pm/hape/ipt_5010/EDI_Portfolio/TAS%20Interim%20Repository/MCCF%20TAS%20Schedule.zip> [↑](#footnote-ref-1)
2. “Enterprise service lines, VAD” for short. Formerly known as the IRM (Information Resources Management) or IT support. [↑](#footnote-ref-2)