

Clinical Procedures (CP) Flowsheets

Patch (MD*1.0*76)

Network Deployment, Installation, Back-Out, and Rollback Guide



June 2020

Department of Veterans Affairs (VA)

Office of Information and Technology (OIT)

Revision History

Date	Description	Author
June 2020	Initial Release	HPS Clinical Sustainment Team

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 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
1.1. Purpose.....	1
1.2. Dependencies.....	1
1.3. Constraints	1
2. Roles and Responsibilities.....	1
3. Deployment	2
3.1. Timeline.....	2
3.2. Site Readiness Assessment.....	3
3.2.1. Deployment Topology (Targeted Architecture)	3
3.2.2. Site Information (Locations, Deployment Recipients)	3
3.2.3. Site Preparation	3
3.3. Resources.....	3
3.3.1. Facility Specifics	3
3.3.2. Hardware	3
3.3.3. Software.....	3
3.3.4. Communications	3
3.3.4.1. Deployment/Installation/Back-Out Checklist.....	4
4. Installation.....	4
4.1. Pre-installation and System Requirements	4
4.2. Platform Installation and Preparation.....	4
4.3. Download and Extract Files	4
4.4. Database Creation.....	4
4.5. Installation Scripts	4
4.6. Cron Scripts.....	4
4.7. Access Requirements and Skills Needed for the Installation	4
4.8. Installation Procedure	5
4.8.1. MD*1*76 VistA Installation	5
4.8.2. CP Flowsheets v1.0.76.2 GUI Installation.....	5
4.8.2.1. CP Flowsheets GUI Methods of Installation	5
4.9. Installation Verification Procedure	8
4.10. System Configuration	8
4.11. Database Tuning	8
5. Back-Out Procedure	8
5.1. Back-Out Strategy.....	8
5.2. Back-Out Considerations	8
5.2.1. Load Testing	8
5.2.2. User Acceptance Testing	8

5.3.	Back-Out Criteria.....	8
5.4.	Back-Out Risks.....	9
5.5.	Authority for Back-Out.....	9
5.6.	Back-Out Procedure	9
5.7.	Back-out Verification Procedure.....	9
6.	Rollback Procedure	10
6.1.	Rollback Considerations	10
6.2.	Rollback Criteria.....	10
6.3.	Rollback Risks.....	10
6.4.	Authority for Rollback	10
6.5.	Rollback Procedure	10
6.6.	Rollback Verification Procedure	10

List of Tables

Table 1: Roles and Responsibilities	1
Table 2: Files to be Downloaded	4
Table 3: HPS Clinical Sustainment Contacts.....	9

List of Figures

Figure 1: Right Click to create shortcut on desktop	7
Figure 2: CP Flowsheets shortcut properties.....	7

1. Introduction

This document describes how to deploy and install the CP Flowsheets v1.0.76.2, 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. In cases where a non-developed COTS product is being installed, the vendor provided User and Installation Guide may be used, but the Back-Out Recovery strategy still needs to be included in this document.

1.1. Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the CP Flowsheets v1.0.76.2 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.

1.2. Dependencies

The CP Flowsheets v1.0.76.2 project is for installation on a fully patched VistA system. There is also a Graphical User Interface (GUI) component that should be running on a Windows system.

1.3. Constraints

CP Flowsheets v1.0.76.2 and the associated M patch (if applicable) are expected to be installed on existing VistA platforms. The hardware may reside at local or regional data centers. CP Flowsheets v1.0.76.2 utilizes existing, nationally released security controls to control access.

2. Roles and Responsibilities

No one single entity oversees decision making for deployment, installation, back out and rollback of CP Flowsheets v1.0.76.2. The Release Agent and Application Coordinators under the Veterans in Process will approve deployment and install from an OIT perspective. If an issue with the software arises, then the facility CIO and other site leadership will meet along with input from Patient Safety and Health Product Support to initiate a back out and rollback decision of the software along with the IT Operations and Services personnel. The following table provides CP Flowsheets v1.0.76.2 project information.

Table 1: Roles and Responsibilities

Team	Phase / Role	Tasks
IT Operations and Services personnel	Deployment	Plan and schedule deployment (including orchestration with vendors)
IT Operations and Services personnel	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.
Site personnel.	Deployment	Test for operational readiness

Team	Phase / Role	Tasks
IT Operations and Services personnel The IT support will need to include person(s) to install the KIDS build as well as the personnel to deploy the GUI – which may be done on each machine, a shared network and/or the Citrix access gateway	Deployment	Execute deployment
IT Operations and Services personnel. The IT support will need to include person(s) to install the KIDS build as well as the personnel to deploy the GUI – which may be done on each machine, a shared network and/or the Citrix access gateway	Installation	Plan and schedule installation
N/A – will work under the VistA ATO and security protocols.	Installation	Ensure authority to operate and that certificate authority security documentation is in place
N/A – no equipment is being added.	Installation	Validate through facility POC to ensure that IT equipment has been accepted using asset inventory processes
N/A – no new functionality is being introduced.	Installations	Coordinate training
Facility CIO, IT Operations, and Services personnel	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)
Hardware and System support – no changes. Software support will be the HPS Clinical Sustainment team.	Post Deployment	Hardware, Software and System Support

3. Deployment

The deployment is planned as a standard VistA National Patch Module patch rollout. Once approval has been given to nationally release, the patch MD*1*76 will be released from the National Patch Module. At this point, it will be available for installation and deployment at all sites.

Scheduling of test/mirror installs, testing and deployment to production will be at the site's discretion. It is anticipated there will be a 30-day compliance period.

3.1. Timeline

There is no timeline specifically for deployment. This is considered a maintenance release and installation will be at the site's discretion, within the constraints of the compliance period for the release.

3.2.Site Readiness Assessment

N/A.

3.2.1.Deployment Topology (Targeted Architecture)

CP Flowsheets v1.0.76.2 will be deployed to each VistA instance. That will include local sites as well as regional data processing centers. The executable will also be deployed to the Citrix Access Gateway.

3.2.2.Site Information (Locations, Deployment Recipients)

The initial deployment will be to IOC sites for verification of functionality. Once that testing is completed and approval is given for national release, CP Flowsheets v1.0.76.2 (MD*1*76) will be deployed to all VistA systems.

The Production (IOC) testing sites are:

- Tomah VA Medical Center (Tomah, WI)
- VA Southern Nevada Healthcare System (Las Vegas, NV)

3.2.3.Site Preparation

There is no special preparation required for CP Flowsheets v1.0.76.2. A fully patched VistA system is the only requirement.

3.3.Resources

N/A

3.3.1.Facility Specifics

N/A

3.3.2.Hardware

N/A

3.3.3.Software

The GUI source code for this patch is available in ZIP file MD_1_76_SRC.ZIP which can be obtained at location: **REDACTED**

3.3.4.Communications

Service Delivery and Engineering (SDE) Field Implementation Services will be sending out an Action Item and National Change Order prior to the release of CP Flowsheets v1.0.76.2 advising them of the upcoming release.

CP Flowsheets v1.0.76.2 will be deployed using the standard method of patch release from the National Patch Module rather than a phased deployment. When patch MD*1*76 is released, the National Patch Module will send a notification to all the personnel who have subscribed to those notifications.

3.3.4.1. Deployment/Installation/Back-Out Checklist

The deployment and installation will be performed by site support personnel once it is nationally released.

4. Installation

4.1.Pre-installation and System Requirements

CP Flowsheets v1.0.76.2 assumes a fully-patched Vista system.

4.2.Platform Installation and Preparation

[Vista] This patch should be loaded during non-peak hours to minimize disruption to users. Installation will take less than 5 minutes. Users may remain on the system.

[GUI] The time to deploy the GUI will depend on which method the site utilizes for running the executable (network share, Citrix, individual workstation installs, etc.).

4.3.Download and Extract Files

CP Flowsheets v1.0.76.2 is being released as a PackMan Message distributed through the National Patch Module combined with a .ZIP file containing the GUI file(s).

The ZIP file can be obtained at location: **REDACTED**

Documentation can be found on the VA Software Documentation Library at: <https://www.va.gov/vdl/>

Table 2: File to be Downloaded

File Name	File Contents	Download Format
MD_1_76.ZIP	CP Flowsheets executable and help file	Binary

4.4.Database Creation

N/A

4.5.Installation Scripts

N/A

4.6.Cron Scripts

N/A

4.7.Access Requirements and Skills Needed for the Installation

Installation of CP Flowsheets v1.0.76.2 requires the following to install:

- Programmer access to Vista instance and ability to install KIDS build.
- Citrix Access Gateway (CAG) installs – access/ability to upload to the CAG.

- Network Share installs – access/ability to upload executable to the network share location.
- Individual work-station installs – access/ability to push executable to required work stations.

4.8.Installation Procedure

4.8.1.MD*1*76 VistA Installation

1. Choose the PackMan message containing this build. Then select the INSTALL/CHECK MESSAGE PackMan option to load the build.
2. From the Kernel Installation and Distribution System Menu, select the Installation Menu. From this menu,
 - A. Select the Verify Checksums in Transport Global option to confirm the integrity of the routines that are in the transport global. When prompted for the INSTALL NAME enter the patch name: MD*1.0*76
 - B. Select the Backup a Transport Global option to create a backup message of any routines exported with this patch. It will not backup any other changes such as DDs or templates.
 - C. You may also elect to use the following options:
 - i. Print Transport Global - This option will allow you to view the components of the KIDS build.
 - ii. Compare Transport Global to Current System - This option will allow you to view all changes that will be made when this patch is installed. It compares all of the components of this patch, such as routines, DDs, templates, etc.
 - D. Select the Install Package(s) option and choose the patch to install.
 - i. When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', answer NO.
 - ii. When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//', answer NO.

4.8.2.CP Flowsheets v1.0.76.2 GUI Installation

The ZIP file (MD_1_76.ZIP) contains the CP Flowsheets GUI executable and associated files. Download the ZIP file and extract all the files.

4.8.2.1. CP Flowsheets GUI Methods of Installation

The following methods of installation of CP Flowsheets are available. Sites' choice of which method(s) to use will depend upon IT Operations and Services personnel/VISN policies, Local Area Network (LAN) performance or other local circumstances. User requirements, physical location and methods of connection to the VA network may warrant more than one of the options below to be used.

Network (Shared) Installation:

This method is typically the simplest to maintain, providing the local network infrastructure is robust enough to handle the additional traffic caused by users running the GUI executable (CPFlowsheets.exe) across the LAN.

The GUI executable (CPFlowsheets.exe) and help file (CPFlowsheets.chm) are copied to a network shared location. Users are provided with a desktop shortcut to run CPFlowsheets.exe directly from the network shared drive. The necessary command line parameters (VistA server address or name and RPC Broker Port number) are entered in the “Target” field of the shortcut properties

At the time of a CP Flowsheets version update, the copy of CPFlowsheets.exe and the help file are replaced, on the network share, with the new version.

Any users requiring access to another site's CP Flowsheets system can be given an alternate desktop shortcut with command line parameters appropriate to the intended target VistA system.

If a user requires access to an older or newer version of CP Flowsheets (e.g. for testing purposes) a different version of CPFlowsheets.exe can be placed in a separate network location and the user be supplied with an appropriate alternate shortcut (different Target path and different VistA server command line parameters).

Citrix Installation:

The GUI executable (CPFlowsheets.exe) and associated files are installed and ran from a remote workstation, and the user views the remote workstation’s screen on their local workstation.

For the local site users, this method is on a similar level to the Network (shared) installation above. The users' workstations require only an appropriate shortcut (and the necessary Citrix Access Group (CAG) infrastructure).

For the Citrix Farm administrator, this method involves installations on the host in a similar manner to either the Gold Path or the Direct Access methods outlined below.

Note: For issues with CAG, please contact the local or national help desk.

Local Workstation Installation:

This is the “standard” method of installation where the GUI executable (CPFlowsheets.exe) and associated files are installed on and run from the user's local workstation. This method of installation initially requires the distribution and installation of a Microsoft Software Installation (MSI) file to each user's workstation, typically accomplished via SCCM. This is outside the scope of the Sustainment team. A National package (Clinical Procedures Flowsheets v1.0.76.2) has been prepared and made available to Regional COR Client Technologies leadership.

Manual Install:

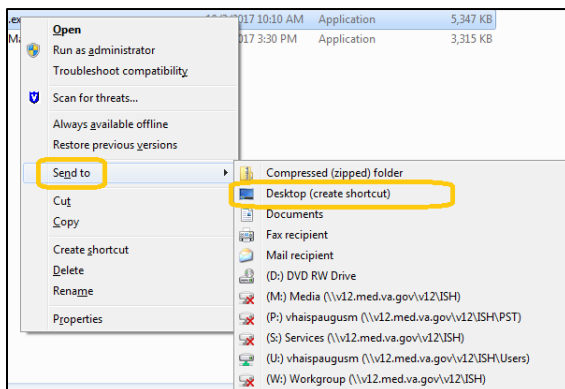
This method is used for users who wish to have a production instance and a non-production instance running on the same machine. An example would be users who are testing this software or users who need to have access to a pre-production (mirror) VistA instance.

1. Locate the MD_1_76.ZIP and unzip the file.
2. Copy the contents of the zip archive to a directory appropriate for programs. For example: C:\Program Files (x86)\Vista\CP Flowsheets. A new directory may need to be created.

Note: Administrator rights are required to complete these steps.

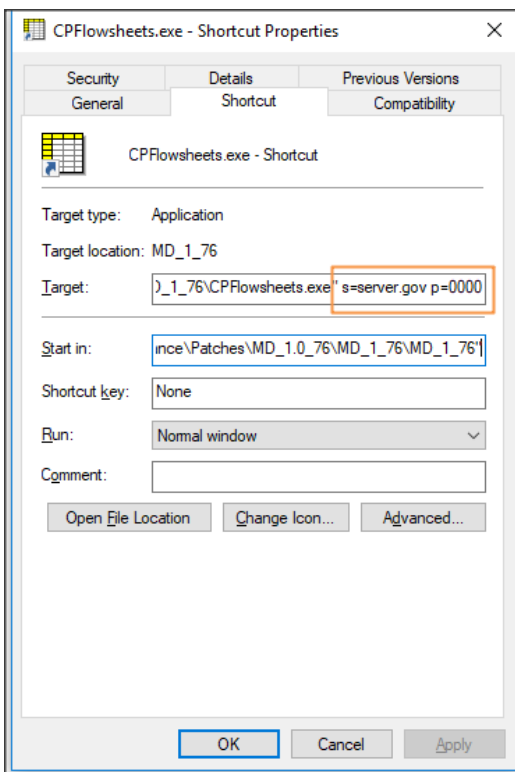
3. Create a Shortcut and name it “CP Flowsheets”. This can be done by using Windows Explorer to navigate to the file location of CP Flowsheets.exe, right Clicking on the file and choosing [Send to] > [Desktop (Create Shortcut)]

Figure 1: How to Create Shortcut



4. Determine the DNS server name or IP address for the appropriate Vista server.
5. Determine the Broker RPC port for the Vista account.
6. Right click on the newly created Shortcut and select Properties. Enter “s=” IP (or DNS name) and “p=” RPC port in the Target field (or use ServerList.exe).

Figure 2: CP Flowsheets Shortcut Properties



Note: The server and port number shown above are for example only.

4.9.Installation Verification Procedure

[VISTA] After installing the VistA side patch, attempt the GUI verification. If the VistA side installed properly there will be no version error upon trying to open the application.

[GUI] Launch the CP Flowsheets GUI and verify the splash screen announces running version 1.0.76.2

4.10. System Configuration

N/A

4.11. Database Tuning

N/A

5. Back-Out Procedure

5.1.Back-Out Strategy

[VistA] This patch has one pre-install routine MDPOST76 which should have been deleted after install, and one routine MDTERM that needs to be restored to its previous version using the backup PackMan message created during the install. To back out the change made by MDPOST76 requires manually reverting the version check parameter to the previous GUI version “1.0.63.2”.

[GUI] To revert to the CP Flowsheets GUI, the 1.0.63.2 GUI would have to be redistributed.

5.2.Back-Out Considerations

5.2.1.Load Testing

No load testing was performed on CP Flowsheets v1.0.76.2. This was a maintenance release to correct defects discovered in CP Flowsheets v1.0.63.2. There is no additional functionality included.

5.2.2.User Acceptance Testing

User acceptance testing was conducted by the test sites listed in section 3.2.2.

The sites followed the provided test plan and executed the test cases according to the plan for the first build of MD*1*76. The sites either passed or failed any item based on testing. The tests were performed by users at each site who are familiar with using the application. Any issues were reported back to the development team and were re-developed and then sent back to the sites for the next build and further acceptance testing following the same process. Once in production, the same final test cases from the last build were tested in production. No subsequent builds were created as the test cases passed and sites signed off on concurrence for release of the product.

5.3.Back-Out Criteria

Back-out would only be considered if there was a catastrophic failure that causes loss of function for the application and/or a significant patient safety issue.

5.4.Back-Out Risks

Backing out CP Flowsheets v1.0.76.2 would result in the re-instatement of the issues addressed in CP Flowsheets v1.0.76.2.

The back-out process, would significantly impact patient care due to the interruption. Therefore, the back-out process should only be performed in an emergency situation.

5.5.Authority for Back-Out

The Area Manager has the final authority to require the rollback and accept the associated risks.

5.6.Back-Out Procedure

These steps assume that the only reason to consider a back-out for CP Flowsheets v1.0.76.2 is in the event of a catastrophic failure.

Contact the HPS Clinical Sustainment implementation team to notify them there has been a catastrophic failure with CP Flowsheets v1.0.76.2. Use the following contacts:

Table 3: HPS CLIN Contacts

Name	Title	Email	Telephone
REDACTED	Project Manager	REDACTED	REDACTED

If the decision is made to proceed with back-out and rollback, the HPS Clinical Sustainment team be available to assist sites.

1. [VistA] In section 4.8.1 (step 2B), the individual installing the patch used option [Backup a Transport Global] to create a PackMan message that will revert the MDTERM routine to its previous state. If for any reason that PackMan Message cannot be located, contact HPS Sustainment: Clinical Contacts (see section 5.6).
2. Navigate in VistA to the XPAR EDIT PARAMETER option .
3. At the Select PARAMETER DEFINITION NAME: prompt, enter MD PARAMETERS.
4. At the Select Enter selection: prompt, enter SYSTEM.
5. At the Select Parameter Name: prompt, enter VERSION_CPFLOWSHEETS.
6. At the Parameter Name: prompt, hit the enter key to accept the default.
7. At the Parameter Value: prompt, enter 1.0.63.2.
8. [GUI] Coordinate with the appropriate IT support, local and regional, to schedule the time to push out and install the previous GUI executable.
9. Once CP Flowsheets v1.0.63.2 GUI has been installed, verify operations before making available to all staff.

5.7.Back-out Verification Procedure

1. Ensure the v1.0.63.2 executable launches properly.
2. Perform site-specific testing appropriate to the areas where the catastrophic failure was identified.

6. Rollback Procedure

6.1. Rollback Considerations

N/A

6.2. Rollback Criteria

N/A

6.3. Rollback Risks

N/A

6.4. Authority for Rollback

The Facility CIO has the final authority to require the rollback and accept the associated risks.

6.5. Rollback Procedure

Back-out will automatically rollback version.

6.6. Rollback Verification Procedure

N/A