

# **Clinical Procedures (CP) Hemodialysis (MD\*1.0\*70)**

## **Deployment, Installation, Back-Out, and Rollback Guide (DIBORG)**



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## Revision History

Date	Version	Description	Author
August 2019	1.1	Technical Writer Review: <ul style="list-style-type: none"><li>• Added names to acronyms</li><li>• Updated styles for consistency</li><li>• Updated for spelling and grammar</li><li>• Updated Title page, TOC, and Footers</li><li>• Updated <u>Figure 1</u> and <u>Figure 2</u></li><li>• Updated Project Manager contact information in <u>Table 3</u> from Megan Lucas to Celeste Schwechel</li></ul>	Joshua Smith
June 2019	1.0	Initial Release	David Michael & Bill Sherman

## Artifact Rationale

This document describes the Deployment, Installation, Back-out, and Rollback Guide for new products going into the VA Enterprise. The plan includes information about system support, issue tracking, and escalation processes, along with the roles and responsibilities involved in all these activities. Its purpose is to provide clients, stakeholders, and support personnel with a smooth transition to the new product or software. The guide should be structured appropriately to reflect the specifics 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 Guide is required to be completed prior to Critical Decision Point #2 (CD #2). The expectation is that it will be updated throughout the lifecycle of the project for each build, as needed.

## Table of Contents

<b>1. Introduction .....</b>	<b>1</b>
1.1. Purpose.....	1
1.2. Dependencies.....	1
1.3. Constraints .....	1
<b>2. Roles and Responsibilities .....</b>	<b>1</b>
<b>3. Deployment.....</b>	<b>2</b>
3.1. Timeline.....	3
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 .....	4
3.3.4.1. Deployment/Installation/Back-Out Checklist .....	4
<b>4. Installation .....</b>	<b>4</b>
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.....	5
4.5. Installation Scripts .....	5
4.6. Cron Scripts.....	5
4.7. Access Requirements and Skills Needed for the Installation .....	5
4.8. Installation Procedure.....	5
4.8.1. MD*1.0*70 VistA Installation .....	5
4.8.2. CP Hemodialysis v1.0.70.1 GUI Installation.....	6
4.8.2.1. CP Hemodialysis GUI Methods of Installation.....	6
4.9. Installation Verification Procedure .....	8
4.10. System Configuration .....	8
4.11. Database Tuning .....	8
<b>5. Back-Out Procedure .....</b>	<b>9</b>
5.1. Back-Out Strategy.....	9
5.2. Back-Out Considerations .....	9
5.2.1. Load Testing .....	9
5.2.2. User Acceptance Testing .....	9

5.3.	Back-Out Criteria.....	9
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.....	10
6.	Rollback Procedure .....	10
6.1.	Rollback Considerations .....	10
6.2.	Rollback Criteria.....	10
6.3.	Rollback Risks.....	11
6.4.	Authority for Rollback.....	11
6.5.	Rollback Procedure .....	11
6.6.	Rollback Verification Procedure .....	11

# 1. Introduction

This document describes how to deploy and install CP Hemodialysis v1.0.70.1, as well as how to back-out the product and rollback to a previous version. This document is a companion to the project charter and management plan for this effort. In cases where a non-developed commercial-off-the-shelf (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 guide is to provide a single common document that describes how, when, where, and to whom CP Hemodialysis v1.0.70.1 will be deployed and installed or backed out and rolled back, if necessary. The plan also identifies resources, communications plans, and rollout schedule. Specific instructions for installation, back-out, and rollback are included in this document.

## 1.2. Dependencies

CP Hemodialysis v1.0.70.1 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 Hemodialysis v1.0.70.1 and the associated MUMPS patch are expected to be installed on existing Vista platforms. The hardware may reside at local or regional data centers. CP Hemodialysis v1.0.70.1 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 Hemodialysis v1.0.70.1. Rather, the Release Agent and Release Coordinators under the VIP will meet and approve deployment and install from an OI&T perspective. If an issue with the software arises, then the facility Chief Information Officer (CIO), Region, 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. The following table provides CP Hemodialysis v1.0.70.1 project information.

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

Team	Phase / Role	Tasks
Site personnel in conjunction with Information Technology (IT) support – which may be local or regional.	Deployment	Plan and schedule deployment (including orchestration with vendors)
Site personnel in conjunction with IT support – which may be local or regional.	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.

Team	Phase / Role	Tasks
Site personnel.	Deployment	Test for operational readiness
Site personnel in conjunction with IT support – which may be local or regional. The IT support will need to include person(s) to install the Kernel Installation & Distribution System (KIDS) build as well as the personnel to deploy the Graphical User Interface (GUI) – which may be done on each machine, a shared network and/or the Citrix Access Gateway (CAG)	Deployment	Execute deployment
Site personnel in conjunction with IT support – which may be local or regional. 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 CAG	Installation	Plan and schedule installation
N/A – will work under the VistA Authority to Operate (ATO) and security protocols.	Installation	Ensure ATO and that certificate authority security documentation is in place
N/A – no equipment is being added.	Installation	Validate through facility Point of Contact (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 and IT support – which may be local or regional.	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 Health Product Support (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\*1.0\*70 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**

This section discusses the locations that will receive CP Hemodialysis v1.0.70.1 deployment.

#### **3.2.1. Deployment Topology (Targeted Architecture)**

CP Hemodialysis v1.0.70.1 will be deployed to each VistA instance. That will include local sites as well as regional data processing centers. The executables will also be deployed to the CAG.

#### **3.2.2. Site Information (Locations, Deployment Recipients)**

The initial deployment will be to Initial Operational Capability (IOC) sites for verification of functionality. Once IOC testing is completed and approval is given for national release, CP Hemodialysis v1.0.70.1 (MD\*1.0\*70) will be deployed to all VistA systems.

**The Production IOC testing sites are:**

- Louis Stokes Cleveland VA Medical Center, OH
- Edward Hines Jr. VA Hospital, IL

#### **3.2.3. Site Preparation**

There is no special preparation required for CP Hemodialysis v1.0.70.1. 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**

N/A

### **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 Hemodialysis v1.0.70.1, advising them of the upcoming release.

CP Hemodialysis v1.0.70.1 will be deployed using the standard method of patch release from the National Patch Module rather than a phased deployment. When patch MD\*1.0\*70 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 Hemodialysis v1.0.70.1 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 Hemodialysis v1.0.70.1 is being released as a PackMan Message distributed through Forum combined with a .ZIP file containing the GUI file(s).

The preferred method is to retrieve files from [download.vista.med.va.gov](http://download.vista.med.va.gov).

This transmits the files from the first available server. Sites may also elect to retrieve files directly from a specific server.

Sites may retrieve the software and/or documentation directly using Secure File Transfer Protocol (SFTP) from the ANONYMOUS.SOFTWARE directory at the following OI Field Offices:

Hines:	<a href="http://fo-hines.med.va.gov">fo-hines.med.va.gov</a>
Salt Lake City:	<a href="http://fo-slc.med.va.gov">fo-slc.med.va.gov</a>

Documentation can also be found on the VA Software Documentation Library at:

<http://www.va.gov/vdl/>



**Table 2: Files to be Downloaded (CP Hemodialysis v1.0.70.1)**

File Name	File Contents	Download Format
MD_1_70.ZIP	CP Hemodialysis executable and help	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 Hemodialysis v1.0.70.1 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\*1.0\*70 VistA Installation**

1. Choose the PackMan message containing this patch and invoke the INSTALL/CHECK MESSAGE PackMan option.
2. Select Kernel Installation & Distribution System Option: Installation
  - 1 Load a Distribution
  - 2 Verify Checksums in Transport Global
  - 3 Print Transport Global
  - 4 Compare Transport Global to Current System
  - 5 Backup a Transport Global
  - 6 Install Package(s)  
Restart Install of Package(s)  
Unload a Distribution
3. From this menu, the [Backup a Transport Global] option must be used to create a back out Patch.

4. From this menu, use one of the following options:
  - Compare Transport Global to Current System
  - Verify Checksums in Transport Global
5. Use the Install Package(s) options and select the package MD\*1.0\*70.
6. When prompted, **Want KIDS to INHIBIT LOGONs during the install? NO//**, respond NO.
7. When prompted, **Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//**, respond NO.

## **4.8.2. CP Hemodialysis v1.0.70.1 GUI Installation**

The ZIP file contains the CP Hemodialysis v1.0.70.1 GUI executable. Download the ZIP file and extract all the files.

### **4.8.2.1. CP Hemodialysis GUI Methods of Installation**

The following methods of installing CP Hemodialysis are available. Sites' choice of which method(s) to use will depend upon Regional/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 use of more than one option below.

- **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 (Hemodialysis.exe) across the LAN.

The GUI executable and related files for each application are copied to a network shared location. Users are provided with a desktop shortcut to run the executable 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 Hemodialysis version update, the copy of the files in the folders are replaced, on the network share, with the new versions from the zip file.

Any users requiring access to another site's CP Hemodialysis 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 Hemodialysis (e.g. for testing purposes) a different version of CP Hemodialysis executable files 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 (Hemodialysis.exe) and help file (Hemodialysis.hlp) are installed and run 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).

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

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.

- **Local workstation installation:**

This is the “standard” method of installation where the GUI executable (Hemodialysis.exe) and help file (Hemodialysis.hlp) are installed on and run from the user's local workstation.

Download the MD\_1\_70.zip file and extract all the files.

Hemodialysis.exe and the Hemodialysis.chm (help) file will need to be installed in the same directory on workstations.

**Note:** There is a national SCCM package to help sites or Information Technology Operations (ITOPS) distribute the Hemodialysis GUI.

- **Manual install:**

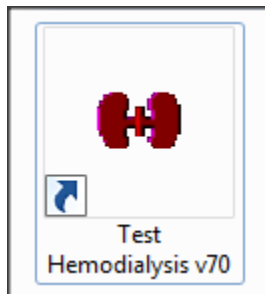
This method is used primarily for advanced users and at testing locations. This method has somewhat changed from what has been used previously for Windows XP workstations.

1. Locate the MD\_1\_70.ZIP and unzip the file.
2. Copy the Hemodialysis.exe to a test directory, for example, C:\CPHemodialysisTest. You may need to create this new directory.

**Note:** You may need to have a user with Administrator rights complete this step.

3. Create a Shortcut and name it **Test CPHemodialysis v70**. This is to give the user another visual cue that this is not the normal CP Hemodialysis icon.

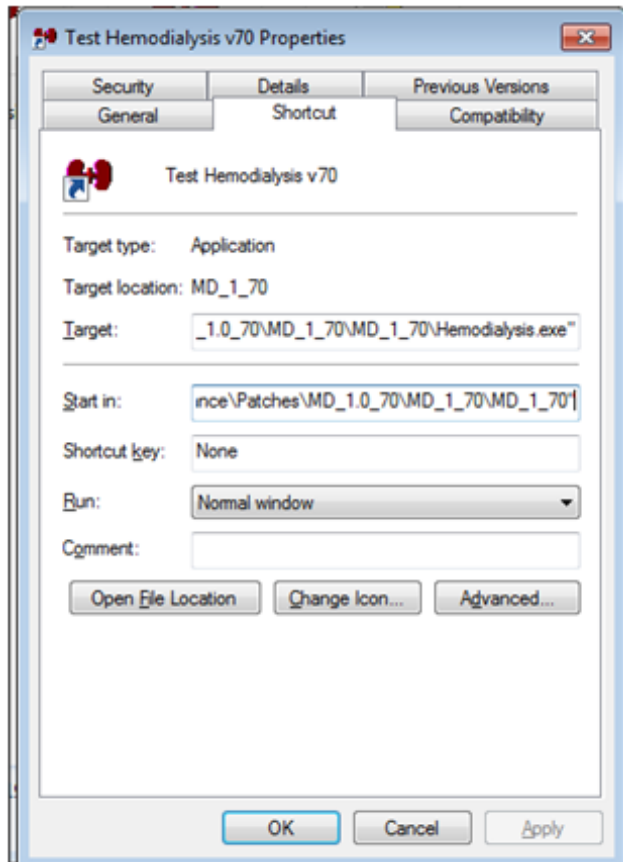
**Figure 1: Test CPHemodialysis v70 Shortcut Icon**



4. Copy the Hemodialysis.chm file into the same directory as Hemodialysis.exe (for example, c:\ CPHemodialysisTest).

5. Determine the Domain Name Server (DNS) server name or Internet Protocol (IP) address for the appropriate VistA server.
6. Determine the Broker RPC port for the VistA account.
7. Enter IP (or DNS name) and RPC port in the **Target** field of the Shortcut properties (or use ServerList.exe).

**Figure 2: Test CPHemodialysis v70 Properties**



The server and port number shown above are not real and are for example only.

## 4.9. Installation Verification Procedure

[VISTA] Verify the checksum of routine MDPOST70 is equal to the checksum listed on the patch description.

[GUI] Launch the CP Hemodialysis GUIs and verify the splash screens now announce that version 1.0.70.1 is running.

## 4.10. System Configuration

N/A

## 4.11. Database Tuning

N/A

## **5. Back-Out Procedure**

### **5.1. Back-Out Strategy**

[VistA] In section 4.8.1 (step 3), the individual installing the patch used option [Backup a Transport Global] to create a packman message that will revert the CP Hemodialysis components to their pre-v1.0.70.1 state. This includes everything transported in the MD\*1.0\*70 (CP Hemodialysis v1.0.70.1) build. If for any reason that PackMan Message cannot be located, contact HPS Sustainment: Clinical (see section 5.6).

[GUI] Redistribute the previous GUIs to revert the CP Hemodialysis GUIs.

### **5.2. Back-Out Considerations**

#### **5.2.1. Load Testing**

No load testing was performed on CP Hemodialysis v1.0.70.1. This was a maintenance release to correct defects discovered in CP Hemodialysis v1.0.66.2, no additional functionality was included.

#### **5.2.2. User Acceptance Testing**

User acceptance testing was conducted by the three 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\*1.0\*70. The sites either passed or failed any item based on testing. The tests were performed by Clinical Application Coordinators at each site who are familiar using the application. The test cases were then delivered with concurrence by the sites to the HPS Clinical Sustainment team. Any items that failed 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 a significant patient safety issue.

### **5.4. Back-Out Risks**

Backing out CP Hemodialysis v1.0.70.1 would result in the re-instatement of the issues addressed in CP Hemodialysis v1.0.70.1.

In addition, there is a risk that the process, which would be performed only in an emergent situation, would significantly impact patient care due to the interruption.

### **5.5. Authority for Back-Out**

The Facility CIO 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 Hemodialysis v1.0.70.1 is in the event of a catastrophic failure.

**Note:** The VistA changes and GUI changes are independent of each other. In the case of a catastrophic failure of the GUI, the VistA patch can remain in the system; consequently, if the catastrophic failure is in the VistA side, the site can back out the VistA patch and continue to use the updated GUI.

1. Contact the HPS Clinical Sustainment implementation team to notify them there has been a catastrophic failure with CP Hemodialysis v1.0.70.1. Use the following contacts:

**Table 3: HPS Clinical Sustainment Contacts**

Name	Title	Email	Telephone Number
Celeste Schwechel	Project Manager	<a href="mailto:Celeste.Schwechel@va.gov">Celeste.Schwechel@va.gov</a>	321-626-7395
Mark Augustiniak	Developer	<a href="mailto:mark.augustiniak@va.gov">mark.augustiniak@va.gov</a>	586-202-4222

2. If you need to proceed with the back out and rollback, the HPS Sustainment Clinical team is available to assist with sites that have misplaced their backup PackMan message. They will also give you the instructions on downloading the executable.
3. [VistA] (if needed)
  - a. Open the Backup MailMan Message.
  - b. At the **Enter message action (in IN basket): Ignore//** prompt Enter **X** for [Xtract PackMan].
  - c. At the **Select PackMan function:** prompt select [INSTALL/CHECK MESSAGE]. The old routine is now restored.

[GUI] (If needed) Coordinate with the appropriate IT support, local and regional, to schedule the time to install MD\*1\*66, and to push out / install the previous GUI executable (v1.0.66.2).
4. Once MD\*1\*66, and CP Hemodialysis v1.0.66.2, have been installed, verify operations before making available to all staff.

## 5.7. Back-out Verification Procedure

1. Ensure the CP Hemodialysis v1.0.66.2 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 the version.

### **6.6. Rollback Verification Procedure**

N/A