Collaborative Terminology Tooling & Data Management (CTT&DM)

Native Domain Standardization (NDS)

Plan of Care (HDI*1.0*22)
Deployment, Installation, Back-Out, and Rollback Guide

Version 1.0

August 2018

Department of Veterans Affairs

Office of Information and Technology (OI&T)

Revision History

Date	Version	Description	Author
08/2018	1.0	Delivery to VA	ManTech Mission Solutions and Services Group
04/2018	0.2	Application Coordinator Review	
03/2018	0.2	Peer Review	ManTech Mission Solutions and Services Group
03/2018	0.1	Initial draft	DG, ManTech Mission Solutions and Services Group

Table of Contents

Table of Figures

Table of Tables

1 Introduction

This document describes how to deploy and install Plan of Care Native Domain Standardization patch (NDS) HDI*1.0*22, 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 Plan of Care patch was developed in the Health Data & Informatics (HDI) namespace.

1.1 Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the Plan of Care (NDS) patch HDI*1.0*22 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 Plan of Care Native Domain Standardization patch HDI*1.0*22 does not have any direct application dependencies.

1.3 Constraints

Plan of Care (NDS) patch HDI*1.0*22 does not possesses any constraints.

2 Roles and Responsibilities

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

Team	Phase / Role	Tasks
OIT Regional Support	Deployment	Plan and schedule deployment (including orchestration with vendors)
CTT&DM NDS Project Team	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.
OIT Regional Support	Deployment	Test for operational readiness
OIT Regional Support	Deployment	Execute deployment
OIT Regional Support	Installation	Plan and schedule installation
CTT&DM NDS Project Team	Installations	Coordinate training
OIT Regional Support	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)

Team	Phase / Role	Tasks
CTT&DM NDS Project Team	Post Deployment – Warranty Period	Hardware, Software and System Support
OIT Regional Support	Post Deployment – Post Warranty	Hardware, Software and System Support

3 Deployment

The deployment is planned as a concurrent online rollout. During IOC testing and after national release, patch HDI*1.0*22 will be distributed via the FORUM Patch Module, and may be deployed at any site without regard to deployment status at other sites.

3.1 Timeline

The deployment and installation is scheduled to run for a period of thirty days, as depicted in the master deployment schedule.

3.2 Site Readiness Assessment

This section discusses the locations that will receive the CTT&DM NDS patch HDI*1.0*22 deployment.

The HDI*1.0*22 patch must be manually installed, or manually queued for installation, at each VistA instance at which it is deployed, using the standard Kernel Installation Distribution System (KIDS) software. The HDI*1.0*22 patch should be installed at all VA VistA instances running the VistA Health Data & Informatics v1.0 application, and will update the MUMPS (Massachusetts General Hospital Utility Multi-Programming System) server software in each VistA instance's Health Data & Informatics namespace.

3.2.1 Deployment Topology (Targeted Architecture)

The deployment topology for the CTT&DM NDS patch HDI*1.0*22, during IOC testing and after national release is described below.

Members of the Information Technology Operations and Services (ITOPS) Office of Information and Technology (OI&T) get the nationally released VistA patch from the VistA National Patch Module and install the patch in the VA facilities that are their responsibility.

3.2.2 Site Information (Locations, Deployment Recipients)

During IOC testing, CTT&DM NDS patch HDI*1.0*22 will be deployed at the following sites:

- REDACTED
- REDACTED

After national release, CTT&DM NDS patch HDI*1.0*22 will be deployed at all sites running the VistA Health Data & Informatics v.1.0 application.

3.2.3　Site Preparation

No special preparation is required by the site prior to deployment.

3.3　Resources

Deployment of CTT&DM NDS patch HDI*1.0*22 requires a fully patched VistA environment running the Health Data & Informatics v.1.0 application, as well as a Health Product Support (HPS) team member available to perform the patch installation.

3.3.1　Facility Specifics

There are no facility-specific deployment or installation features of CTT&DM NDS patch HDI*1.0*22.

3.3.2　Hardware

CTT&DM NDS patch HDI*1.0*22 requires no site hardware specifications during, or prior to, deployment.

3.3.3　Software

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

Table 2: Software Specifications

Required Software	Make	Version	Configuration	Manufacturer	Other
VistA Health Data & Informatics (HDI) patch HDI*1.0*22		1.0	Standard	VHA	

Please see the Roles and Responsibilities table in <u>Section 2</u> for details about who is responsible for preparing the site to meet these software specifications.

3.3.4　Communications

No notifications are required for deployment of CTT&DM NDS patch HDI*1.0*22.

3.3.4.1 Deployment/Installation/Back-Out Checklist

The Release Management team will deploy the patch HDI*1.0*22, which is tracked in the National Patch Module (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 and by whom 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 systems. Therefore, this information does not need to be manually tracked in the chart below.

Table 3: 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

4.1.1 Pre/Post Installation Overview

It is recommended that a Local Patch Backup is created that can be re-installed in the event that patch HDI*1.0*22 must be backed out. The approximate time to create the saved local patch is 30 minutes.

4.1.2 Patch Dependencies

There are not any patch dependencies associated with this patch (HDI*1.0*22).

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.

4.2 Pre-Installation Instructions

Patch HDI*1.0*22 does not require any platform installation or preparation.

4.2.1 Creating a Local Patch Backup

This patch may be installed with users on the system although it is recommended that it be installed during non-peak hours to minimize potential disruption to users. This patch should take less than five minutes to install.

This patch does not update, modify, or create any VistA Data Definitions. This patch does not modify any existing VistA routines or options. As such a local patch backup does not need to be created.

Backing out the patch's new software components must be done by installing 'back-out' KIDS build HDI*1.0*0022, created specifically to back-out all the software components installed by HDI*1.0*22, or alternatively by manually deleting the new software components.

4.3 Platform Installation and Preparation

Patch HDI*1.0*22 does not require any platform installation or preparation.

4.4 Download and Extract Files

CTT&DM NDS Patch HDI*1.0*22 is being released as a FORUM Patch via the Patch Module.

Documentation describing the new functionality introduced by this patch is available. The preferred method is to retrieve files from 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: REDACTED
Salt Lake City: REDACTED

The documentation can also be found on the VA Software Documentation Library (VDL) at: http://www.va.gov/vdl/

Title: HDI SDO Retrieval User Manual

File Name: hdi_1_sdo_um.docx

               hdi_1_sdo_um.pdf

FTP Mode: Binary

Title: Deployment, Installation, Back-Out, Rollback Guide HDI*1.0*22

File Name: hdi_1_22_ig.docx

               hdi_1_22_ig.pdf

FTP Mode: Binary

4.5 Database Creation

No new database is required for the CTT&DM NDS patch HDI*1.0*22.

4.6 Installation Scripts

No installation scripts are required for installation of CTT&DM NDS patch HDI*1.0*22.

4.7 Cron Scripts

No CRON scripts are required for installation of CTT&DM NDS patch HDI*1.0*22.

4.8 Access Requirements and Skills Needed for the Installation

Access to national VA network, as well as the local network of each site to receive CTT&DM NDS patch HDI*1.0*22 is required to perform the installation, as well as authority to create and 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.](#)

4.9 Installation Procedure

4.9.1   Installation Instructions:

1) Choose the PackMan message containing this patch.
2) Choose the INSTALL/CHECK MESSAGE PackMan option.
3) From Kernel Installation and Distribution System Menu, select the Installation Menu.
4) From this menu, you may elect to use the following options. When prompted for the INSTALL NAME, enter the patch HDI*1.0*22:
   a. Backup a Transport Global - This option will create a backup message of any routines exported with this patch. It will not backup other changes such as DDs or templates.
   b. 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 components of these patch routines, DDs, templates, etc.
   c. Verify Checksums in Transport Global - This option will allow you to ensure the integrity of the routines that are in the transport global.
5) Select Backup a Transport Global.
   a. When prompted for the INSTALL NAME, enter HDI*1.0*22.
   b. Accept the default Subject, and send the patch backup to yourself and copy other personnel with programmer access that might be responsible for installing the patch at the facility.
   c. After entering all recipients, press ENTER at the final "And Send to:" prompt to return to the Installation Menu.
6) After returning to the Installation Menu, select Install Package(s). When prompted for the INSTALL NAME, enter the patch HDI*1.0*22:
7) From the Installation Menu, select the Install Package(s) option and choose the patch to install.
8) When prompted: 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//', respond NO.
9) When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', respond NO.
10) When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//', respond NO.
11) If prompted 'Delay Install (Minutes): (0 - 60): 0//' respond 0.

4.10 Installation Verification Procedure

Installation of routines in CTT&DM NDS patch HDI*1.0*22 may be verified by running the Kernel checksum tool from the VistA server command line after installation:

```
D CHECK1^XTSUMBLD
```

The checksums produced by the checksum tool should match the numeric portion of the "After:" checksums in the CTT&DM NDS patch HDI*1.0*22 patch description.

Figure 1: Example, Checksum for routines as displayed by Kernel checksum tool CHECK1^XTSUMBLD

```
HDIPSZRT  value = 30347676

HDISDOC   value = 83861623

HDISDOCL  value = 114683234

HDISDOL   value = 81231137

HDISDOLL  value = 185025754

HDISDSR   value = 8012840

HDISDSR1  value = 13794495

HDISDSRL  value = 173574871

The "After:" checksum for routines as displayed in the patch description:

Routine Name: HDIPSZRT

    Before: B30301671  After: B30347676  **21,22**

Routine Name: HDISDOC

    Before:      n/a  After: B83861623  **22**

Routine Name: HDISDOCL

    Before:      n/a  After:B114683234  **22**

Routine Name: HDISDOL

    Before:      n/a  After: B81231137  **22**

Routine Name: HDISDOLL

    Before:      n/a  After:B185025754  **22**

Routine Name: HDISDSR

    Before:      n/a  After:  B8012840  **22**

Routine Name: HDISDSR1

    Before:      n/a  After: B13794495  **22**

Routine Name: HDISDSRL

    Before:      n/a  After:B173574871  **22**
```

4.11 System Configuration

No System Configuration is required before or after deployment of CTT&DM NDS patch HDI*1.0*22.

4.12 Database Tuning

No Database Tuning is required before or after deployment of CTT&DM NDS patch HDI*1.0*22.

<div style="border:2px solid black; background-color:#FBD9B8; text-align:center; padding:40px; font-weight:bold;">

THIS CONCLUDES THE INSTALLATION PROCESS

</div>

5 Back-Out Procedure

5.1 Back-Out Strategy

The Back-out Strategy is to remove the routines and options that were installed with this patch HDI*1.0*22.

5.2 Back-Out Considerations

The back-out should only be done in the event that the local facility management determines that the patch HDI*1.0*22 is not appropriate for that facility, and should only be done as a last resort.

5.2.1 Load Testing

No load testing is required for patch HDI*1.0*22.

5.2.2 User Acceptance Testing

N/A

5.3 Back-Out Criteria

Local Facility Management would need to determine patch HDI*1.0*22 is not appropriate for their facility.

5.4 Back-Out Risks

There have no back out risks identified for this patch HDI*1.0*22.

5.5 Authority for Back-Out

The Local Facility Management has the authority to back-out patch HDI*1.0*22.

5.6 Back-Out Procedure

In the event that a site decides to back-out this patch, the site should contact the National Service Desk (NSD) to submit a CA SDM ticket; the development team will assist with the process.

Perform the preferred back-out procedure by installing KIDS build HDI*1.0*0022, or the alternate method of manually deleting the following components:

5.6.1 Preferred Back-Out Method:

1. Load KIDS build HDI*1.0*0022:

   a. Find and select Mailman message containing HDI*1.0*0022.

   b. Extract and Load PackMan Message from the 'Enter message action' prompt:

Figure 2: Example, extract and load PackMan message HDI*1.0*0022

```
Enter message action (in IN basket): Ignore// Xtract KIDS

Select PackMan function: 6  INSTALL/CHECK MESSAGE

Line 6    Message #464606    Unloading KIDS Distribution   HDI*1.0*0022

Want to Continue with Load? YES// YES

Loading Distribution...

   HDI*1.0*0022
```

2. From the Install Package(s) option in the Installation menu in the Kernel Installation and Distribution System [XPD MAIN] menu, install HDI*1.0*0022.

Figure 3: Example, installation HDI*1.0*0022 KIDS build

```
Select Kernel Installation & Distribution System <TEST ACCOUNT> Option:
INSTallation

Select Installation <TEST ACCOUNT> Option: INSTall Package(s)

Select INSTALL NAME: HDI*1.0*0022      3/3/18@08:25:09

    => HDI*1.0*22 Backout of patch HDI*1.0*22

This Distribution was loaded on Mar 03, 2018@08:25:09 with header of

   HDI*1.0*22 Backout of patch HDI*1.0*22

   It consisted of the following Install(s):

   HDI*1.0*0022

Checking Install for Package HDI*1.0*0022

Install Questions for HDI*1.0*0022
```

```
Want KIDS to INHIBIT LOGONs during the install? NO//

Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//

DEVICE: HOME// HOME    SSH VIRTUAL TERMINAL

                               HDI*1.0*0022

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

 Installing Routines:

            Mar 03, 2018@08:54:29

Running Post-Install Routine: EN^HDI22BO

Deleting routine ^HDISDOC

Deleting routine ^HDISDOCL

Deleting routine ^HDISDOL

Deleting routine ^HDISDOLL

Deleting routine ^HDISDSR

Deleting routine ^HDISDSR1

Deleting routine ^HDISDSRL


 Updating Routine file...


 Updating KIDS files...


 HDI*1.0*0022 Installed.

            Mar 03, 2018@08:54:29
┌──────────────────────────────────────────────────────────────────┐
│                    25              50              75               │
└──────────────────────────────────────────────────────────────────┘
Complete

Install Completed
```

5.6.2   Alternate (Manual) Back-Out Method:

<u>The following involves manual deletion of Options and routines, and will need to be executed from the programmers prompt. This procedure must be performed by persons with programmer-level access and in conjunction with the STS Team.</u>

The following will need to be executed from the programmers prompt (User input depicted below in **_bold-italicized_** and <u>underlined </u>font).

Figure 4: Delete new options using FileMan

```
Select OPTION: ENTER OR EDIT FILE ENTRIES
```

```
Input to what File: OPTION// OPTION              (16433 entries)

EDIT WHICH FIELD: ALL//



Select OPTION NAME: HDISDOSERVER     HDI SDO ORDER SERVER

NAME: HDISDOSERVER// @

   SURE YOU WANT TO DELETE THE ENTIRE 'HDISDOSERVER' OPTION? Yes  (Yes)

SINCE THE DELETED ENTRY MAY HAVE BEEN 'POINTED TO'

BY ENTRIES IN THE 'AUDIT' FILE, ETC.,

DO YOU WANT THOSE POINTERS UPDATED (WHICH COULD TAKE QUITE A WHILE)? No//No (No)



Select OPTION NAME: HDISDO API      HDI SDO API

NAME: HDISDO API// @

   SURE YOU WANT TO DELETE THE ENTIRE 'HDISDO API' OPTION? Yes  (Yes)

SINCE THE DELETED ENTRY MAY HAVE BEEN 'POINTED TO'

BY ENTRIES IN THE 'AUDIT' FILE, ETC.,

DO YOU WANT THOSE POINTERS UPDATED (WHICH COULD TAKE QUITE A WHILE)? No//No (No)



Select OPTION NAME: HDISDO REQUEST SDO    HDI REQUEST SDO

NAME: HDISDO REQUEST SDO// @

   SURE YOU WANT TO DELETE THE ENTIRE 'HDISDO REQUEST SDO' OPTION? Yes  (Yes)

SINCE THE DELETED ENTRY MAY HAVE BEEN 'POINTED TO'

BY ENTRIES IN THE 'AUDIT' FILE, ETC.,

DO YOU WANT THOSE POINTERS UPDATED (WHICH COULD TAKE QUITE A WHILE)? No//No (No)

Select OPTION NAME:

Select OPTION:
```

Figure 5: Example, manual deletion of routines using option DELETE ROUTINES [XTRDEL]

```
Select OPTION NAME: ROUTINE MANAGEMENT MENU  XUROUTINES    Routine Management Menu

         Bring in Sent Routines

         Delete Routines
```

```
        First Line Routine Print

        List Routines

        Move Routines across Volume Sets
Select OPTION NAME: DELETE ROUTINES  XTRDEL     Delete Routines

Delete Routines

ROUTINE DELETE

All Routines? No => No

Routine: HDISDOC

Routine: HDISDOCL

Routine: HDISDOL

Routine: HDISDOLL

Routine: HDISDSR

Routine: HDISDSR1

Routine: HDISDSRL

Routine:

7 routine

7 routines to DELETE, OK: NO// Y

HDISDOC

HDISDOCL

HDISDOL

HDISDOLL

HDISDSR

HDISDSR1

HDISDSRL


Done.
```

5.7 Back-out Verification Procedure

5.7.1   Routines

After backing out patch HDI*1.0*22 by installing the local patch from section 4.8, routine back-out may be verified by running the Kernel checksum tool from the VistA server command line after installation:

```
D CHECK1^XTSUMBLD
```

The checksums produced by the checksum tool should match the numeric portion of the "Before:" checksums in the CTT&DM NDS patch HDI*1.0*22 patch description.

For patch HDI*1.0*22, since the routines are new, the "Before:" checksums from the patch description are "n/a". If routine back-out was successful, the checksum tool will display the message "Routine not in this UCI" in place of a checksum.

Figure 6: Patch description "Before" checksums are "n/a"

```
Routine Name: HDIPSZRT

    Before: B30301671   After: B30347676  **21,22**

Routine Name: HDISDOC

    Before:        n/a  After: B83861623  **22**

Routine Name: HDISDOCL

    Before:        n/a  After: B114683234  **22**

Routine Name: HDISDOL

    Before:        n/a  After: B81231137  **22**

Routine Name: HDISDOLL

    Before:        n/a  After: B185025754  **22**

Routine Name: HDISDSR

    Before:        n/a  After:  B8012840  **22**

Routine Name: HDISDSR1

    Before:        n/a  After: B13794495  **22**

Routine Name: HDISDSRL

    Before:        n/a  After: B173574871  **22**
```

Figure 7: After back-out, checksum tool displays "Routine not in this UCI"

```
D CHECK1^XTSUMBLD

New CheckSum CHECK1^XTSUMBLD:

     Select one of the following:

          P         Package

          B         Build

Build from: Build

This will check the routines from a BUILD file.

Select BUILD NAME: HDI*1.0*22       HEALTH DATA & INFORMATICS

HDISDOC   Routine not in this UCI.

HDISDOCL  Routine not in this UCI.

HDISDOL   Routine not in this UCI.

HDISDOLL  Routine not in this UCI.

HDISDSR   Routine not in this UCI.
```

```
HDISDSR1  Routine not in this UCI.

HDISDSRL  Routine not in this UCI.

done
```

6 Rollback Procedure

N/A

6.1 Rollback Considerations

N/A

6.2 Rollback Criteria

N/A

6.3 Rollback Risks

N/A

6.4 Authority for Rollback

N/A

6.5 Rollback Procedure

N/A

6.6 Rollback Verification Procedure

N/A