

# **VistA Lab Enhancements – Microbiology**

**Release: MMRS\*1.0\*4**

## **Deployment, Installation, Back-out, and Rollback Guide**



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## Revision History

| Date       | Document Version | Description         | Author / Team Role |
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| 01/31/2017 | 1.0              | Document baselined. | <b>REDACTED</b>    |

## Artifact Rationale

This document describes the Deployment, Installation, Back-out, and Rollback Plan for new products going into the 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 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.

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# 1. Introduction

The Installation, Back-out, Rollback Guide defines the ordered, technical steps required to install the product, and if necessary, to back-out the installation, and to roll back to the previously installed version of the product. It provides installation instructions for the VistA Lab Enhancements (VLE) Microbiology project, release MMRS\*1.0\*4.

The MMRS\*1.0\*4 release shall support the timely identification of multi-drug resistant organisms (MDROs), provide enhanced reporting capabilities for Carbapenem Resistant Enterobacteriaceae (CRE) and Clostridium Difficile Infection (CDI) positive cases, and streamline the MDRO initiative by updating the existing MRSA Program Tools menu options and naming conventions to MDRO where applicable. The features and functionality provided in the patch will provide technicians, MDRO Prevention Coordinators (MPCs) and Infection Prevention (IP) personnel automated tools thereby increasing efficiency and decreasing the amount of labor hours required previously with manual data mining.

In regards to enhanced reporting capabilities, the MMRS\*1.0\*4 release shall provide the following new reporting capabilities:

- CDI reporting functionality to capture positive cases for the wards of a particular facility.
- CRE reporting functionality to capture positive cases within a facility.

## 1.1 Purpose

The purpose of this guide is to provide a single, common document that describes how, when, where, and to whom the MMRS\*1.0\*4 build 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

Patch MMRS\*1.0\*4 includes the following dependencies:

- MMRS\*1.0\*3
- LR\*5.2\*463

## 1.3 Constraints

Security controls will be inherited from VistA and therefore will be fully compliant with National Institute of Standards and Technology (NIST) controls and in compliance with Directive 6500. In addition, the MMRS\*1.0\*4 release will be 508 compliant and designed to ensure no performance impacts will be experienced in the production environments.

## 1.4 Orientation

This section addresses package or audience specific notations or directions (e.g., symbols used to indicate terminal dialogues or user responses) for the installation and post-installation instructions included in this document.

All headings and text in this guide are intentionally formatted flush left, regardless of the heading level, to save space and to make for better readability.

In tables which list mandatory steps (as for installation and post-installation), a column is provided at the right-hand side so that users may check (✓) off the step as it is performed.

### 1.4.1 Computer Dialogue

The computer dialogue will appear in Courier New 11-point font.

**Example:** Courier New font 11 points

### 1.4.2 Instructions

Instructions will appear in Arial 11-point font.

**Example:** Arial font 11 points

### 1.4.3 User Response

User entry responses will appear in Courier New 11-point font.

**Example:** Courier New font 11 points

In Vista, every response you type must be followed by pressing the < **Return** > key or the < **Enter** > key.

## 2. Roles and Responsibilities

The deployment, installation, back-out, and roll-back roles and responsibilities are outlined in the table below.

**Table 1: Roles and Responsibilities**

| ID | Team                  | Phase / Role | Tasks  |
|----|-----------------------|--------------|--|
| 1  | Field Operations (FO) | Deployment   | Plan and schedule deployment.  |
| 2  | FO                    | Deployment   | Determine and document the roles and responsibilities of those involved in the deployment.     |
| 3  | FO                    | Deployment   | Test for operational readiness.  |
| 4  | FO                    | Deployment   | Execute deployment.  |
| 5  | FO                    | Installation | Plan and schedule installation.  |
| 6  | FO                    | Installation | Ensure authority to operate and that certificate authority security documentation is in place. |

| ID | Team | Phase / Role    | Tasks   |
|----|------|-----------------|---|
| 7  | FO   | Installation    | Validate through facility point of contact to ensure that IT equipment has been accepted using asset inventory processes. |
| 8  | FO   | Installations   | Coordinate training.  |
| 9  | FO   | Back-out        | Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out).      |
| 10 | FO   | Post Deployment | Hardware, Software and System Support.  |

## 3. Deployment

The Microbiology (Micro) Initiative is a collaborative solution between the VistA Laboratory Enhancement (VLE) Team and Clinical Laboratory personnel. This solution provides Micro Laboratory Technologists a system that integrates with the existing VistA Microbiology system.

A National Release is planned for February 2017 after testing has been successfully completed at two Test Sites.

Deployment will be performed by Local Facility staff and supported by team members from one or more of the operations organizations: Enterprise Systems Engineering (ESE), Field Operations (FO), Enterprise Operations (EO), and/or others.

### 3.1 Site Preparation

Each site must prepare for the deployment, installation, and implementation of the Micro capabilities. The extent for which they must prepare will vary based upon the sites current processes.

The following table describes the overall 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   |
|------------|---|---|--|---|
| All        | Determine changes to current processes. | Existing Micro MDRO procedures.         | Evaluate how new processes differ from current processes and adapt training accordingly. | Micro Technologists, Laboratory Information Managers (LIMs), Facility Business Owners |

| Site/Other                           | Problem/Change Needed  | Features to Adapt/Modify to New Product             | Actions/Steps   | Owner   |
|--------------------------------------|--|---|---|---|
| Sites using a VistA Micro currently. | Evaluate configuration changes that will need to be made to adapt to new Micro enhancements. | Existing Order Menus, Order Sets, and Quick Orders. | If using Generic Lab or Consult Order Types, determine if there are ordering menus, sets, and/or quick orders that need to be modified. | Micro Technologists, LIMs, Facility Business Owners |

## 3.2 Software

The following table describes software specifications required at each site prior to deployment for the MMRS\*1.0\*4 release.

**Table 3: Software Specifications**

| Required Software   | Manufacturer    | Other   |
|---|-----------------|---|
| The following prerequisite release is required for the MMRS*1.0*4 patch: <ul style="list-style-type: none"> <li>MMRS*1.0*3</li> <li>LR*5.2*463</li> </ul> | Not applicable. | Local OI&T staff will provide the assistance needed to ensure that the users have the latest patches and upgrades required for the build. |

## 3.3 Communications

Technicians will use email and conference calls for communication during the deployment; email and/or conference calls will be utilized to notify the stakeholders of the successful release of the product.

# 4. Pre-Installation and Installation Preparation Instructions

This section provides pre-installation and installation preparation instructions for the MMRS\*1.0\*4 build.

## 4.1 Installation Timing Recommendation

The MMRS\*1.0\*4 patch may be loaded with users on the system; however, it is highly recommended that the patch is installed during non-peak hours to minimize any potential disruption to the users.



### 4.1.1 Estimated Timing

The installation will take less than 5 minutes.

### 4.1.2 Kernel Patches

Kernel patches must be current on the target system to avoid problems loading and/or installing this patch.

### 4.1.3 Global Growth

There is no significant change to global growth.

## 4.2 Download and Extract Files

The patch will be released as a Mailman message to VA Medical Centers (VAMCs) via FORUM.

Sites may retrieve the documentation directly via Secure File Transfer Protocol (SFTP) from the ANONYMOUS.SOFTWARE directory at the OI&T Field Offices listed below.

**REDACTED**

Documentation will also be distributed via a VLE MMRS MDRO Enhancement.ZIP file, which contains both .pdf and .docx formatted files.

The latest documentation can also be found on the VA Software Documentation Library at: <http://www.va.gov/vdl/>

**Table 4: Files for Retrieval**

| File Name                     | Contents  | Retrieval Format   |
|-------------------------------|---|--|
| MMRS*1.0*4                    | Mailman message with code attached (PackMan).   | Mailman message will be sent to VAMC's via FORUM distribution. |
| VLE MMRS MDRO Enhancement.ZIP | VLE Micro_MMRS_1_0_4_Deployment_Installation_Roll Back_Back Out_Guide<br>VLE Micro_MMRS_1_0_4_Technical_Manual<br>VLE Micro_MMRS_1_0_4_User_Guide | Binary   |

## 4.3 Access Requirements and Skills Needed for the Installation

This guide is written with the assumption that the reader is experienced or familiar with the following:

- VistA computing environment
- VA FileMan data structures and terminology
- Microsoft Windows

Local or Regional OI&T staff will coordinate the patch installation with the LIM at each site. The Local or Regional OI&T staff have the necessary access and skill set to conduct the installation.

## 4.4 Pre-Installation and System Requirements

The MMRS\*1.0\*4 patch installation must be coordinated with the ADPAC to ensure that all Lab Interface related activities are halted.

## 4.5 Installation Procedure

Follow the instructions outlined in the table below to install the software.

**Table 5: M Code Installation Instructions**

| Step # | Description   | ✓ |
|--------|---|---|
| 1      | Select the PackMan message containing the MMRS*1.0*4 patch.                         |   |
| 2      | Select the INSTALL/CHECK MESSAGE PackMan option.                                    |   |
| 3      | Access the KIDS menu (XPD MAIN).  |   |
| 4      | From the KIDS menu, select the Installation menu.                                   |   |
| 5      | From the Installation menu, select option #1: Load a Distribution.                  |   |
| 6      | When prompted, 'INSTALL NAME', respond 'MMRS*1.0*4'                                 |   |
| 7      | When prompted, 'Want to Continue with Load? YES//', respond "Yes".                  |   |
| 8      | From the Installation menu, select option #2, Verify Checksums in Transport Global. |   |
| 9      | When prompted 'Select INSTALL NAME:' respond 'MMRS*1.0*4'                           |   |
| 10     | When prompted 'Want each Routine Listed with Checksums: Yes//' respond "Yes"        |   |

| Step # | Description   | ✓ |
|--------|---|---|
|        | <b>a</b> Verify the following routine information:<br>MMRSCDI Calculated 219284495<br>MMRSCDI1 Calculated 47343212<br>MMRSCDI2 Calculated 162714137<br>MMRSCRE Calculated 90369826<br>MMRSCRE2 Calculated 12793206<br>MMRSCRE3 Calculated 160454267<br>MMRSCRE4 Calculated 34859922<br>MMRSIPCP Calculated 45727414<br>MMRSP4 Calculated 634304 |   |
| 11     | From the Installation menu, select option #3, Print Transport Global  |   |
| 12     | When prompted 'Select INSTALL NAME:' respond 'MMRS*1.0*4'   |   |
| 13     | When prompted 'Select one of the following:' respond "1" for Print Summary.   |   |
| 14     | When prompted 'Want each Routine Listed with Checksums: Yes//' respond "Yes"  |   |
| 15     | From the Installation menu, select option #4, Compare Transport Global to Current System.   |   |
| 16     | When prompted 'Select INSTALL NAME:' respond 'MMRS*1.0*4'   |   |
| 17     | When prompted 'Select one of the following:' respond "2" for Second line of Routines only.  |   |
| 18     | From the Installation menu, select option #5: Backup a Global Transport.  |   |
| 19     | When prompted 'Select INSTALL NAME:' respond 'MMRS*1.0*4'   |   |
| 20     | From the Installation menu, select option #6: Install Package(s) .  |   |
| 21     | When prompted 'Select INSTALL NAME:' respond 'MMRS*1.0*4'   |   |
| 22     | When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', respond "NO".   |   |
| 23     | When prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//', respond "NO".   |   |
| 24     | When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', respond "NO".   |   |
| 25     | When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//', respond "NO".   |   |

| Step # | Description   | ✓ |
|--------|---|---|
| 26     | If prompted 'Delay Install (Minutes): (0 - 60): 0//', respond "NO".<br><br><b>Note:</b> See Appendix A for an example of the installation.                                      |   |
| 27     | After receiving the message "Install Completed", print out the installation for the patch.<br><br><b>Note:</b> See Appendix B for an example of the installation file printout. |   |
| 28     | From the KIDS menu, select the Utilities menu.  |   |
| 29     | From the Utilities menu, select Install File Print.   |   |
| 30     | When prompted 'Select INSTALL NAME:' respond 'MMRS*1.0*4'   |   |
| 31     | Save all printouts.   |   |

## 5. Back-Out Procedure

The build does not make any changes that would affect the operational state of the software and platform settings. The functionality in the MMRS\*1.0\*4 build will not be available until the installation process has been successfully completed.

### 5.1 Back-Out Strategy

During installation, if the option to back up routines was run as directed, 'Backup a Transport Global', then routines have the ability to be restored from the "backup" MailMan message that was generated. However, the KIDS installation process does not perform a restore of other VistA components, such as data dictionary, cross-reference, and template changes, etc.

**REDACTED**

### 5.2 Back-Out Considerations

The LIM and the Chief of Pathology have the authority to order the back-out.

### 5.3 Back-Out Criteria

Criteria for a back-out includes, but are not limited, to the following:

- Failed baseline testing.
- Non-recoverable software error.

### 5.4 Back-Out Risks

No back-out risks have been determined at this time.

## 5.5 Authority for Back-Out

The LIM, the Lab Manager, and the Chief of Pathology have the authority to request and approve the back-out and accept the risks.

## 6. Rollback Procedure

The MMRS\*1.0\*4 build as well as any installed dependent patch changes that follow these releases need to be taken out in reverse of the order in which they were installed; routines and data dictionary modifications and populated data must also be rolled back in reverse order.

**REDACTED**

### 6.1 Rollback Considerations

No rollback considerations have been determined at this time.

### 6.2 Rollback Criteria

The only criteria for a rollback that has been determined at this time is that the installation failed baseline testing.

### 6.3 Rollback Risks

The only risk determined at this time is the possibility of downtime which would only effect the users of the Laboratory package.

### 6.4 Authority for Rollback

The LIM, the Lab Manager, and the Chief of Pathology have the authority to require the rollback and accept the risks.

### 6.5 Rollback Procedure

The need for a rollback is highly unlikely, however if it is required, please contact the Product Support team for assistance. The rollback procedure will require Lab downtime and a reinstall of any previous KIDS versions.

# Appendix A: Example of Captured Installation

The following is an example of a captured installation.

**Figure 1: Captured Installation**

Select INSTALL NAME: MMRS\*1.0\*4 12/28/16@11:58:16  
=> MMRS\*1\*4

This Distribution was loaded on Dec 28, 2016@11:58:16 with header of  
MMRS\*1\*4

It consisted of the following Install(s):

MMRS\*1.0\*4

Checking Install for Package MMRS\*1.0\*4

Install Questions for MMRS\*1.0\*4

Incoming Files:

104 MDRO SITE PARAMETERS (including data)

\*BUT YOU ALREADY HAVE 'MRSA SITE PARAMETERS' AS FILE #104!

Shall I write over your MRSA SITE PARAMETERS File? YES//

104.1 MDRO TOOLS LAB SEARCH/EXTRACT

\*BUT YOU ALREADY HAVE 'MRSA TOOLS LAB SEARCH/EXTRACT' AS FILE #104.1!

Shall I write over your MRSA TOOLS LAB SEARCH/EXTRACT File? YES//

104.3 MDRO WARD MAPPINGS

\*BUT YOU ALREADY HAVE 'MRSA WARD MAPPINGS' AS FILE #104.3!

Shall I write over your MRSA WARD MAPPINGS File? YES//

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

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

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

Enter the Device you want to print the Install messages.

You can queue the install by enter a 'Q' at the device prompt.

Enter a '^' to abort the install.

DEVICE: HOME//

MMRS\*1.0\*4

---

Installing FORM

Installing OPTION

Dec 29, 2016@10:23:59

Running Post-Install Routine: EN^MMRSP4

Updating Routine file...

Updating KIDS files...

MMRS\*1.0\*4 Installed.

Dec 29, 2016@10:23:59

Not a production UCI

NO Install Message sent

---

┌  
100% | 25 50 75 |  
Complete  
└

Install Completed

## Appendix B: Example of Installation File Printout

The following is an example of an installation file printout; the printout should be saved for future reference.

**Figure 2: Installation File Printout**

|   |                                    |         |
|---|------------------------------------|---------|
| PACKAGE: MMRS*1.0*4   | JAN 17, 2017 2:49 PM               | PAGE 1  |
|   | COMPLETED                          | ELAPSED |
| -----   |                                    |         |
| STATUS: <u>INSTALL COMPLETED</u>                                      | DATE LOADED: JAN 17, 2017@14:48:07 |         |
| INSTALLED BY: LASTNAME,FIRSTNAME                                      |                                    |         |
| NATIONAL PACKAGE: MDRO INITIATIVE REPORTS                             |                                    |         |
| INSTALL STARTED: JAN 17, 2017@14:48:41                                | 14:48:43                           | 0:00:02 |
| ROUTINES:   | 14:48:41                           |         |
| FILES:  |                                    |         |
| MDRO SITE PARAMETERS  | 14:48:41                           |         |
| MDRO TOOLS LAB SEARCH/EXTRACT   | 14:48:41                           |         |
| MDRO TYPES  | 14:48:41                           |         |
| MDRO WARD MAPPINGS  | 14:48:41                           |         |
| SECURITY KEY  | 14:48:41                           |         |
| FORM  | 14:48:41                           |         |
| OPTION  | 14:48:43                           | 0:00:02 |
| POST-INIT CHECK POINTS:   |                                    |         |
| XPD POSTINSTALL STARTED   | 14:48:43                           |         |
| XPD POSTINSTALL COMPLETED   | 14:48:43                           |         |
| INSTALL QUESTION PROMPT   |                                    | ANSWER  |
| XPF104#1 SHALL I WRITE OVER YOUR MRSA SITE PARAMETERS FILE            |                                    | YES     |
| XPF104.1#1 SHALL I WRITE OVER YOUR MRSA TOOLS LAB SEARCH/EXTRACT FILE |                                    | YES     |
| XPF104.3#1 SHALL I WRITE OVER YOUR MRSA WARD MAPPINGS FILE            |                                    | YES     |
| XPO1 WANT KIDS TO REBUILD MENU TREES UPON COMPLETION OF INSTALL       |                                    | NO      |
| XPI1 WANT KIDS TO INHIBIT LOGONS DURING THE INSTALL                   |                                    | NO      |
| XPZ1 WANT TO DISABLE SCHEDULED OPTIONS, MENU OPTIONS, AND PROTOCOLS   |                                    | NO      |
| MESSAGES:   |                                    |         |
| INSTALL STARTED FOR MMRS*1.0*4:                                       |                                    |         |
| JAN 17, 2017@14:48:41   |                                    |         |
| BUILD DISTRIBUTION DATE: DEC 20, 2016                                 |                                    |         |
| INSTALLING ROUTINES:  |                                    |         |
| JAN 17, 2017@14:48:41   |                                    |         |
| INSTALLING DATA DICTIONARIES:   |                                    |         |
| JAN 17, 2017@14:48:41   |                                    |         |
| INSTALLING DATA:  |                                    |         |



JAN 17, 2017@14:48:41

INSTALLING PACKAGE COMPONENTS:

INSTALLING SECURITY KEY

INSTALLING FORM

INSTALLING OPTION

JAN 17, 2017@14:48:43

RUNNING POST-INSTALL ROUTINE: EN^MMRSP4

UPDATING ROUTINE FILE...

UPDATING KIDS FILES...

MMRS\*1.0\*4 INSTALLED.

JAN 17, 2017@14:48:43

INSTALL MESSAGE SENT #34533037

\*\*\* END OF INSTALLATION PROCESS \*\*\*