Telehealth Management Platform
Deployment, Installation, Back-Out, and Rollback Guide

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Department of Veterans Affairs

Office of Information and Technology (OI&T)

Revision History

Date	Version	Description	Author
September 22, 2023	9.3	Updated with Release 5.1	Telehealth Management Platform (TMP) Team
December 23, 2022	9.2	Updated with Release 4.9.0.14	Telehealth Management Platform (TMP) Team
November 10, 2022	9.1	Updated with Release 4.9.0.13	Telehealth Management Platform (TMP) 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 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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Introduction

This document describes how to deploy and install the Telehealth Management Platform (TMP) Release, 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 Telehealth Management Platform (TMP) solution, 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

Figures 1, 2, 3, 4 and 5 illustrate the systems interfacing with Telehealth Management Platform (TMP).

Figure 1: Telehealth Management Platform (TMP)/VEIS (LOB & EC) Environment Mapping

Figure 2: Telehealth Management Platform (TMP)/VEIS/MVI Environment Mapping

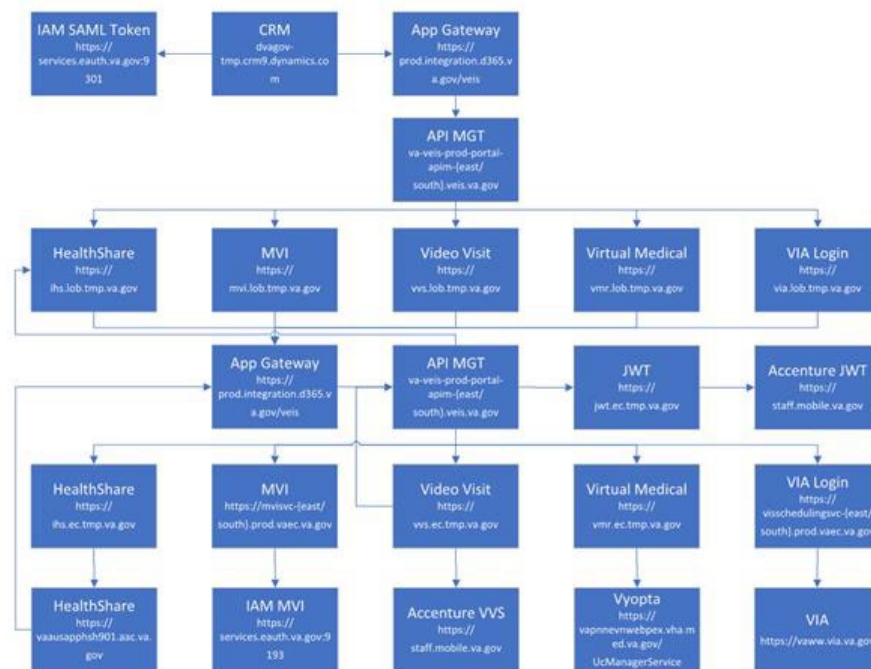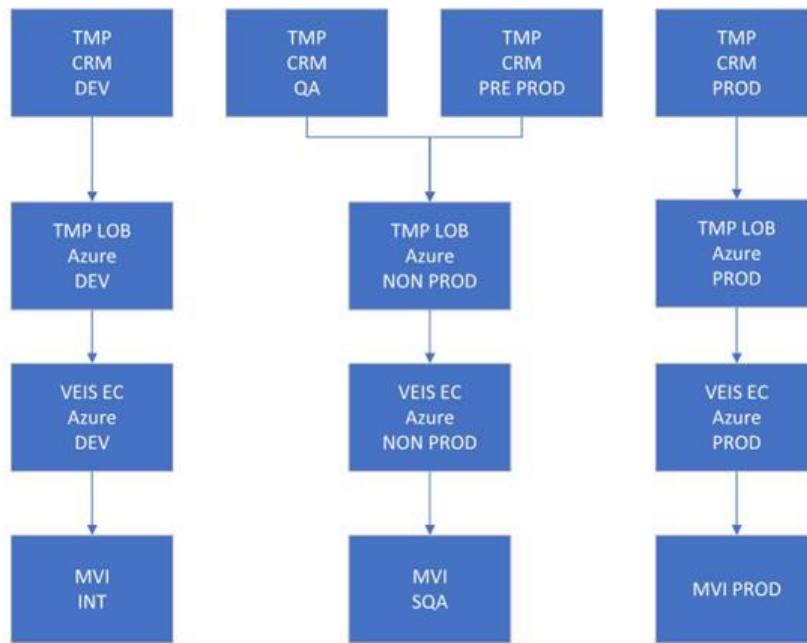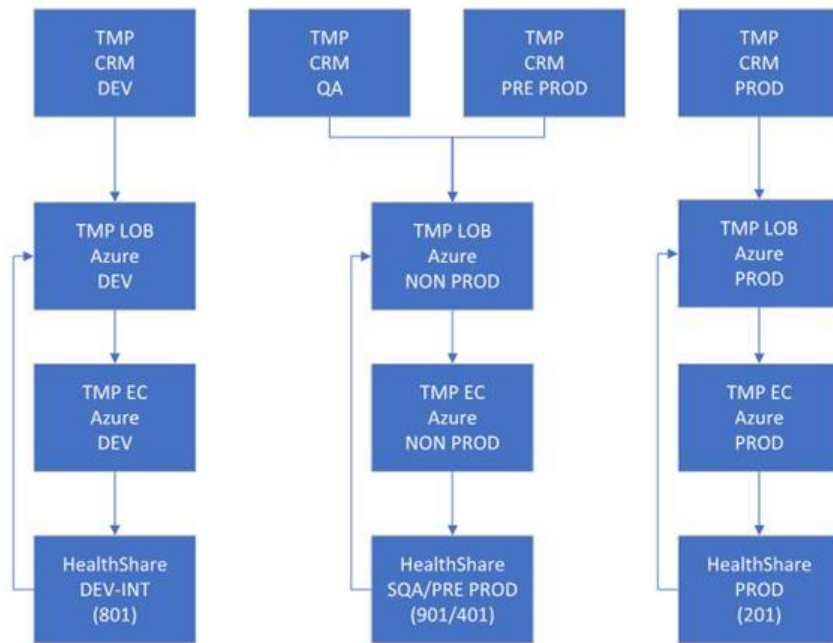**Figure 3: Telehealth Management Platform (TMP)/VEIS/ HealthShare Environment Mapping**
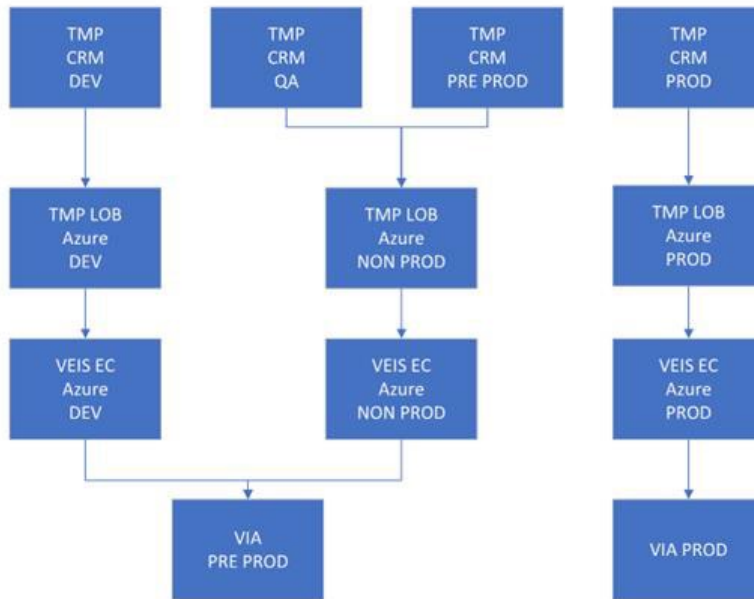
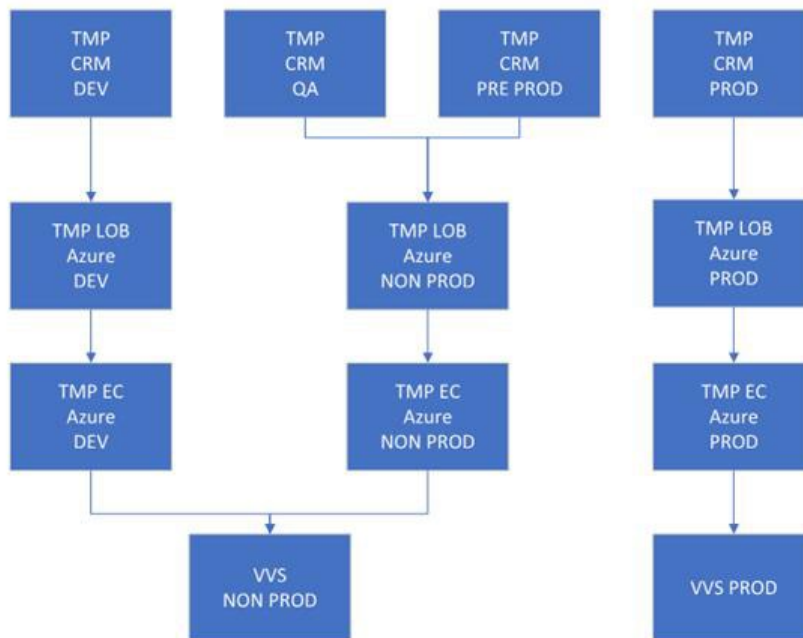**Figure 4: Telehealth Management Platform (TMP)/VEIS/VVS Environment Mapping**

Figure 5: Telehealth Management Platform (TMP)/VEIS/VVS Environment Mapping

1.3 Constraints

There are no additional constraints to this project.

Roles and Responsibilities

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

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
	O&M Team, Project Team and Development Team	Deployment	Plan and schedule deployment (including orchestration with vendors)	Telehealth Management Platform (TMP) Release
	O&M Team and Development Team	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.	Telehealth Management Platform (TMP) Release
	Enterprise Operations (EO)	Deployment	Test for operational readiness	Telehealth Management Platform (TMP) Release
	O&M Team	Deployment	Execute deployment	Telehealth Management Platform (TMP) Release
	O&M Team and Development Team	Installation	Plan and schedule installation	Telehealth Management Platform (TMP) Release
	O&M Team/Hosting Team	Installation	Ensure authority to operate and that certificate authority security documentation is in place	Telehealth Management Platform (TMP) Release
	O&M Team/Hosting Team	Installation	Validate through facility POC to ensure that IT equipment has been accepted using asset inventory processes	Telehealth Management Platform (TMP) Release
	Training	Installations	Coordinate training	Telehealth Management Platform (TMP) Release
	O&M Team and Development Team	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)	Telehealth Management Platform (TMP) Release

This section describes the teams who perform the steps described in this Plan. Representatives from the teams listed in the following table perform deployment and installation activities. This phase begins after the solution design (including deployment topology) is complete. Design activities are not included in this phase.

Table 2: General Roles and Responsibilities

Team	Tasks / Responsibilities
D365 Product Team	- Deploy code during migrations from lower environments into pre-prod and prod - Coordinate with VA Project Team members, VA NSOC, and Microsoft Support team - Receive and process incoming incidents via Cloud Ticket Determine incident types and capture all relevant incident data Create developer user accounts - Diagnose infrastructure issues - Troubleshoot basic and complex issues Resolve issues
VA Project Team	- Liaison between the project teams and team members to capture incidents - Submit incident requests using the Cloud Ticket tool
Liberty Development Team	- Communicate with CRM Cloud Solution team to provide additional information, if necessary - Identify and submits issues to the VA project POC
Liberty Development Team	- Deploy solutions provided by Microsoft Development Team from lower environments into pre-prod and prod - Coordinate with VA Project Team members, VA NSOC, and Microsoft Support team - Receive and process incoming incidents - Determine incident types and capture all relevant incident data - Diagnose incident issues Troubleshoot basic and complex issues Resolve issues

Table 3: Code Deployment Responsibilities

Team	Phase	Role
Liberty Development Team	Planning	- Finalize Development Build and Code Compilation Instructions - Provide listing of developer accounts - Schedule deployment with the CRM Cloud Hosting team via Cloud Ticket
Telehealth Management Platform (TMP) Project Team	Planning	Schedule UAT testers and support
Liberty Development Team	Prepare for Deployment	- Provide O&M Team with all relevant data/code, including solution extract for CRM, Compiled Code, and ISV Folder, utilizing a method approved by the Project Team (e.g. FTP, Secure Server, or other) - Freeze all development activities
Liberty Development Team	Prepare for Deployment	- Review Code Compilation instructions for completion - Work with project teams if compilation instructions are unclear or incomplete - Replicate the existing environment configuration and code - Perform database back-ups
Telehealth Management Platform (TMP) Project Team	Execute Deployment	- Coordinate deployment support by maintaining the bridge and managing all involved stakeholders - Conduct UAT testing activities
Liberty Development Team	Execute Deployment	Work with O&M team to resolve issues, if necessary

Team	Phase	Role
O&M Team	Execute Deployment	Deploy the code into Pre-Prod and Prod
Telehealth Management Platform (TMP) Project Team	Validation & Go- Live	Validate that the new environment functions as expected
O&M Team	Validation & Go- Live	Execute roll-back, if necessary

The following table describes the planned deployment environments.

Table 4: Deployment Environments

Environment	Use	Involved Parties
Developer Workstations	Development, Unit Testing	LITS
VA Hosted (NWA) Dev	Development, Unit Testing	LITS
VA Hosted (NWA) INT	Unit Testing, Integration Testing	LITS, VA (Integration)
VA Hosted (NWA) QA	User Acceptance Testing	LITS, VA
VA Hosted (NWA) Pre- Prod	Fallback for Production	LITS, VA
VA Hosted (NWA) Prod	Production	LITS, VA

Deployment

The deployment is planned as a single rollout.

This section provides the schedule and milestones for the deployment.

This Release and Installation Guide identifies processes and procedures to promote the Telehealth Management Platform (TMP) Dynamics Customer Relationship Management (CRM) system into the Production Environment. The CRM system is web-based and is deployed using files containing configuration information rather than directly from one environment to another.

- Telehealth Management Platform (TMP) Dev
- Telehealth Management Platform (TMP) QA
- Telehealth Management Platform (TMP) Pre-Prod
- Telehealth Management Platform (TMP) Prod
- Git Hub https://github.com/department-of-veterans-affairs/crm-tmp-product

3.1 Timeline

The deployment and installation will run for approximately 1 day, as depicted in the master deployment schedule Telehealth Management Platform (TMP).

In most Deployment Plans, Enterprise Operations (EO) maintains the master schedule in MS Project Server, Field Operations and Development (FOD) maintains its schedule in Clarity, and FOD provides site scheduling

to meet parameters and milestones enumerated above. Given the agile methodology used to develop and deploy Telehealth Management Platform (TMP), along with the limited scope of this software-only deployment/installation, there is no need for a Master Deployment Schedule. The high-level schedule included below will suffice.

Table 5: High Level Milestones

Milestones	Target Date
Unit Testing Completed	9/15/2023
Software Quality Assurance Testing Completed	9/21/2023
Pre-Production Testing Completed	

3.2 Site Readiness Assessment

This section discusses the locations that will receive the Telehealth Management Platform (TMP) deployment. Topology determinations are made by ESE and vetted with PD, FO, NDCP, and the PMO during the design phase as appropriate. Field site coordination will be completed FO unless otherwise stipulated by FO. The Microsoft team provides input and support to all ESE, PD, FO, NDCP, and the PMO team during the site readiness assessment. Telehealth Management Platform (TMP) is a minor application covered under CRM/UD. Site readiness will be assessed in the hosting environment.

This section discusses the locations that will receive the Telehealth Management Platform (TMP) deployment.

3.21 Deployment Topology (Targeted Architecture)

Deployment will be conducted through web client in a QA, Pre-Prod, and Production environment administered by O&M, managed by Microsoft.

The CRM system is web-based and is deployed using files containing configuration information rather than directly from one environment to another.

3.22 Site Information (Locations, Deployment Recipients)

The CRM system is web-based and is deployed using files containing configuration information rather than directly from one environment to another.

3.23 Site Preparation

Telehealth Management Platform (TMP) will be accessed using the browser.

Table 6: Site Preparation

Site/Other	Problem/Change Needed	Features to Adapt/Modify to New Product	Actions/Steps	Owner
All Sites	Familiarization with application	N/A	Attend training sessions	Office of Connected Care-Telehealth Training Team
All Sites	Data Migration	N/A	Metadata Import into Production	Liberty Development team

All Sites	Establish access to Telehealth Management Platform (TMP) URL	N/A	Grant access to application users of Telehealth Management Platform (TMP)	Will be handled by the appropriate region/site

3.3 Resources

This section describes hardware, software, and facilities required for the Telehealth Management Platform (TMP) deployment and installation.

3.3.1 Facility Specifics

Current Telehealth Management Platform (TMP) release will deploy on CRM cloud hosted environment. There are no facility-specific features required for deployment.

Table 7: Facility-Specific Features

Site	Space/Room	Features Needed	Other
None			

3.3.2 Hardware

Current Telehealth Management Platform (TMP) release will be supported by the existing cloud hosted environment. No hardware specifications exist.

Table 8: Hardware Specifications

Required Hardware	Model	Version	Configuration	Manufacturer	Other
None					

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.

3.3.3 Software

Current Telehealth Management Platform (TMP) release will be utilizing approved existing software on TRM tools list. No software specifications exist.

Table 9: Software Specifications

Required Software	Make	Version	Configuration	Manufacturer	Other
None					

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.

3.3.4 Communications

A VA Teams meeting will occur for all members involved and/or invested in Telehealth Management Platform (TMP) deployment. All members involved and/or invested in Telehealth Management Platform (TMP) Deployment will receive status emails throughout the deployment activities.

Table 10: Team Support Information/Role

Team Support Information	Role	POC
Communication Lead *Scheduled*	Serves as the main communication and coordination POC on behalf of the application to provide regular status updates and issue escalation.	
Functional Tester(s) *Scheduled*	Performs testing to verify that application is functioning as expected.	
Development *On Call*	Development resources are typically on-call for production deployments, unless they are required to serve as advisory resources during the release activities.	
VA OIT *On Call*	Engage OIT contacts if decisions need to be made on behalf of the application and as voting members on the Go/No Go calls.	
VA Business / TDD *On Call*	Engage Business Contacts if decisions need to be made on behalf of the application and as voting members on the Go/No Go calls.	
Application Support *Scheduled*	Application Support contacts are scheduled to perform Production code releases and infrastructure changes.	
Hosting Support *On Call*	Hosting Support contacts are scheduled to perform infrastructure changes or otherwise scheduled to be on call.	
Integration Partners *Scheduled*	Typically, on-call support for the implementation or update of web service partner connections.	

3.3.5 Deployment/Installation/Back-Out Checklist

This section will be completed once each task is complete.

Table 11: Deployment/Installation/Back-Out Checklist

Activity	Day	Time	Individual who completed task
Deploy	TBD	TBD	
Install	TBD	TBD	
Back-Out	TBD	TBD	

Installation

4.1 Pre-installation and System Requirements

Customer-approved user stories and defects will be stored on the Telehealth Management Platform (TMP) Jira project,

4.2 Platform Installation and Preparation

TMP ORG is backed up by a member of the team the night of deployment.

Deployment occurs during off hours.

Software installs within 60-120 minutes.

4.3 Download and Extract Files

The CRM system is web-based and is deployed using files containing configuration information rather than directly from one environment to another.

Table 12: File Inventory List

Filename

4.4 Access Requirements and Skills Needed for the Installation

Microsoft Dynamics CRM Security Role – System Administrator

4.5 Installation Procedure

Refer to the *Telehealth Management Platform (TMP) Release Deployment Instructions* (Appendix A).

4.6 Installation Verification Procedure

Refer to the *Telehealth Management Platform (TMP) Release Deployment Instructions* (Appendix A). Verification/Testing Steps begin on page 1 of Appendix A.

For detailed testing, please also refer to the *Telehealth Management Platform (TMP) Release Deployment Instructions* (Appendix A).

Notification sent to the field via email from Office of Connected Care Help Desk (OCCHD).

Users were informed of upcoming changes on a weekly call.

4.7 System Configuration

Refer to the *Telehealth Management Platform (TMP) Release Deployment Instructions* (Appendix A).

Back-Out Procedure

Refer to the *Telehealth Management Platform (TMP) Release Backout and Rollback Plan* (Appendix B).

Rollback Procedure

TMP ORG is backed up the night of deployment.

6.1 Rollback Considerations

Go/No-Go meeting will enable a decision to provide viability to proceed.

6.2 Rollback Criteria

Restore backup of Production environment taken prior to deployment.

6.3 Rollback Risks

No risks exist.

6.4 Authority for Rollback

Refer to the *Telehealth Management Platform (TMP) Release Backout and Rollback Plan* (Appendix B).

6.5 Rollback Procedure

- A member of the Development Team will be assigned to this deployment.
- Evening prior to deployment – Approximately 10 pm a backup of Telehealth Management Platform (TMP) Production Environment
- Deployment Date– Upon completion of deployment activities (Installation, Verification, Testing), Go/No Go meeting will take place involving Stakeholders listed in 6.4. If decision of No Go is made, Rollback procedure will commence.
- For procedure, see *Telehealth Management Platform (TMP) Release Backout and Rollback Plan* (Appendix B)

Appendix A – Telehealth Management Platform (TMP) Release Deployment Instructions

This section provides steps to deploy the Telehealth Management Platform (TMP) related changes in the Production environment.

Wave 2 2023 Update

1. To activate the wave 2 update
2. Go to
3. Select **Environments** in the left-hand navigation.
4. Select the environment to update in the list.
5. In the Update box, select **Manage**.
6. Select **Update Now**.
7. Wait for the update to complete. It may take an hour or two.

Solution Deployment to hide New Look toggle

To get the solution:

1. Go to PowerApps:
2. On the top navigation, select **Environment** and select **VA TMP Dev**.
3. On the left navigation, select **Solutions**.
4. Select the **New Look** solution.
5. On the ribbon, select **Export**.
6. When the export is done, there'll be a green message below the ribbon.

To import the solution

1. Go to PowerApps:
2. On the top navigation, select **Environment** and select the environment you want to import the solution to.
3. On the left navigation, select **Solutions**.
4. On the ribbon, select **Import Solution**.

5. Select **Browse**.

6. Find the **New Look** solution on your machine and select it.

7. Wait for the import to finish - there'll be a green message below the ribbon.

8. Select **Publish All Customizations**.

9. Wait for the publish to finish - there'll be a green message below the ribbon.

10. Select **Publish All Customizations** a second time.

11. Wait for the publish to finish - there'll be a green message below the ribbon.

12. Go to the environment and confirm the New Look button is gone.

TSL API

For a deployment to nprod, use the correct Publish Profile to publish.

To deploy the TSL API:

1. Log into Kudu for either the Prod East or Prod South regions for the Telehealth Specialty Location App Service. If you don't have the Publish Profile(s) for them you'll need to log into Azure and download them, first. Use the publishUrl, userName and UserPwd values from the Publish Profile to log into Kudu.

2. Select the CMD option from the Debug console menu.
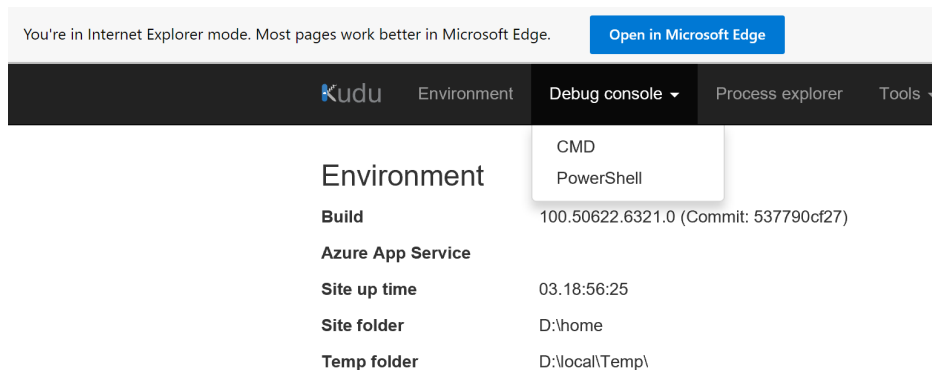
3. Then click on site link, followed by the.

4. Open Integration Solutions Project in Visual Studio.

5. Locate the TelehealthSpecialtyLocation API Project in the LOB Api Folder (VA.TMP.Integration.Api.TelehealthSpecialtyLocation).
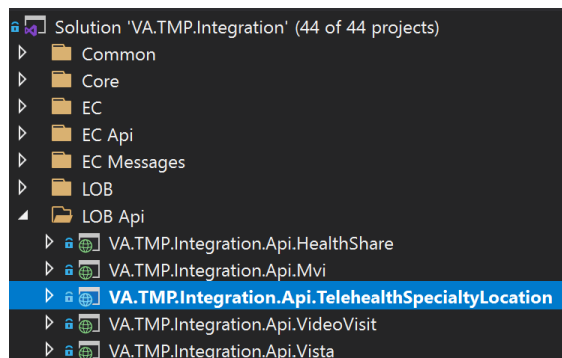
6. Either right-click on the Project and select the **Publish** option or select the **Publish** option from the Build Menu.

7. Select either the Prod East or Prod South Publish Profile from the menu. If you do not currently have those Profiles as seen here, you'll need to download them from Azure and Import them into Visual Studio, first.
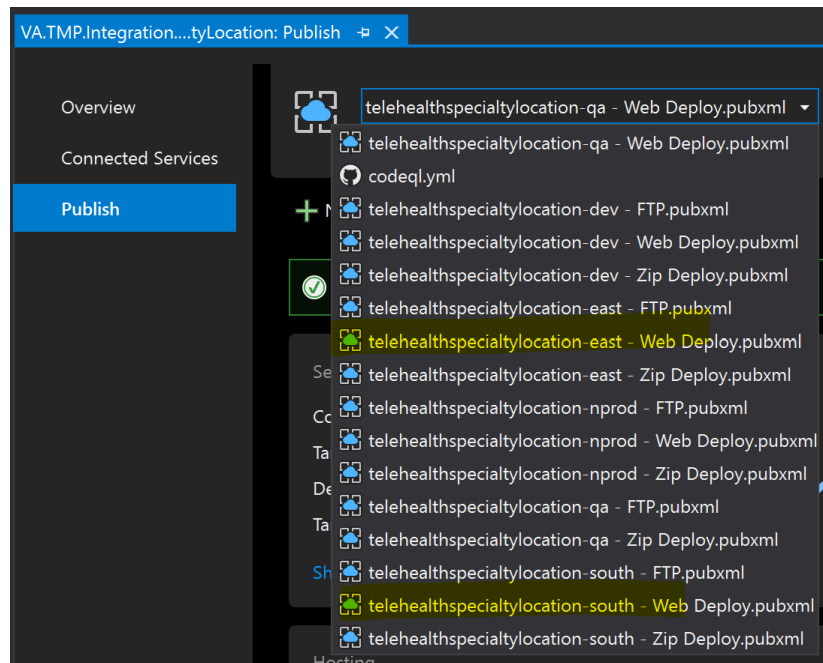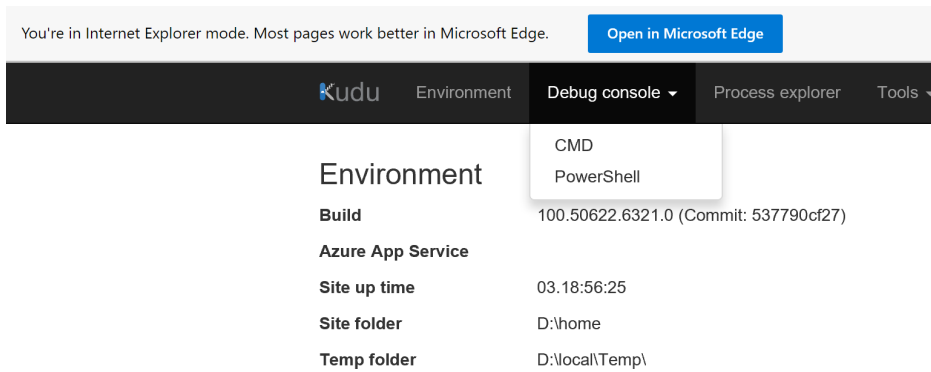

8. Click **Publish**.

9. Verify Publish.

10. Confirm the correct appSettings.json files were deployed via Kudu. There should only be 2, one named appSettings.json and one named appSettings.Prod.json.

11. Confirm appSettings.Prod.json values: both BaseUrl and Scope should contain TMP Prod Url, and the AppId should have the correct AppId for the Production Environment. This value can be found in several locations such as the Integration Settings in TMP and most, if not all, the App Services TMP uses in their respective Configuration Sections. Use the value from CrmAppId setting for confirmation. Update the Default Log Level to "ERROR" in the Logging section.

12. Open the web.config file and confirm the EnvironmentName attribute contains "Prod". This is used by the App Service to determine the correct appSettings.json to use.

13. Update the Log Level in the log4net.config file. Set the value for the "level" element in the root section to "ERROR" and Save.

14. Repeat Steps 1 thru 9 for the other remaining Region (i.e., East or South).

Duplicate Patient records bug fix

For a deployment to nprod, use the correct Publish Profile to publish.
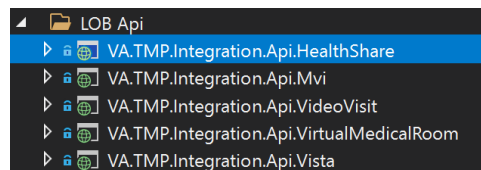
To deploy the bug fix:

1. Log into Kudu for either the Prod East or Prod South regions for the HealthShare App Service. If you don't have the Publish Profile(s) for them you'll need to log into Azure and download them, first. Use the publishUrl, userName and UserPwd values from the Publish Profile to log into Kudu.

2. Select the **CMD** option from the Debug console menu.

Kudu   Environment   Debug console ▾   Process explorer   Tools ▾

CMD
PowerShell

Environment

Build	100.50622.6321.0 (Commit: 537790cf27)
Azure App Service	
Site up time	03.18:56:25
Site folder	D:\home
Temp folder	D:\local\Temp\

3. Then click on site link.

4. Backup the wwwroot folder by clicking the Download button and saving off to your local machine.

... / site **+** | 4 items | 🏠 🌐 💾

Name
📁 deployments
📁 diagnostics
📁 locks
📁 wwwroot
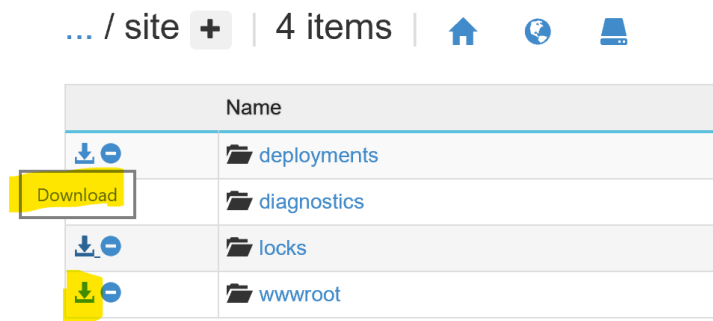
5. Open Integration Solutions Project in Visual Studio.

6. Locate the HealthShare API Project in the LOB Api Folder (VA.TMP.Integration.Api.HealthShare).

▲ 📁 LOB Api
  ▷ 🔒 VA.TMP.Integration.Api.HealthShare
  ▷ 🔒 VA.TMP.Integration.Api.Mvi
  ▷ 🔒 VA.TMP.Integration.Api.VideoVisit
  ▷ 🔒 VA.TMP.Integration.Api.VirtualMedicalRoom
  ▷ 🔒 VA.TMP.Integration.Api.Vista

7. Either right-click on the Project and select the **Publish** option or select the **Publish** option from the Build Menu.

8. Select either the Prod East or Prod South Publish Profile from the menu. If you do not currently have those Profiles as seen here, you'll need to download them from Azure and Import them into Visual Studio, first.
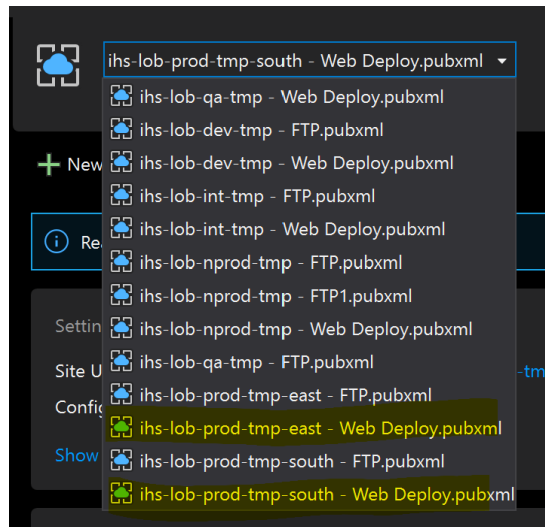
9. Click **Publish**.

10. Repeat Steps 1 thru 9 for the other remaining Region (i.e., East or South).

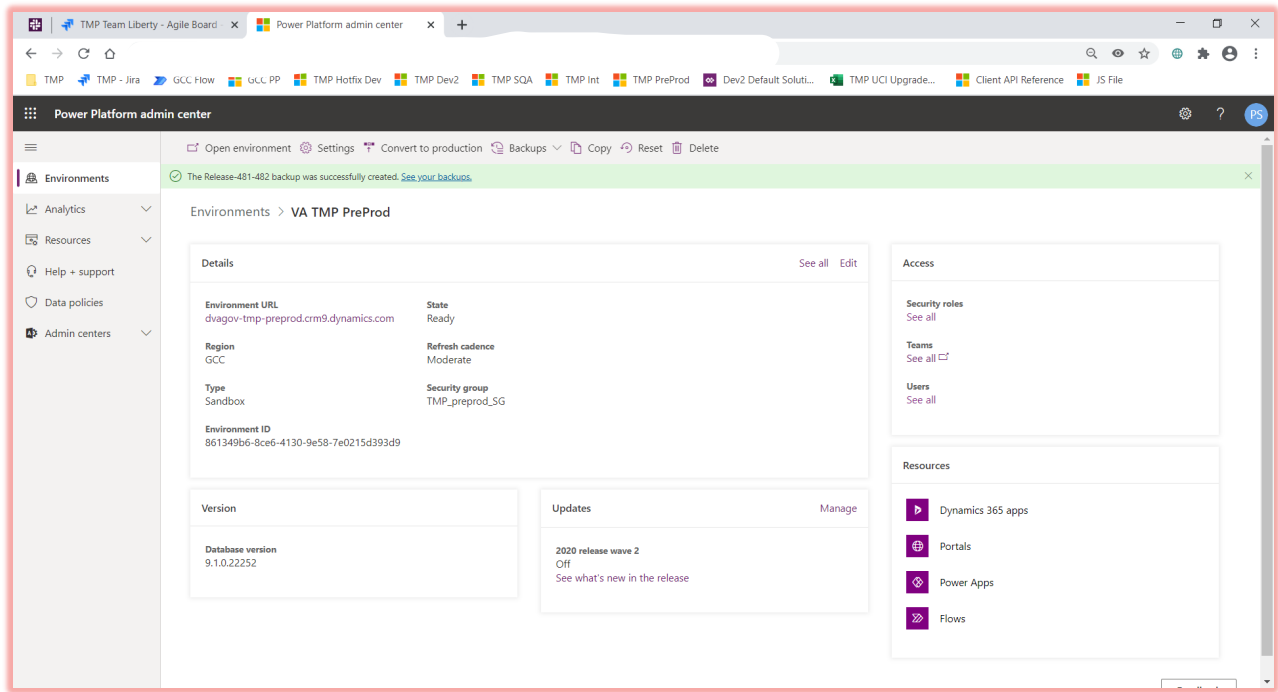**Appendix B – Telehealth Management Platform (TMP) Release Backout and Rollback Plan**

Deployment, Installation, Backup, Restore Instructions for a Telehealth Management Platform (TMP) Release.

Backup

1. Navigate to the

2. Select the production environment "VA TMP Prod".
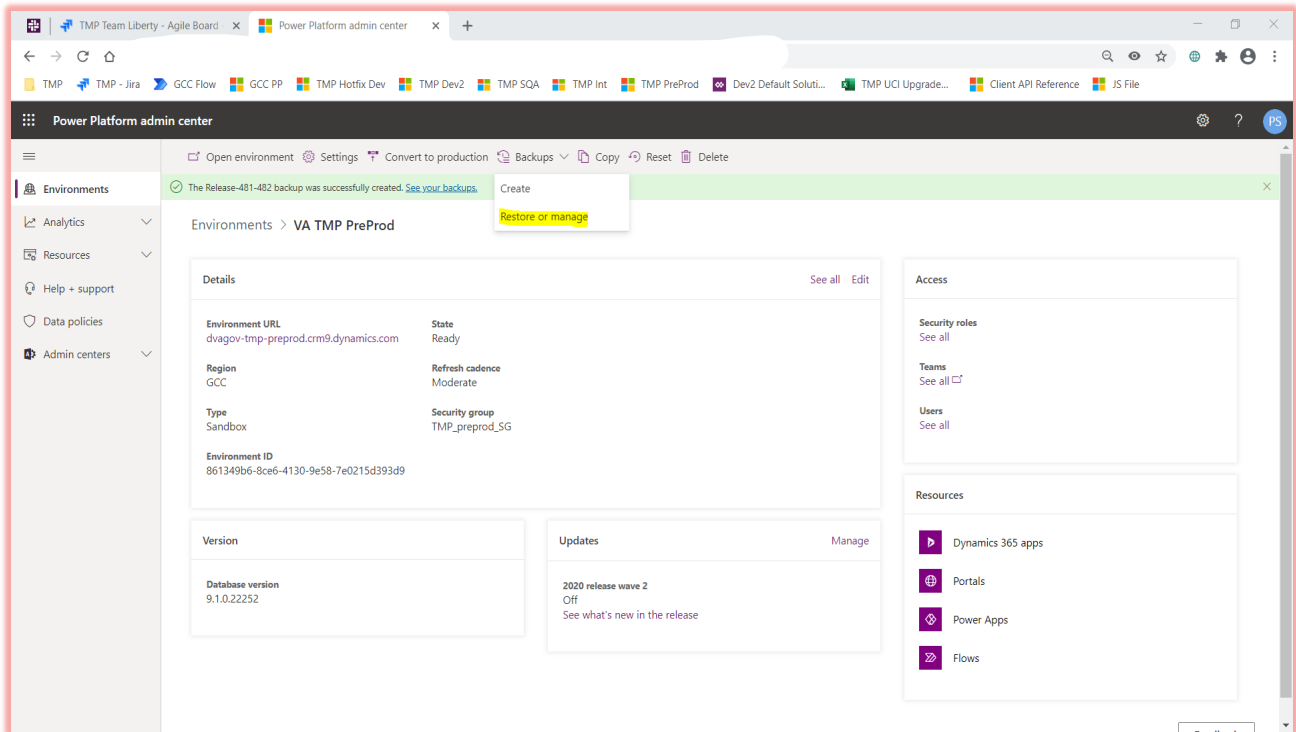
3. Create a manual backup as shown below.
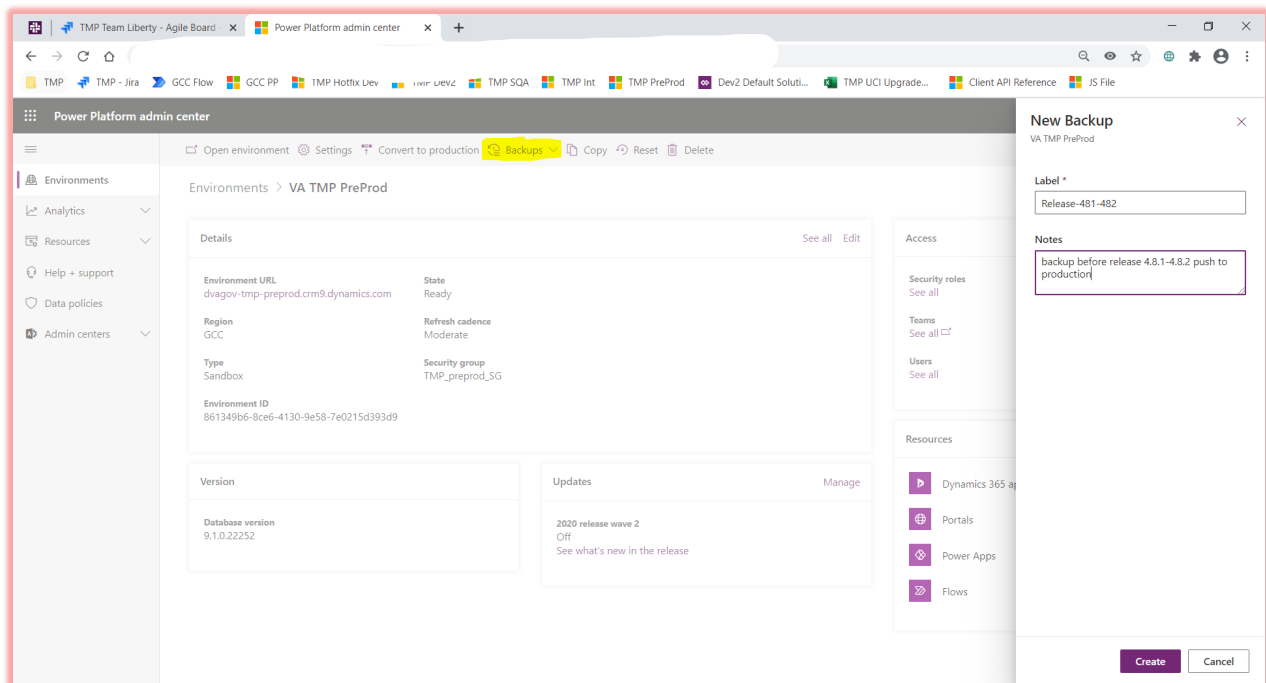
4. Wait till you see a message like below.

Restore

1. Navigate to the

2. Select the production environment "VA TMP Prod".

3. Select **Restore** or manage under "Backups" link.

4. Select the backup created in Backup step #1 -> Click **Restore**.