Customer Relationship Management/Unified Desktop-Optimization (CRM/UD-O)

Deployment, Installation, Back-Out, and Rollback Plan



May 2021

Document Version 24.1

Department of Veterans Affairs (VA)

Office of Information and Technology (OI&T)

Revision History

| Date | Revision | Description | Author |
| --- | --- | --- | --- |
| 5/26/2021 | 24.1 | UDO Configuration Release 2.24.0.0.3.0 | Matt Ahearn |
| 5/19/2021 | 24.0 | UDO Configuration Release 5.19.21 | Matt Ahearn |
| 5/12/2021 | 23.9 | UDO Configuration Release 5.12.21 Configuration Change | Matt Ahearn |
| 04/17/2021 | 23.8 | UDO Enhancement Release 2.24.0.0.0.0 | Matt Ahearn |
| 04/08/2021 | 23.7 | UDO Configuration Release 4.8.21 Configuration Change | Matt Ahearn |
| 03/31/2021 | 23.6 | UDO Configuration Release 3.31.21 Configuration Change | Matt Ahearn |
| 03/17/2021 | 23.5 | UDO Configuration Release 3.17.21 Configuration Change | Matt Ahearn |
| 03/03/2021 | 23.4 | UDO Configuration Release 3.3.21 Configuration Change | Matt Ahearn |
| 02/22/2021 | 23.3 | UDO Configuration Release 2.22.21 Configuration Change | Matt Ahearn |
| 02/17/2021 | 23.2 | UDO Configuration Release 2.17.21 Configuration Change | Matt Ahearn |
| 02/09/2021 | 23.1 | UDO Hotfix Release 2.75.128.1 | Rajul Jain/Matt Ahearn |
| 02/06/2021 | 23.0 | UDO Enhancement Release 2.74.127.1 | Rajul Jain |
| 01/21/2021 | 22.1 | UDO Configuration Release 2021.1.21 | Rajul Jain |
| 01/09/2021 | 22.0 | UDO Enhancement Release 2.71.126.1 | Rajul Jain |
| 12/05/2020 | 21.6 | UDO UCI Upgrade Hotfix Release 2.69.124.1 | Rajul Jain |
| TBD | 21.5 | UDO O&M Maintenance Release 2.68.124.1 | Amy DeLorge |
| 11/13/2020 | 21.4 | UDO O&M Maintenance Release 2.67.124.1 | Amy DeLorge |
| 11/07/2020 | 21.3 | UDO Hotfix Release 2.66.123.1 | Rajul Jain |
| TBD | 21.2 | UDO O&M Maintenance Release 2.65.123.1 | Amy DeLorge |
| 10/28/2020 | 21.1 | UDO O&M Maintenance Release 2.64.123.1 | Amy DeLorge |
| 10/24/2020 | 21.0 | UDO Enhancement Release 2.63.122.1 | Rajul Jain |
| TBD | 20.2 | UDO O&M Maintenance Release 2.62.122.1 | Amy DeLorge |
| TBD | 20.1 | UDO O&M Maintenance Release 2.61.122.1 | Amy DeLorge |
| 09/19/2020 | 20.0 | UDO Enhancement Release 2.60.121.1 | Rajul Jain |
| 09/12/2020 | 19.0 | UDO USD Upgrade Release 2.57.120.1 | Rajul Jain |
| TBD | 18.2 | UDO O&M Maintenance Release 2.56.120.1 | Amy DeLorge |
| 08/28/2020 | 18.1 | UDO O&M Maintenance Release 2.55.119.1 | Amy DeLorge |
| 08/22/2020 | 18.0 | UDO VASS Enhancement Release 2.54.119.1 | Rajul Jain |
| TBD | 17.1 | UDO O&M Maintenance Release 2.53.119.1 | Amy DeLorge |
| 08/15/2020 | 17.0 | UDO Enhancement Release 2.52.118.1 | Rajul Jain |
| TBD | 16.4 | UDO O&M Maintenance Release 2.51.118.1 | Amy DeLorge |
| TBD | 16.3 | UDO O&M Maintenance Release 2.50.118.1 | Amy DeLorge |
| TBD | 16.2 | UDO O&M Maintenance Release 2.49.118.1 | Amy DeLorge |
| 07/25/2020 | 16.1 | UDO Hotfix Release 2.48.118.1 | Rajul Jain |
| 07/25/2020 | 16.0 | UDO VASS Enhancement Release 2.47.118.1 | Rajul Jain |
| TBD | 15.5 | UDO O&M Maintenance Release 2.46.118.1 | Amy DeLorge |
| 07/14/2020 | 15.4 | UDO O&M Maintenance Release 2.45.117.1 | Amy DeLorge |
| 07/14/2020 | 15.3 | UDO O&M Maintenance Release 2.44.117.1 | Amy DeLorge |
| 06/29/2020 | 15.2 | UDO O&M Maintenance Release 2.43.117.1 | Amy DeLorge |
| 06/24/2020 | 15.1 | UDO Hotfix Release 2.42.117.1 | Rajul Jain |
| 06/20/2020 | 15.0 | UDO Enhancement Release 2.41.115.1 | Rajul Jain |
| TBD | 14.2 | UDO O&M Maintenance Release 2.40.115.1 | Amy DeLorge |
| TBD | 14.1 | UDO O&M Maintenance Release 2.39.115.1 | Amy DeLorge |
| 06/06/2020 | 14.0 | UDO Enhancement Release 2.38.115.1 | Rajul Jain |
| 05/30/2020 | 13.0 | UDO VASS Enhancement Release 2.37.115.1 | Rajul Jain |
| TBD | 12.4 | UDO O&M Maintenance Release 2.36.115.1 | Amy DeLorge |
| TBD | 12.3 | UDO O&M Maintenance Release 2.35.115.1 | Amy DeLorge |
| 5/11/2020 | 12.2 | UDO O&M Maintenance Release 2.34.115.1 | Amy DeLorge |
| 5/4/2020 | 12.1 | UDO O&M Maintenance Release 2.33.114.1 | Amy DeLorge |
| 5/2/2020 | 12.0 | UDO VASS Enhancement Release 2.32.114.1 | Rajul Jain |
| 4/25/2020 | 11.0 | UDO Enhancement Release 2.31.113.1 | Rajul Jain |
| 4/23/2020 | 10.2 | UDO O&M Hotfix Release 2.30.113.1 | Amy DeLorge |
| 4/15/2020 | 10.1 | UDO O&M Hotfix Release 2.29.113.1 | Amy DeLorge |
| 4/03/2020 | 10.0 | UDO VASS Enhancement Release 2.28.113.1 | Rajul Jain |
| 4/03/2020 | 9.1 | UDO Hotfix Release 2.27.113.1 | Rajul Jain |
| 3/29/2020 | 9.0 | UDO VASS Enhancement Release 2.26.112.1 | Rajul Jain |
| 3/28/2020 | 8.0 | UDO Enhancement Release 2.25.112.1 | Rajul Jain |
| 3/18/2020 | 7.3 | UDO O&M Hotfix Release 2.24.112.1 | Amy DeLorge |
| 3/13/2020 | 7.2 | UDO O&M Hotfix Release 2.23.112.1 | Amy DeLorge |
| 2/29/2020 | 7.1 | UDO Hotfix Release 2.22.111.3 | Rajul Jain |
| 2/14/2020 | 7.0 | UDO VASS Enhancement Release 2.21.111.1 | Q Suliman |
| 2/13/2020 | 6.3 | UDO Hotfix Release 2.20.111.1 | Q Suliman |
| 2/13/2020 | 6.2 | UDO O&M & Dev Hotfix Release 2.19.111.1 | Amy DeLorge |
| 2/12/2020 | 6.1 | UDO Dev Hotfix Release 2.18.111.1 | Q Suliman |
| 1/29/2020 | 6.0 | UDO Dev Enhancement Release 2.17.110.1 | Q Suliman |
| 2/1/2020 | 5.2 | UDO O&M Hotfix Release 2.16.110.1 | Amy DeLorge |
| 1/21/2020 | 5.1 | Updated for 2.15.110.1 Release (Hotfix) | Q Suliman |
| 1/13/2020 | 5.0 | Updated for 2.14.109.1 Release (Enhancement) | Q Suliman |
| 1/8/2020 | 4.0 | Updated for 2.13.109.1 Release (Enhancement) | Q Suliman |
| 1/7/2020 | 3.12 | UDO O&M Maintenances Release 2.12.109.1 | Amy DeLorge |
| 12/14/2019 | 3.11 | UDO O&M Maintenances Release 2.11.108.1 | Amy DeLorge |
| 12/09/19 | 3.10 | Updated for 2.10.108.1 VASS Release | Q Suliman |
| 11/18/19 | 3.9 | Updated for 2.9.107.1 VASS Release | Q Suliman |
| 11/14/2019 | 3.8 | UDO Hotfix Release 2.8.107.1 | Matt Murto |
| 11/14/19 | 3.7 | Updated for 2.7.107.1 Release (Hotfix) | Matt Murto |
| 10/30/19 | 3.6 | Updated for 2.6.105.1 Release (Hotfix) | Matt Murto |
| 10/30/19 | 3.5 | Updated for 2.5.105.1 Release (Hotfix) | Matt Murto |
| 10/30/19 | 3.4 | Updated for 2.4.104.1 Release (Hotfix) | Matt Murto |
| 10/25/19 | 3.3 | Updated for 2.3.104.1 Release (Hotfix) | Matt Murto |
| 09/10/19 | 3.2 | Updated for 2.2.104.1 Release (Hotfix) | Matt Murto |
| 09/09/19 | 3.1 | Updated for 2.1.104.1 Release (Hotfix) | Matt Murto |
| 09/06/19 | 3.0 | Updated for 2.0.103.20 Release (D365 Migration) | Matt Murto |
| 08/22/19 | 2.16 | Updated for 1.13.103.1 Release | Matt Murto |
| 07/24/19 | 2.15 | Updated for 1.12.101.1 Release | Matt Murto |
| 07/24/19 | 2.14 | Updated for 1.11.101.1 Release (Spell Check) | Matt Murto |
| 06/28/19 | 2.13 | Updated for 1.10.98.1 Release (Spell Check) | Matt Murto |
| 03/25/19 | 2.12 | Updated for 1.9.96.1 Release (Emergency Button Hotfix) | Matt Murto |
| 03/19/19 | 2.11 | Updated for 1.8.95.1 Release (Misc Hotfixes) | Matt Murto |
| 03/04/19 | 2.10 | Updated for 1.7.94.1 Release (0820a and FNOD Hotfix) | Matt Murto |
| 02/06/19 | 2.9 | Updated for 1.6.91.2 Release | Matt Murto |
| 1/30/2019 | 2.8 | Updated for 1.6.91.1 release (DocGen hotfix) | Engility |
| 1/17/2019 | 2.7 | Updated for plugin disable (no code change) | Engility |
| 10/24/2018 | 2.6 | Updated for 1.5.88.1 release | Engility |
| 8/28/2018 | 2.5 | Updated for 1.5.84.4 release | Matt Murto |
| 8/15/2018 | 2.4 | Updated for 1.5.84.3 release | Engility |
| 4/18/2018 | 2.3 | Updated for 1.5.80.1 release | Engility |
| 3/14/2018 | 2.2 | Updated for 1.5.78.1 release | Engility |
| 3/1/2018 | 2.1 | Updated for 1.5.77.1 release | Engility |
| 12/19/2017 | 2.0 | Updated for 1.5.74.1 release | Engility |
| 11/14/17 | 1.9 | Updated for 1.3.71.2 release | Engility |
| 11/8/17 | 1.8 | Updated for 1.3.71.1 release | Engility |
| 10/2/17 | 1.7 | Updated for 1.3.70.1 release | Engility |
| 9/6/17 | 1.6 | Updated for 1.3.69.1 release | Engility |
| 8/18/17 | 1.5 | Updated for 1.3.67.2 release | Engility |
| 7/11/17 | 1.4 | Updated for 1.3.66.1 release | Engility |
| 6/12/17 | 1.3 | Updated for 1.3.65.2 release | Engility |
| 4/25/17 | 1.2 | Updated for 1.2.63.3 release. | Engility |
| 3/29/17 | 1.1 | Updated for 1.2.61.6 release. | Engility |
| 2/21/17 | 1.0 | Initial version created; old documents moved to new VIP template | Engility |

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 Customer Relationship Management/Unified Desktop-Optimization (CRM/UD-O) CRM product, 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.

## Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the CRM/UD-O product 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.

## Dependencies

The table below lists and describes all identified dependencies for CRM/UD-O.

CRM/UD-O Dependencies

| Dependency | Description |
| --- | --- |
| Microsoft Dynamics 365 (D365) CRM | CRM/UD-O will utilize the following updated software versions: Dynamics 365 (D365) v9.1 |
| Integration | Resources and work efforts need to be coordinated between the multiple veteran system of record repositories, including:   * Master Veteran Index (MVI) * VA Veterans Health Information Systems and Technology Architecture (VistA) |
| Credentialing | A credentialing system needs to be maintained and managed by VA personnel. (ADFS 3.0 for OAuth PIV authentication) |

## Constraints

The following constraints are applied to the CRM/UD-O CRM System:

* Delays in the infrastructure, setup and configuration
* Web services provided by VA (delays in creating any required web services and lack of documentation of the data services is a constraint)
* Availability of test data to adequetly test the software being developed

# Roles and Responsibilities

Table 1 details the roles and responsibilities for deployment, installation, back-out, and rollback activities. These roles and responsibilities are shared amongst the Office of Information and Technology (OI&T), VA Business Project Management Office, Microsoft Development team, Technical Integeration (TI) team, and Cognosante Operations and Maintenance (O&M).

Deployment, Installation, Back-Out, and Rollback Roles and Responsibilities

|  |  |  |  |
| --- | --- | --- | --- |
| Team | Phase / Role | Tasks | Project Phase (See Schedule) |
| Microsoft, O&M, Business PMO, OI&T, TI | Deployment | Plan and schedule deployment (including orchestration with vendors) | Active/Current Build |
| Microsoft, O&M, Business PMO, OI&T, TI | Deployment | Determine and document the roles and responsibilities of those involved in the deployment. | Active/Current Build |
| Microsoft/ O&M/ TI | Deployment | Test for operational readiness | Active/Current Build |
| Cognosante O&M | Deployment | Execute deployment | Active/Current Build |
| Cognosante O&M | Installation | Plan and schedule installation | Active/Current Build |
| OI&T | Installation | Ensure authority to operate and that certificate authority security documentation is in place | Active/Current Build |
| OI&T | Installation | Validate through facility POC to ensure that IT equipment has been accepted using asset inventory processes | Active/Current Build |
| VA PMO, Microsoft | Installations | Coordinate training | Active/Current Build |
| Microsoft, Cognosante O&M | Back-out | Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out) | Active/Current Build |
| Cognosante O&M | Post Deployment | Hardware, Software and System Support | Active/Current Build, Sustainment |

# Deployment

The deployment is planned as a deployment to all CRM/UD-O users.

## Timeline

Go/No-Go Call – 5/26/2021  
Resource and Site Preperation – 5/26/2021  
Deploy code to servers – 5/26/2021  
Install solution – 5/26/2021  
Test/validate install – 5/26/2021  
Determine need for backout/confirm install success 5/26/2021

## Site Readiness Assessment

This section discusses the locations that will receive the CRM/UD-O deployment.

The following table includes significant Functional Workload and Functional Performance Requirements.

|  |  |
| --- | --- |
| **Theme** | **Requirement** |
|  | CRM UDO Hours of Operation are 24x7X365 |
|  | Data volume for the CRM/UD-O System is expected to start with 500 users in the first year, adding approximately 800 each year thereafter. In the end, the system should be able to handle about 3000 concurrent users on average per year. |
| SLA | Maintain 99.99% availability |

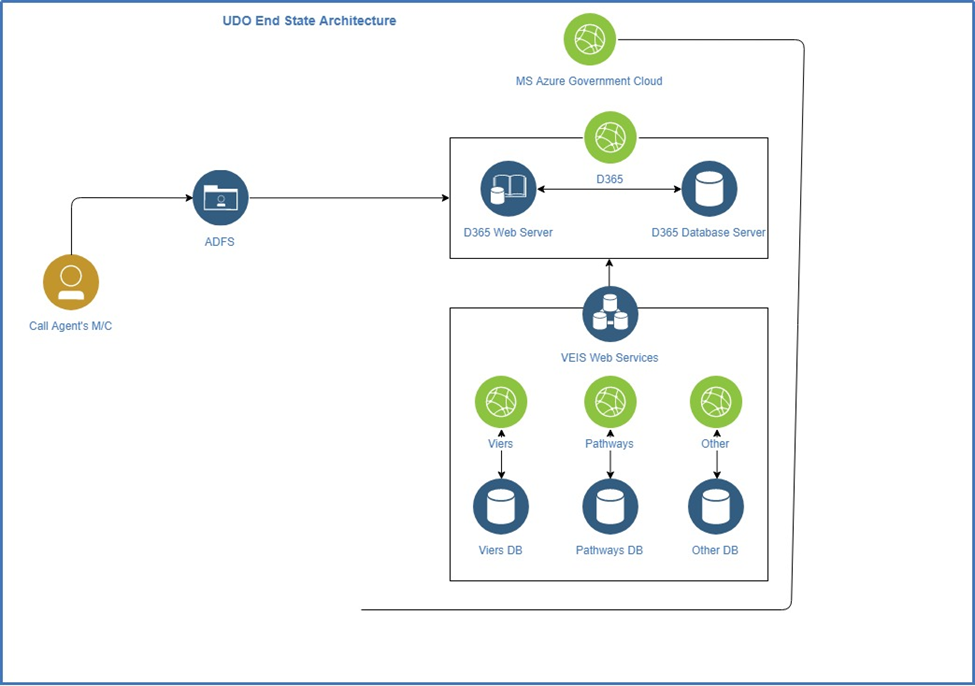
Per the CRM Microsoft Azure Dynamics 365 Cloud Hosting contract CRM/UD-O has a High Availability SLA – 99.9% up-time requirement during operating hours of 24x7x365 with a Recovery Point Objective (RPO) for the D365 environment of two hours. A full back up is taken every morning at 5am est.

### Site Information (D365 Cloud Organizations, Site and User Locations, Site Preperation)

The CRM cloud environment is composed of five logical zones that include the Production (dvagov-udo-prod4), Performance Test (dvagov-udo-perf2), and other non-production zones such as Quality Assurance (dvagov-udo-qa2), Integration (dvagov-udo-int4), and Development (dvagov-udo-dev).

CRM/UD-O will use an Azure based Veterans Experience Integration Solution (VEIS). VEIS will utilize a Web Service Uniform Resource Locator (URL), with end points directed to interfaces such as BEP, VA/Department of Defense Information Repository (VADIR), and the MVI Service Interface. VEIS has the security abstraction to only accept CRM/UD-O VA credentials, to process the request, and direct it to the appropriate service.

An example of one of these zones is shown in the figure below.



For further details, or details about D365 for US Government, please refer the relevant MSDN entries.

<https://docs.microsoft.com/en-us/dynamics365/customer-engagement/admin/government/microsoft-dynamics-365-government>

### Application Locations/Users

Application Locations:

|  |  |  |
| --- | --- | --- |
| **Application** | **Location** | **Type** |
| CRM | Microsoft Azure Government Cloud | Application and Data Store |

Application Users

|  |  |  |
| --- | --- | --- |
| **Application** | **Location** | **User** |
| CRM | Call Centers | PCR |
| CRM | Call Centers | Coaches/Managers |
| CRM | Education Call Center | Call Technician |
| CRM | Regional Offices | PCT |
| CRM | Regional Offices | PCT Coaches |

### Site Preparation

Table 5 describes preparation required by the site prior to deployment.

Site Preparation

| Site/Other | Problem/Change Needed | Features to Adapt/Modify to New Product | Actions/Steps | Owner |
| --- | --- | --- | --- | --- |
| NCC | Configuration of all machines | Configure all identified NCC machines to point to the production environment | When the USD client is pushed to the desktop, the configuration file will have the necessary information for the client to connect to the production environment. | GDIT |

## Resources

The CRM/UD-O CRM solution will be deployed to the D365 CRM Cloud Solution as described above by the Cognosante O&M Team, which is part of a fully-funded support contract used by all CRM projects with the BAM/VCE Program.

### Hardware Arcitecture

CRM Cloud Solution architecture is designed with fully dedicated hardware that is not shared with any other customer or agency. This design provides full benefits of a cloud environment, without the security risks and exposure. The CRM Cloud Solution features include:

* Dedicated physical application and database server hardware for the CRM Cloud Solution and the VRM Projects it hosts.
* Dedicated physical storage hardware for the CRM Cloud Solution and the VRM Projects it hosts.
* Dedicated Disaster Recovery (DR) - geographically-remote DR infrastructure for the CRM Cloud Solution and the VRM Projects it hosts.

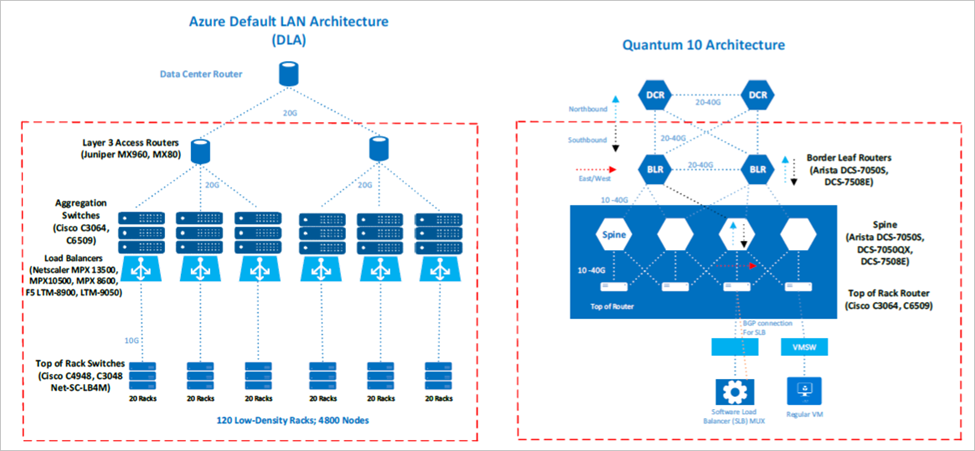
Network, switch, router, server, and storage hardware are deployed exclusively for the CRM Cloud Solution, providing a physical layer boundary for heightened security and protection, as well as providing a shield against performance degradation from other program utilization. The environment supports Secure Sockets Layer (SSL) transactions as well as other interfaces with other Government organizations to provide the secure transfer of data to and from the VRM private cloud through the VA’s Trusted Internet Connection (TIC).

The CRM Hardware Architecture as a part of the program is spread across two different hardware infrastructure enclaves:

* Microsoft Azure Government (MAG) Cloud Services
* VA Facilities - All the web services including BGS Services, VIERS Services hosted within the VADIR Environment reside on the VA Servers. Additionally the desktops supporting CRM/UDO are within the VA boundary at the NCC Locations.

Please see the following links for the latest Microsoft Azure Government Cloud hardware details:

* <https://docs.microsoft.com/en-us/azure/security/azure-security-infrastructure>
* <https://docs.microsoft.com/en-us/azure/security/azure-infrastructure-components>
* <https://docs.microsoft.com/en-us/azure/security/azure-infrastructure-availability>



### Software Architecture

This section documents the software requirements to install and run the CRM/UD-O solution.

The Software Architecture encompasses several modules to include Veteran Contact, claims, appeals, payments, and activities such as service requests and contact history.

The D365 SDK (<https://docs.microsoft.com/en-us/dynamics365/customer-engagement/>) contains information pertaining to routines tables, events, methods, classes, etc. D365 is a COTS Application that has packaged and supported software classes and other relevant source code.

The physical location of all software systems including CRM software and web applications, database platforms, compilers, utilities, operating systems, and communication software will be in Microsoft Azure Cloud hosting environments.

Microsoft Dynamics CRM will run on Internet Explorer version 10 and 11. Although users may be able to use Internet Explorer 8 or Internet Explorer 9, those web browsers are not recommended.

The following operating systems are supported:

* Windows 8.1 when using Internet Explorer 11
* Windows 8 supported when using Internet Explorer 10
* Windows 7 supported when using Internet Explorer 10 or Internet Explorer 11

Table 8 outlines the software technologies and versions currently in use for D365.

Software Specifications

| Required Software | Version |
| --- | --- |
| Windows Server 2012 Enterprise/Standard (<http://www.va.gov/TRM/ToolPage.asp?tid=35>) | 2012 |
| Microsoft SharePoint 2013 (<http://www.va.gov/TRM/ToolPage.asp?tid=5448>) | 2013 |
| Scribe Insight 7.9 (<http://www.va.gov/TRM/ToolPage.asp?tid=6490>) | 7.9 |
| Microsoft Dynamics 365 CRM | 9.1 |
| SQL Server 2014 (<http://www.va.gov/TRM/ToolPage.asp?tid=5020>) | 2014 |
| Microsoft .NET Framework 4.6.2 | 4.6.2 |
| Visual Studio 2013 (<http://www.va.gov/TRM/ToolPage.asp?tid=5670>) | 2013 |
| SQL Server 2014 Data Tools (<http://www.va.gov/TRM/ToolPage.asp?tid=9305>) | 2014 |
| ZapBI 7.1 (<http://www.va.gov/TRM/ToolPage.asp?tid=8463>) | 7.1 |

### Communications

The CRM/UD-O communications plan details the methods and techniques used by the business and development teams to ensure clear and consistent communication throughout the complete project lifecycle, development through deployment.

In preparation for system deployment, the Development Team must check the Cognosante Deployment calendar to verify that there are no conflicting deployments, and submit a ticket to ensure that resources are available to deploy the system. The Development Team must also communicate the deployment to the business stakeholders.

The business stakeholders will set up an initial Go/No Go meeting; gernally held the Wednesday or Thusrday prior to a deployment. During this meeting, O&M will create a Production Deployment PowerPoint that includes all testing performed for this release, user stories and defects, and a timeline for the release. The Deployment Manager will send an email communication to all deployment stakeholders. This will occur when each step in the process is about to start, when it has finished, and for status updates.

#### Deployment / Installation / Back-Out Checklist

Table 9 provides the checklist for the deployment, installation, and back-out activities. Deployments are held after-hours and on weekends, whenever possible as to limit impacts to production users.

Deployment / Installation / Back-Out Checklist

|  |  |  |  |
| --- | --- | --- | --- |
| Activity | Day | Time | Individual who completed task |
| Deploy | 5/26/2021 | Evening | Microsoft |
| Install | 5/26/2021 | Evening | Microsoft |
| Back-Out | N/A unless needed | N/A unless needed | Microsoft |

# Installation

## First Time Installation Instructions

**For this current release, this is not necessary but included in case a future clean install is needed.**

This section provides step-by-step instructions for installing the D365 CRM/UD-O application for the first time, or in a brand new environment. The table below outlines each environment and the corresponding URLs:

Target Environments

|  |  |
| --- | --- |
| Target Environment | URL |
| Development (DEV) | https://dvagov-udo-dev.crm9.dynamics.com/ |
| Integration (INT) | https://dvagov-udo-int4.crm9.dynamics.com/ |
| Quality Assurance (QA) | https://dvagov-udo-qa2.crm9.dynamics.com/ |
| Performance Test (Perf) | https://dvagov-udo-perf2.crm9.dynamics.com/ |
| Production (Prod) | https://dvagov-udo-prod4.crm9.dynamics.com/ |

The full installation procedure for the CRM/UD-O product is detailed in the embedded link below:

[https://microsoft.sharepoint.com/teams/CRMUDOD365Migration/Shared%20Documents/General/CRMUDO/3.%20Build/Build%20&%20Release/UDO%20Migration%20-%20Deployment%20Guide.docx?web=1](https://nam06.safelinks.protection.outlook.com/ap/w-59584e83/?url=https%3A%2F%2Fmicrosoft.sharepoint.com%2Fteams%2FCRMUDOD365Migration%2FShared%2520Documents%2FGeneral%2FCRMUDO%2F3.%2520Build%2FBuild%2520%26%2520Release%2FUDO%2520Migration%2520-%2520Deployment%2520Guide.docx%3Fweb%3D1&data=02%7C01%7CQ.Suliman%40microsoft.com%7C87bf280cda214c6e620b08d75cc61c4a%7C72f988bf86f141af91ab2d7cd011db47%7C1%7C0%7C637079901905222026&sdata=4B9eA3L%2F7NCZk%2BED4lEjudchyAmz0aQSStRHUlbDloo%3D&reserved=0)

*Note: supplemental, release specific insturctions are supplied when applicable and are stored in the appropriate ‘Releases’ sub-folder in Rational.*

*Note: This has been split out to aid in the reading of this document and in the installation instructions as it is a large document containing many screenshots.*

## Release Specific Installation Instructions

The embedded document(s) in this section applies to this specific release:



### Download and Extract Files

Installation files can be found in CRM/UD-O CCM Rational repository in the release specific folder:

(RTC) Source Control > Streams > VA.VRMUDO > VA.VRMUDO > UDO > CRMUDO > UDO > Releases > x.x.xx.x (release being installed)

*Note: The’Releases’ folder contains all releases for the project; please select the appropriate one.*

The following files are included in this release package:

| Package | Release Package Description | Release Package Delivery Method | Release Package Location Identified |
| --- | --- | --- | --- |
| UDO\_ConfigChange\_v2.24.0.0.3.0.Deployment.Guide.docx | Supporting Document | GitHub | <https://github.com/department-of-veterans-affairs/crm-udo-code/releases/tag/vConfRelease2.24.0.0.3.0> |

*Note: CRM installations use .zip files, rather than the traditional or more familiar .exe or similar. These folders are not meant to be unzipped; the solution importer uses the .zip when installing.*

## Access Requirements and Skills Needed for the Installation

To install the CRM/UD-O system, a user must have:

* System Administrator CRM security role;
* Deployment Administrator Access to the CRM Application Server
* Access to the necessary files in Rational.

Additionally, client machines at the CRM/UD-O site will require a web browser and working internet connection.

## Installation Verification Procedure

The VRM PMO conducts smoke testing and post-validation testing (PVT) in order to verify that the system installation was successful. At the conclusion of the PVT, business stakeholders participate in a production go/no-go call to communicate the results of PVT.

## System Configuration

D365 CRM Solutions are customized via CRM Solutions. Solution are ‘packages’ of system customizations of all kinds which can be exported and imported between CRM organizations and handled in various ways to insure the integrity of customization components and stability of the system at large. The content below, from the Microsoft Developer Network (MSDN) Library, discusses in mild detail how CRM Solution Layers operate. For further details, please refer the relevant MSDN entries.

<https://docs.microsoft.com/en-us/dynamics365/customer-engagement/developer/introduction-solutions>

### Solution Components

Solution components are created by using the customization tools or APIs included in Microsoft Dynamics CRM and are fully hosted in the application. The following diagram shows the types of solution components.

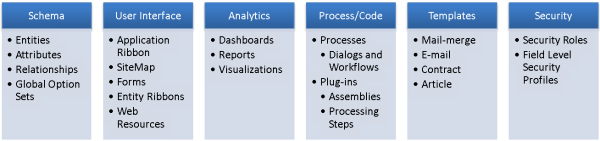


Figure 10 – Solution Components

## Database Tuning

This section is not applicable.

# Back-Out Procedure

Back-Out pertains to a return to the last known good operational state of the software and appropriate platform settings.

The current last known stable and operational Production version is: 2.24.0.0.0.1

## Back-Out Strategy and Procedure

Back-out and rollback are highly intertwined. The same high-level procedure is in place for both back-out and rollback. The back-out and rollback strategy for CRM/UD-O begins at the time of application deployment. The steps below describe, at a general level, what should be included in the procedure for back-out/rollback:

1. At the time of system deployment, create a complete backup of the system and store it on a separate machine.
2. Proceed with application-specific (CRM/UD-O) system deployment steps.
   1. If system fails during deployment, perform a system rollback using the system backup created in step 1.
3. Perform thorough and comprehensive testing to ensure the integrity and functionality of the system.
4. Perform a system backup once the system is deemed stable and ready for users, and store it on a separate machine.
   1. Once users begin working on the system, regularly create system backups and store them on another machine.
5. If system failure occurs after users are on the system, perform a system rollback using the system backup created in step 4a.
6. Any client machines may need to clear their web browser cache before they will see the effects of the system rollback.

The strategy above provides assurance against fault and a guaranteed rollback position in the event of an undiagnosed fault. At times, however, there may be a reason to not rollback the complete solution migration and instead only rollback a portion of it. In such cases, alternate approaches may be taken to restore the system to its previous state, although each approach will be dependent on the situational specifics. Some potential reasons for this include:

* The fault is easily identified and localized in a single CRM component which is deemed non-essential.
* The fault is not identified during initial release testing, but only after the solution is in use in production and a complete database restore is no longer an option.
* The backup file is corrupted or lost.

If a deployment fails, the only recourse is a organization restore to remove the changes made. Full backups are done before the deployment to make this process quicker. A full back up is taken every morning at 5am est.

## Back-Out Considerations

### Load Testing

A performance test that subjects the system to varying workloads in order to measure and evaluate the performance behaviors and abilities of the system to continue to function properly under these different workloads. Load testing determines and ensures that the system functions properly beyond the expected maximum workload. Additionally, load testing evaluates the performance characteristics (e.g., response times, transaction rates, and other time-sensitive issues).

### User Acceptance Testing

User Acceptance Testing (UAT) is conducted for every build that is released to Production to ensure that there are no critical or high defects being deployed to users in the field. Testing is conducted by the PMO team, TI team, and supported by Microsoft’s testing team.

## Back-Out Criteria

The criteria for a back-out are:

* The fault is easily identified and localized in a single CRM component that has been deemed non-essential.
* The fault is not identified during initial release testing, but only after the solution is in use in production, and a complete database restore is no longer an option.
* The backup file is corrupted or lost.

## Back-Out Risks

If a back-out occurs, the only risk is the potential loss of any incremental code releases. When backing out to the last known good operational state of the software, there is the potential loss of functionality added since the last release. This is mitigated by the fact that code can be maintained in the lower environments, reviewed to determine if it was the cause of the corrupted operational state, and then reinstated if it is deemed to be in good working order.

## Authority for Back-Out

The Department of Veterans Affairs (VA) Project Manager has the authority to authorize a back-out.

In the event of a back-out, use the contact information below to receive approval from the appropriate personnel.

Back-out Authority

|  |  |  |
| --- | --- | --- |
| Role | Name | Email |
| VA Project Manager | Lamont Taylor | [Lamont.Taylor@va.gov](mailto:Lamont.Taylor@va.gov) |
| VA Business Sponsor | John Lundy | [John.lundy@va.gov](mailto:John.lundy@va.gov) |
| Microsoft Project Manager | Fred Lupone | [Fred.Lupone@microsoft.com](mailto:Fred.Lupone@microsoft.com) |

## Back-Out Verification Procedure

Back-outs are verified by checking the solution number against the current and the one being implemented. Once the back-out has been completed, the system administrator checks that all settings are configured correctly and were not overwritten. A test is completed in USD to validate that the back-out did not cause any issues with USD.

# Rollback Procedure

Back-out and rollback are highly intertwined. The same high-level procedure for back-out should be applied to rollback.

In the case of this release, if there is a need for a rollback the plugins will be re-enabled. A backup of the database, to be used for this purpose, will be conducted prior to deployment.

## Rollback Considerations

The interactions of overlapping unmanaged CRM solutions can be a burden, at a functional level and at a system level, to a CRM deployment. If precautions are not taken before rolling back changes using a system backup, some of the components delivered in newer solution packages can be overwritten by components contained in the older solutions being used as backups.

The System Design Document for CRM/UD-O better expands upon the various integrations and reliances in the system.

## Rollback Criteria

The criteria to execute back-out procedures would be the occurrence of high-severity defects that have stopped all processing, or high-severity defects that have severely hampered call center operations. The strategy put in place provides assurance against fault, and a guaranteed rollback of data in the event of an undiagnosed fault.

## Rollback Risks

The main risk involved with the rollback process is the improper restoration of data. Data integrity must be maintained in order for the call center agents to provide accurate information to the Veteran callers. If other risks associated with rollback are identified, they will be added to the project risk register which is now maintained in the EPMD Tools Risk SharePoint list.

## Authority for Rollback

The Department of Veterans Affairs (VA) Project Manager has the authority to authorize a rollback of data to a known recovery point. The development, hosting, VA Business, and VA OI&T teams will all make a joint decision on when and how to best execute a rollback if the need arises.

In the event of a rollback, use the contact information below to receive approval from the appropriate personnel.

Rollback Authority

|  |  |  |
| --- | --- | --- |
| Role | Name | Email |
| VA Project Manager | Lamont Taylor | [Lamont.Taylor@va.gov](mailto:Lamont.Taylor@va.gov) |
| VA Business Sponsor | John Lundy | [John.lundy@va.gov](mailto:John.lundy@va.gov) |
| Microsoft Project Manager | Fred Lupone | [Fred.Lupone@microsoft.com](mailto:Fred.Lupone@microsoft.com) |

## Rollback Procedure

Back-out and rollback are highly intertwined. The same high-level procedure for back-out should be applied to rollback. See Section 5.1 for details.

In the case of a failed deployment or a critical, work stopping bug, the CRM software will be reverted to the prior stable version (as discussed in Section 5). However, the piece of most concern is the Veteran data that the system interacts with. CRM/UD-O interfaces with multiple legacy VA systems, which are the System of Record for their specific pieces, but the data that UDO handles and stores (call notes, customer interaction history) will need to be restored using a previous data backup if the problem is severe enough. A full system backup is taken daily at 5am est.

## Rollback Verification Procedure

Back-out and rollback are highly intertwined. The same high-level procedure for back-out should be applied to rollback. See Section 5.6 for details. Rolled back data should be checked for integrity and accuracy after any roll back is conducted.

# Acronyms and Abbreviations

| Acronym | Acronym Meaning |
| --- | --- |
| CRM | Customer Relationship Management |
| MS | Microsoft |
| OI&T | Office of Information and Technology |
| SDD | System Design Document |
| VA | Department of Veterans Affairs |
| VRM | Veterans Relationship Management |