

National Aeronautics and

Space Administration

Headquarters

Washington, DC, 20024

CAREER MANAGEMENT TRACKING SYSTEM

(CMTS)

Version 5.0

VERSION DESCRIPTION DOCUMENT

**Headquarters Information Technology Support Services**

**(HITSS) Task Order**

**Contract Number: NNH12CF39C**

**June 11, 2015**

**DMI, Inc.**

Revision Log

All revisions of this document are listed in chronological order.

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**Issues**

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| --- | --- | --- | --- | --- |
| **Date** | **Description** | **Owner** | **Status (Open/ Closed)** | **Resolution  (if Closed)** |
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1. INTRODUCTION

This Version Description Document (VDD) describes the steps necessary to set up and configure the application server for the National Aeronautics and Space Administration (NASA) application identified below.

* 1. Identification

|  |  |
| --- | --- |
| **Application Name** | CAREER MANAGEMENT TRACKING SYSTEM |
| **Application Acronym** | CMTS |
| **SR Number** | 2015-0002618 |
| **SR Class** | 2 |
| **Version Number** | 5.0 |
| **Deployment Date** | June 19, 2015 |
| **Deployment Time** | WESTPrime: June 18, 2015 6:00 p.m. – June 19 12:00 p.m.  HITSS: June 19, 2015 9:00 a.m. – 12:00 p.m. |

* 1. Purpose

The purpose of this release is to migrate HQ applications from WESTPrime to the HQ VM Cluster.

* 1. Scope

The scope of this release includes the following:

* Migrate CMTS in WESTPrime to the HQ VM Cluster
* Migrate application database schema and data to HQ
  1. Points of Contact

The development points of contact (POCs) will notify the Software Development Management POCs and HQ Information Technology and Communications Division (ITCD) POCs via email during the course of the application deployment.

|  |  |  |  |
| --- | --- | --- | --- |
| **HITSS Deployment Team Points of Contact** | | | |
| **Development** | | | |
| POC 1 | Marithe Le | 571-385-4030 | marithe.le@nasa.gov |
| POC 2 | Alicia McPherson | 571-385-4010 | alicia.mcpherson@nasa.gov |
| **DBA & Crystal Report & DMS Administrator** | | | |
| POC 1 | Bob Ryan | 571-385-4021 | [bob.ryan-2@nasa.gov](file:///C:\Documents%20and%20Settings\shon\Local%20Settings\Temporary%20Internet%20Files\Content.Outlook\Documents%20and%20Settings\shon\Local%20Settings\Temporary%20Internet%20Files\tthomas\Local%20Settings\Temporary%20Internet%20Files\Content.Outlook\H5WJ0TM0\bob.ryan-2@nasa.gov) |
| POC 2 | Weishing Liu | 571-385-4008 | [weishing.liu-1@nasa.gov](file:///C:\Documents%20and%20Settings\shon\Local%20Settings\Temporary%20Internet%20Files\Content.Outlook\Documents%20and%20Settings\shon\Local%20Settings\Temporary%20Internet%20Files\tthomas\Local%20Settings\Temporary%20Internet%20Files\Content.Outlook\H5WJ0TM0\weishing.liu-1@nasa.gov) |
| POC 3 | Carroline Twalla | 571-385-4030 | carroline.c.twalla@nasa.gov |
| **Operations** | | | |
| POC1 | UNIX Server Operations | 202-358-0086 | unix@lists.hq.nasa.gov |
| **Configuration Management** | | | |
| POC | CM Team |  | hitsscm@hq.nasa.gov |
| **Software Development Management** | | | |
| POC 1 | Monalisha Mishra | 571-385-4050 | monalisha.mishra@nasa.gov |
| POC 2 | Dawayne Pretlor | 571-385-4018 | dawayne.e.pretlor@nasa.gov |
| **Integrated Customer Service** | | | |
| POC 1 | Luis Ayala (PM) | 202-350-2103 | Luis.ayala@nasa.gov |
| POC 2 | Tanya Hamlet (TOM) | 202-350-2113 | Tanya.r.hamlet@nasa.gov |
| **NASA Points of Contact** | | | |
| **ITCD** | | | |
| POC 1 | Will Brandt | 202-358-1981 | William.r.brandt@nasa.gov |
| POC 2 | Liteshia Dennis | 202-358-4778 | [liteshia.b.dennis@nasa.gov](mailto:liteshia.b.dennis@nasa.gov) |
| POC 3 | Linda Hong | 202-358-0462 | [Linda.l.hong@nasa.gov](mailto:Linda.l.hong@nasa.gov) |
| POC 4 | Chris McCoy | 202-358-3790 | [christopher.d.mccoy@nasa.gov](mailto:christopher.d.mccoy@nasa.gov) |
| **Application Owner** | | | |
| De Andrea Peters | | 202-358-2009 | deandrea.m.peters@nasa.gov |

1. FUNCTIONAL INFORMATION
   1. Functional Interfaces

There are no changes to functional interfaces for this release.

* 1. Migrated Interfaces

CMTS will be migrated from cuomo-hq-webapp-1-pubvpc.nasawestprime.com to cmts.hq.nasa.gov.

* 1. Application Administration

This section is not applicable to this release.

1. TECHNICAL INFORMATION
   1. Technical System Interface

* Database: Oracle 11g on Rivers
* Application: ColdFusion 10 on cmts.hq.nasa.gov
* Reports: NA
* Web Service: HQTS
* Access Launchpad
* HQ core-load internet browsers:
  + PC: Microsoft Internet Explorer and FireFox
  + MAC: Safari and Firefox
  1. Data Dictionary Changes

There are no changes to the data dictionary for this release.

* 1. Software Object Changes

There are no software object changes with this release.

1. SYSTEM IMPLEMENTATION PLAN

The System Implementation Plan (SIP) provides the information necessary to install the application into the HQ VM Cluster Stage environment for government acceptance testing and then into the Production environment. It describes the procedures that must be accomplished to ensure the orderly transition of the application into Production.

* 1. External Resources and Dependencies

The application is currently hosted in WESTPrime. The HITSS team will coordinate deployment activities with WESTPrime in advance of the deployment date. The steps for coordinating with WESTPrime are noted below.

| **Step** | **Pre-production Deployment** | **Production Deployment** |
| --- | --- | --- |
|  | N/A | Submit Jira ticket (<https://jira.nasawestprime.com>) |
|  | N/A | Complete Configuration Implementation Plan (CIP) |
|  | N/A | Attend WESTPrime CCB |
|  | N/A | Obtain approval |

The Jira ticket for WESTPrime includes the following requests:

* Lock the Production database at the beginning of the deployment window to prevent any further transactions on the current system.
* Provide a dump of CMOTS\_APPL schema for insertion into the new Production application.
  1. Server Identification

|  |  |  |
| --- | --- | --- |
|  | **Stage** | **Production** |
| Application server | cmts.stage.hq.nasa.gov | cmts.hq.nasa.gov |
| Web server | cmts.stage.hq.nasa.gov | cmts.hq.nasa.gov |
| Database server | Weezer.sef.hq.nasa.gov | rivers.hq.nasa.gov |
| Other server | N/A | N/A |

* 1. Deployment Package (Source Code and File Location)

|  |  |  |  |
| --- | --- | --- | --- |
|  | | **Stage** | **Production** |
| Application Deployment Package | Package name(s) | cmts\_build\_5\_0.xml  cmts\_readme\_5\_0.txt  cmts\_v5.0.tar.gz | Already deployed to the staging VM. To be cloned to production. |
| Package location | Large File Transfer | N/A |
| Database Scripts | Script name(s) | N/A | N/A |
| Package location | N/A | N/A |
| Report Files | Report file name(s) | N/A | N/A |
| Report location | N/A | N/A |
| Other material | Material name | N/A | N/A |
| Material location | N/A | N/A |

* 1. Critical Issues

There are no critical issues identified to this release.

* 1. Implementation Schedule

| **Step** | **Production Procedure** |
| --- | --- |
|  | WESTPrime DBA will lock the current production CMOTS\_USER schema on rivers-hq-db-1-prod-priv.ce1huyr3kvoa.us-east-1.rds.amazonaws.com, export CMTS data, and deliver to HITSS DBAs through the large file transfer service. Notify the deployment team that the CMTS database is ready to be migrated. |
|  | HITSS DBA will download and move all database related deployment files from large file transfer to Rivers. Upon completion, notify everyone on the deployment POC list that the database deployment is completed. |
|  | HITSS Operations will deploy application per installation instructions in Section 4.6. Notify everyone on the deployment POC list that the ColdFusion installation is completed. |
|  | HITSS Operations will set up ColdFusion10 Administrator and then notify everyone on the deployment POC list that the setup is complete. |
|  | HITSS DBA will unlock the database and notify everyone on the deployment POC list that the schema is unlock. |
|  | HITSS Development team will test CMTS 5.0 and notify everyone on the deployment POC list when the test is completed. |
|  | If the deployment is not successful, the application will be rolled back (see Section 4.9, Back-out Plans). HITSS Development team will test CMTS 4.0. |
|  | Development team will send notification to everyone on the deployment POC list about the deployment status. |
|  | PM will send notification to NASA customer and ITCD about the deployment status. |

* 1. Application Installation Instructions
     1. **Application**

| **Application Installation** | | |
| --- | --- | --- |
| **Step** | **Stage** | **Production Procedure** |
|  | HITSS DBA will download all application related deployment files from large file transfer to cmts.stage and follow the execution steps specified in the cmts\_readme\_5\_0.txt file to deploy CMTS onto the server. | Operations will start deployment after receiving notification that the CMTS database schema is locked. |
|  | HITSS DBA will notify developers in the deployment POC list that the installation is complete. |  |

| **External Resource Support** | | |
| --- | --- | --- |
| **WESTPrime Database Steps** | | |
| **Step** | **Stage** | **Production Procedure** |
|  | N/A | * Lock the current Production CMTS schema rivers/cmots\_user. * Provide AppDev an schema dump from current Production CMTS database (rivers/cmots) with the following steps:   --- exp file=cmots\_appl.dmp owner=cmots\_appl compress=n statistics=none log=cmots\_appl.log  --- exp file=cmots\_user.dmp owner=cmots\_user compress=n statistics=none log=cmots\_user.log   * + Send files to DBAs. |

* + 1. **Setup in ColdFusion Administration**

|  |  |  |
| --- | --- | --- |
| **Setup ColdFusion Administration** | | |
| **Step** | **Stage** | **Production** |
|  | Login to CF10 Administrator on the cmts.stage.hq.nasa.gov. | Login to CF10 Administrator on the cmts.hq.nasa.gov HQ VM Cluster. |
|  | Setup DataSource “CMTS”:   1. From the left menu, under DATA & SERVICES choose Data Sources 2. From the page on the right, on “Add New Data Source” section, input information given below:  * Data Source Name: CMTS * Driver: Oracle * Click Add  1. In the pop up page, input information given below:  * CF Data Source Name = CMTS * SID Name = weezer * Server = weezer.sef.hq.nasa.gov * Port = 1521 * User Name = CMOTS\_USER (check with DBA) * Password = DBA will give password to CF Admin (check with DBA)  1. Click on 'show Advanced Settings' button, set following attributes accordingly and leave the rest as is: 2. CLOB checkbox – uncheck 3. Allowed SQL -> make sure checkbox "Stored Procedures” is checked. 4. Click Submit and verify that the data source has been created successfully (an ‘OK’ text found under Status column for Data Source Name ‘CMTS’ indicates the creation is successful). | Verify and Update Data Source “CMTS”:  a. From the left menu, under DATA & SERVICES choose Data Sources  b. Edit the CMTS data source update the SID Name, Server and password.  - Password = (check with DBA)  c. Click Submit and verify that the data source has been updated successfully (an ‘OK’ text found under Status column for Data Source Name ‘CMTS’ indicates the creation is successful). |
|  | Enable ‘CMTS‘ data source in ColdFusion10 Sandbox:   1. Login to the ColdFusion10 Administrator. 2. From the left menu, under the Security tab click on the Sandbox Security link. 3. Ensure checkbox for “Enable ColdFusion Sandbox Security” is checked. 4. Scroll down to Defined Directory Permissions section click the link to /usr/local/data/www/docs/ 5. Under the Data Sources tab, move ‘CMTS’ from the Disabled Data sources box on the right to the Enabled Data sources box on the left. 6. Under the CF Tags tab, enable all Tags. 7. Under the CF Functions tab, enable all Functions. 8. Click on the tab: Files/Dirs 9. Copy and paste following paths into the File Path text box and check the Permissions accordingly before hitting the ‘Add Files / Paths’ button:   /usr/local/data/www/docs/   (Permissions: Read, Write, Execute, Delete)  /usr/local/data/www/docs/-      (Permissions: Read, Write, Execute, Delete)  /usr/local/coldfusion10/cfusion/stubs/ (Permission: Write)  /usr/local/coldfusion10/cfusion/stubs/-      (Permission: Write)  /usr/local/coldfusion10/jre/lib/ (Permissions: Read, Execute)  /usr/local/coldfusion10/jre/lib/- (Permissions: Read, Execute)  /usr/local/coldfusion10/cfusion/runtime/work/Catalina/localhost/tmp/      (Permissions: Read, Write, Execute, Delete)  /usr/local/coldfusion10/cfusion/runtime/work/Catalina/localhost/tmp/-     (Permissions: Read, Write, Execute, Delete)  /tmp/     (Permissions: Permissions: Read, Write, Execute, Delete)  /tmp/-     (Permissions: Read, Write, Execute, Delete)  NOTE: make sure there are no trailing spaces before or after the string path.   1. Under the Others tab, move ‘createClassLoader’ from the Disabled Runtime Permissions box on the right to the Enabled Runtime Permissions box on the left.   Click the Finish button to complete enabling CMTS in the sandbox. | Verify ‘CMTS’ data source is enabled in ColdFusion10 Sandbox:  Already done prior cloning. |
|  | Restart ColdFusion10 Server | Restart ColdFusion10 Server. |

* + 1. **Setup Servers**

| **Server Updates** | | |
| --- | --- | --- |
| **Step** | **Stage** | **Production Procedure** |
| 1. | N/A | Verify that cmts.hq.nasa.gov and ws.hq.nasa.gov certificate is installed to CF Keystore for these two directories: /usr/local/coldfusion/jre/lib/security, /usr/local/coldfusion/cfusion/jetty/jre/lib/security/keytool -list -v -keystore cacerts -storepass PASSWORD > /tmp/keystore (substitute in correct value for PASSWORD)  Then edit /tmp/keystore and search for cmts.hq.nasa.gov and ws.hq.nasa.gov |
| 2. | N/A | Cut over DNS <https://cmts.hq.nasa.gov> from CMTS on cuomo-hq-webapp-1-pubvpc.nasawestprime.com |

* 1. Database Instructions

| **Database Implementation** | | |
| --- | --- | --- |
| **Step** | **Stage** | **Production Procedure** |
| 1. | N/A | Download CMTS database dump received from WESTPrime |
| 2. | Load schema and data onto the weezer database server | Load cmots\_appl.dmp and cmots\_user.dmp onto the Rivers database server |
| 3. | Change password for CMOTS\_USER. | Change password for CMOTS\_USER. |
| 4. | Provide password for CMOTS\_USER to operations. | Provide password for CMOTS\_USER to operations. |
| 5. | Analyze and compile all objects in the CMOTS\_APPL schema. | Analyze and compile all objects in the CMOTS\_APPL schema. |
| 6. | Grant all privileges to synonym CMOTS\_APPL. | Grant all privileges and synonyms from CMOTS\_APPL to CMOTS\_USER. |
| 7. | N/A | Notify HITSS Operations that the database setup is completed. |

* 1. Notifications

Notification will be sent to the appropriate team at the end of each phase of the deployment.

|  |  |
| --- | --- |
| **DBA POC** | Notify via email both the HITSS deployment team and the WESTPrime deployment team that the CMTS application is ready to be migrated. |
| **Operations POC** | Notify via email the HITSS deployment team of successful completion of ColdFusion set up. |
| **Development POC** | Notify HITSS deployment team POCs (Section 1.4) via email of deployment status. |
| **PM** | Notify NASA ITCD POCs (Section 1.4) via email of deployment status; if deployment was successful, notify NASA application owner that application requires testing. |

* 1. Back-out Plans

This section provides a description of the steps to be performed in the event that the application must be restored to its previous version.

| **Step** | **Stage** | **Production Back-out** |
| --- | --- | --- |
|  | N/A | Cut over the DNS https://CMTS.hq.nasa.gov back to cuomo-hq-webapp-1-pubvpc.nasawestprime.com. |
|  | N/A | Decommission CMTS.hq.nasa.gov VM. |
|  | N/A | Notify the HITSS deployment team that the back-out is complete. |

| **Database Back-out** | | |
| --- | --- | --- |
| **Step** | **Stage** | **Production** |
|  | N/A | HITSS DBA will lock CMOTS\_USER schema and notify HITSS Operations to begin application un-installation. |
|  | N/A | The CMTS database on the Rivers server will be removed by HITSS DBA after receiving notifications from HITSS Operations that the server CMTS.hq.nasa.gov has been decommissioned. |
|  | N/A | WESTPrime DBA will unlock the CMOTS\_USER schema on rivers-hq-db-1-prod-priv.ce1huyr3kvoa.us-east-1.rds.amazonaws.com after receiving notifications from HITSS Operations and HITSS DBA that back-out is complete. |

* 1. Operational Preparation

Commence installation by following instructions given in Section 4.6.2 above.

* 1. Confirmation

1. After completion, HITSS Operations and DBA will notify the Development POCs via email and page of successful deployment.
2. The Development POCs will test the system to ensure that the deployment was successful.
3. The PM will contact the customer and inform them of application deployment.
4. The PM will contact the ITCD POCs via email and inform them of application deployment and notify the customer that the application requires testing.
5. If there are any issues with verification, the PM will contact HITSS DBA Administrator and HITSS Operations and have the application uninstalled.
6. Notification for the aborted deployment will be issued to the Software Development Management POCs and the ITCD POCs.

APPENDIX — ACRONYMS

|  |  |
| --- | --- |
| **Acronym** | **Definition** |
| CM | Configuration Management |
| DBA | Database Administrator |
| HITSS | Headquarters Information Technology Support Services |
| HQ | Headquarters |
| ITCD | Information Technology and Communications Division |
| NASA | National Aeronautics and Space Administration |
| PM | Project Manager |
| POC | Point of Contact |
| SIP | System Implementation Plan |
| Stage | WESTPrime Stage Environment |
| CMTS | Unit Price Agreement Tracking System Web |
| VDD | Version Description Document |