Decision Support System (DSS)

Version Description Document (VDD)
FY2018
Software Version 3.0
Patch ECX*3.0*169

November 2017

Document Version 1.1

Department of Veterans Affairs (VA)
Office of Information and Technology (OI&T)

Document Revision History

Date	Version	Description	Author
11/01/2017	v1.0	Initial document release	TeamSMS/Leidos
11/17/2017	v1.1	Updated to reference patch number ECX*3.0*169	TeamSMS/Leidos

Deliverable (Product) Version History

Date	Release / Revision	Description	Project Name	VA Department
11/01/2017	ECX*3.0*166	DSS Extracts FY18 Annual Sustainment Patch	Decision Support System Annual Sustainment Project	Product Support
11/17/2017	ECX*3.0*169	DSS Extracts FY18 Update Patch	Decision Support System Annual Sustainment Project	Product Support

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1   General Configuration Management (CM) Information

Table 1 below lists the general CM information for the proposed changes for the sustainment effort for Fiscal Year 2018 (FY18) to the Decision Support System (DSS) application Patch Update Release ECX*3.0*169. The Patch Release number is assigned by creating a new patch number in the FORUM patch module and includes the following components for the DSS FY18 Annual Sustainment application:

- Project Namespace: ECX

- DSS Extracts Software Application Version: 3.0

- Patch Number: 169

Table 1: General CM Information

Deliverable (Product) Name	Configuration Manager	VDD Package Name	Project Manager
ECX*3.0*169	Melissa Duquette, Configuration/Release Manager	Not Applicable (N/A)	Lisa Forren

2 Configuration Management (CM) Tools

Rational CM is a collaborative software development/delivery environment based on the Jazz technology platform from International Business Machines (IBM). Rational CM provides documentation version control and workspace management. This product is part of the Office of Information and Technology (OI&T) Chief Information Officer's (CIO) mandated standardized toolset for OI&T projects.

For Massachusetts General Hospital Utility Multi-Programming System (MUMPS)-based VistA patches, there are currently no available CM tools approved for use by the VA. To comply with VIP processes, a baseline snapshot of DSS MUMPS routines is created and posted to Rational CM. Additional snapshots are created and posted throughout the development cycle. Refer to Section 4 for additional information.

Table 2 describes where the project artifacts for DSS FY18 are located within Rational.

Table 2: Configuration Management Tools

CM Tools	CM Tool Location	Tool Onsite/ Offsite	CM Tool Access Point of Contact	Access Information (Forms or other access requirements)
Rational DOORS Next Generation (RDNG) Requirements Management (RM)	Web Application	Onsite	Department of Veterans Affairs (VA) Rational Tools Team	Rational@va.gov
Change Configuration Management (CCM)	Web Application	Onsite	VA Rational Tools Team	Rational@va.gov
Rational Quality Management (RQM)	Web Application	Onsite	VA Rational Tools Team	Rational@va.gov

3   Configuration Management of Documents

Project-related documents are managed and controlled within the Rational Tool Suite. Final documentation deliverables are posted in the VA Software Document Library (VDL).

3.1   Rational Change and Configuration Management (CCM) Documents

Table 3 details the CCM location for the DSS FY18 documents.

Table 3: Rational CCM Information

CCM Information	Explanation
CCM Universal Record Location (URL)	DSS (CM) Source Control Note: If selecting the hyperlink returns an error, copy and paste the link directly into a browser; do not click on it.
CCM Project Area	Rational DSS (CM) Project Area
CCM Team Area	Sustainment Team
CCM Stream	DSS_Docs
Baseline Identification (ID)	ECX*3.0*169
Components	DSS_Docs_ECX-3-169
Directory Path	DSS(CM) > Source Control > Streams > DSS-Docs > DSS_Docs_ECX-3-169
Documents Included in the Baseline	DSS_FY2018_VDD (Version Description Document) DSS_FY2018_DIBR (Deployment, Installation, Back-out, and Rollback) DSS_FY2018_UG (User Guide) DSS_FY2018_TM (Technical Manual) DSS_FY2018_DD (Data Dictionary)

4   Configuration Management Development Files

DSS development is completed in accounts created for and managed by the Albany Field Office (AFO). AFO has multiple accounts used by various development groups. The following subsections describe the CM development files.

4.1   Rational CCM Repository

The DSS application source code is developed using the MUMPS language and development environment. Development Source artifacts are not maintained in the Rational CCM Repository during development. Instead, development source artifacts/builds are produced and maintained on VistA servers. Documentation delivery artifacts are maintained in the Rational CCM repository as described in the Configuration Management of Documents Section above.

4.1.1   Baseline and Component

Table 4 below lists the baseline details for DSS FY18.

Table 4: Development Files Baseline Details

Name	Description
ECX_30_169.KID	ECX*3.0*169 – The baseline containing the DSS FY18 Annual Sustainment Patch update.
Required Patches: ECX_30_146.KID ECX_30_161.KID ECX_30_166.KID	ECX*3.0*146, ECX*3.0*161, and ECX*3.0*166 were previously released annual sustainment patches (2013, 2016, and 2017 respectively) and contain shared routines which make them pre-requisites for installing ECX*3.0*169.

4.1.2   Build Information

Builds are performed in the Veterans Health Information Systems and Technology Architecture (VistA) development account(s) for the MUMPS code. Builds are performed using selected versions of the formally submitted source code contained within the Development Repositories. General build information that results from the build process is maintained in the DSS (CM) repository as detailed in Table 5.

Table 5: Build Information

Name	Description
Build Output	The DSS build process does not generate output.
Build Output Directory	N/A
Target Deployment Location	ECX*3.0*169 will first be deployed to 5 Initial Operating Capability (IOC) production sites. Upon successful IOC deployment, the patch will be released nationally at the enterprise level no later than November 30, 2017. VistA Patches are released in FORUM using Packman messages.

4.1.3   CCM Build Definition

The Product Component build uses the approved product design and all applicable standards, tool sets, and environments.

4.1.4   Build Label or Number

The Package Build consists of the individual application components, and the System Build (Release Packages) includes all packages that comprise the entire release for the specific environment.

Table 6 lists the identifier for the derived object or package produced for deployment and/or install for DSS FY18.

Table 6: Build Label or Number

Name	Description
ECX*3.0*169	DSS FY18 Annual Sustainment (AS) Update Patch DSS Extracts version 3.0, Patch 169

5 Build and Packaging

The methods of packaging and rules concerning management of a release are determined by OI&T Release Management, working with Product Management to meet the needs of the development team, along with consideration for the operational needs for accepting the product. For VA products being developed, the primary form of a release candidate will be in the form of an electronically packaged release.

5.1 Build Log

DSS FY18 update patch was developed in one product build in response to Remedy Ticket I17314063FY18. ECX*3.0*169 is the product build that is intended to move forward to the IOC production environments.

5.2 Build System/Process Information

The Kernel Installation and Distribution System (KIDS) is used to manually bundle all the code for distribution. The builds are then sent to FORUM where they become the basis of the patch that is sent to the sites for installation.

6   Change Tracking

Change tracking identifies a set of work product versions created to resolve a specific Change Request. For MUMPS based VistA patches, there are currently no available CM tools approved for use by the VA.

For DSS, a baseline snapshot of M routines is created and posted to Rational and may be used to observe changes between fiscal year patches. Table 7 lists where the change tracking information can be found.

Table 7: Change Tracking Information

Change Tracking Tool	Change Tracking Tool Location	Tool Onsite/ Offsite	Change Tracking Tool Access / Point of Contact (POC)	Access Information (Forms or other access requirements)
Rational (CM)	Web Application	Onsite	VA Rational Tools Team	Rational@va.gov

6.1   Rational CCM Repository

Table 8 provides details for the CCM Repository used for Change Tracking.

Table 8: Rational CCM Change Tracking Repository Information

CCM Information	Explanation
CCM URL	DSS (CM) Project Dashboard Note: If selecting the hyperlink returns an error, copy and paste the link directly into a browser; do not click on it.
CCM Project Area	DSS(CM) Project Area
CCM Team Area	Sustainment Team

7   Business User Stories

Table 9 provides details for the DSS FY18 Business User Stories (BUSs) maintained in the DSS (RM) Project area that are included in this release. These BUSs are implemented by executing work items maintained in the DSS (CM) project area to produce the artifacts, also maintained in the DSS (CM) project area, that comprise the build.

Table 9: Business User Stories

Count	BUS ID (from Rational RM tool)	BUS Summary
1	861801	As a user I want to know the Unit of Issue for prosthetics items provided to the Veteran.
2	862563	As a user I need to be able to produce a report to identify rental prosthetics items.
3	862564	As a user I need to collect all possible Ionizing Radiation values.
4	862565	As a user I need to know the value in the Medical Specialty field for Non-Operating Room (OR) cases in the Surgery file.
5	862568	As a user I want the default Action to Send for any newly added Occasion of Service (OOS) clinics to be Action Code 5.
6	862569	As a user I need to be able to read the Patient Division in Station 5 (Sta5) or Station 6 (Sta6) form.
7	862571	As a user I want to populate the Facility field with the Patient's Location in Sta5 and Sta6 forms.
8	862572	As a user I want to collect the Production Division code in the Treating Specialty Change Extract (TRT) extract.
9	862573	As a user I no longer need International Classification of Diseases - Ninth Revision (ICD 9) Postop Diagnosis Code fields in the Surgery (SUR) extract.
10	862574	As a user I want current acronyms in the Extract Manager's menus and files for Patient Information Management System (PIMS) and Managerial Cost Accounting Office (MCAO).
11	862575	As a user I want current acronyms in the Data Definitions Document (DDD) and User Manual for PIMS and MCAO.
12	862576	As a user I want a report listing possible Test Patients.
13	862577	As a user I want to be able to lookup Current Procedural Terminology (CPT) Codes, ICD 9 Codes, and International Classification of Diseases - Tenth Revision (ICD 10) Codes.
14	862578	As a user I no longer need the Current Procedural Terminology (CPT) Inquiry option.
15	862579	As a user I no longer need the Feeder Key field #9 in the Clinical (CLI) extract.
16	862580	As a user I need to capture MCA Labor Type in the Feeder Key field of the CLI extract.
17	862581	As a user I want the option to specify Managerial Cost Accounting (MCA) Labor Code in the Clinics and Stop Codes file.

Count	BUS ID (from Rational RM tool)	BUS Summary
18	862582	As a user I want the "DSS Unit Identifier" field renamed to "Non-OR DSS Identifier" in the Clinics and Stop Codes file.
19	862583	As a user I want to be able to Add, Change and Remove the MCA Labor Code and Non-OR DSS Identifier for any existing clinic.
20	862584	As a user I want to see the MCA Labor Code on the Duplicate Clinics Reports.
21	862585	As a user I want to see the MCA Labor Code and Non-OR DSS Identifier on the Clinics and Stop Codes print reports.
22	862589	As a user I need to know which current extract reports and audits need to be run pre-extract vs. post extract.
23	862590	As a user I do not need the Setup for DSS Lab Results Information on the Maintenance Menu.
24	862591	As a user I want to see records with pseudo-Social Security Numbers (SSN) in all extracts.
25	862592	As a user I need to capture up to 3 organs for transplant surgery cases.
26	862594	As a user I do not want empty extracts to transmit.
27	862595	As a user I need to see current Anesthesia Technique values in the VistA Data Dictionary and DDD document for VDL and Information Management / Knowledge Management (IM/KM).
28	862596	As a user I want to see accurate and complete Technical Description of the IVP Cost field in the VistA Data Dictionary and DDD (IM/KM and VDL).
29	862597	As a user I want to see valid times in all extracts.
30	862598	As a user I want accurate data and technical descriptions in the VistA data dictionary.
31	862599	As a user I want accurate Extract Logic documentation.
32	862600	As a user I want the DSS application to handle new and modified extract fields accurately during FY changes.
33	862601	As a user I want current Report Logic documentation.
34	862602	As a DSS Test Site manager I want to be able to test current and upcoming FY programming changes.
35	863836	As a user I would like to see pre-extract Audits and Reports grouped together in the Manager's menu.
36	863854	As a user I want a report listing all possible Units of Issue from file# 420.5.
37	863858	As a user I want all reports showing the CLI Feeder Key to use the New Feeder Key field instead.
38	889665	As a user when I run the Event Capture System (ECS) extract, I want to include State Veteran Home records that are late and have not already been previously extracted.
39	902284	As a user I need the Application Programming Interface (API) that determines whether the encounter is inpatient or outpatient to obtain the time of service in the IVP extract.
40	902881	As a user I need the Radiology Extract (RAD) to contain all the records within the date range including the ones on the end date and the starting date.

8   Release (Deployment) Information

The VIP release management process is required for any release into production environments, for all national releases (limited or widespread), and for all releases that might have a national impact.

The Application Coordinator is responsible for coordinating the activities for the national release of the product or patch, representing Health Product Support (HPS) for the product or patch release. This includes working with the appropriate Sustainment Manager (SM) to ensure a smooth and successful transition of the product from development to sustainment. This project is using the IOC model.

Table 10 below lists the release deployment POC information for DSS FY18.

Table 10: Release (Deployment) POC Information

Release Identification	Release Package POC Name	Release Package POC Email
ECX*3.0*169	Stacy Hardy HPS Application Coordinator	Stacy.Hardy@va.gov

Table 11 below lists the release package information for DSS FY18.

Table 11: Release Package Information

Release Package (Component) Identified	Release Package Description	Release Package Delivery Method	Release Package Location Identified
ECX*3.0*169	KIDS Build DSS FY18 annual sustainment update patch	FORUM KIDS Build	FORUM.MED.VA.GOV

Appendix A　　Acronyms

Table 12 lists the acronyms used in this document.

Table 12: Acronym Table

Acronym	Description
AFO	Albany Field Office
API	Application Programming Interface
AS	Annual Sustainment
BUS	Business User Story
CCM	Change and Configuration Management
CIO	Chief Information Officer
CLI	Clinic Extract
CM	Configuration Management
CPT	Current Procedural Terminology
DD	Data Dictionary
DDD	Data Definitions Document
DSS	Decision Support System
ECS	Event Capture Extract
FY	Fiscal Year
HPS	Health Product Support
IBM	International Business Machines
ID	Identification
IM/KM	Information Management / Knowledge Management
IOC	Initial Operating Capability
IVP	Intravenous Pharmacy Detail Extract
KIDS	Kernel Installation and Distribution System
MCA	Managerial Cost Accounting
MCAO	Managerial Cost Accounting Office
MUMPS	Massachusetts General Hospital Utility Multi-Programming System
N/A	Not Applicable
NON-OR	Non-Operating Room
OI&T	Office of Information and Technology
OOS	Occasion of Service
PIMS	Patient Information Management System
POC	Point of Contact
RAD	Radiology Extract
RDNG	Rational DOORS Next Generation
RM	Requirements Management
RQM	Rational Quality Manager

Acronym	Description
SCM	Software Configuration Management or Source Code Management
SM	Sustainment Manager
SSN	Social Security Number
Sta5	Station number 5 digits (Point of-Service VHA Facility/Division number)
Sta6	Station number-6 digits (National Facility/Division number)
SUR	Surgery Extract
TBD	To Be Determined
TRT	Treating Specialty Change Extract
URL	Universal Record Location
VA	Department of Veterans Affairs
VDD	Version Description Document
VDL	VA Software Document Library
VistA	Veterans Health Information Systems and Technology Architecture

Appendix B   Data Dictionary Changes

Table 13 is a list of the Data Dictionary Definitions modified for DSS FY18 patch ECX*3.0*169.

Table 13: Data Dictionary Changes

File Name	File Number	Field Name	Field Number
ADMISSION EXTRACT	#727.802	RADIATION STATUS	#22
ADMISSION EXTRACT	#727.802	PATIENT DIVISION	#99
BCMA EXTRACT	#727.833	RADIATION STATUS	#63
CLINIC EXTRACT	#727.827	PLACEHOLD FEEDER KEY	#9
CLINIC EXTRACT	#727.827	RADIATION STATUS	#38
CLINIC EXTRACT	#727.827	NEW FEEDER KEY	#131
CLINIC EXTRACT	#727.827	PATIENT DIVISION	#132
EVENT CAPTURE LOCAL EXTRACT	#727.815	RADIATION EXPOSURE	#35
EVENT CAPTURE LOCAL EXTRACT	#727.815	PATIENT DIVISION	#129
IV DETAIL EXTRACT	#727.819	COST	#13
IV DETAIL EXTRACT	#727.819	RADIATION STATUS	#53
IV DETAIL EXTRACT	#727.819	PATIENT DIVISION	#94
PHYSICAL MOVEMENT EXTRACT	#727.808	PATIENT DIVISION	#38
PRESCRIPTION EXTRACT	#727.81	RADIATION STATUS	#45
PRESCRIPTION EXTRACT	#727.81	PATIENT DIVISION	#106
PROSTHETICS EXTRACT	#727.826	RADIATION EXPOSURE STATUS	#21
PROSTHETICS EXTRACT	#727.826	UNIT OF ISSUE	#104
QUASAR EXTRACT	#727.825	RADIATION EXPOSURE	#35
QUASAR EXTRACT	#727.825	PATIENT DIVISION	#129
RADIOLOGY EXTRACT	#727.814	PATIENT DIVISION	#54
SURGERY EXTRACT	#727.811	PLACEHOLD PRINC POSTOP DX	#85
SURGERY EXTRACT	#727.811	PLACEHOLD OTHER POSTOP DX_#1	#86
SURGERY EXTRACT	#727.811	PLACEHOLD OTHER POSTOP DX_#2	#87
SURGERY EXTRACT	#727.811	PLACEHOLD OTHER POSTOP DX_#3	#88
SURGERY EXTRACT	#727.811	PLACEHOLD OTHER POSTOP DX_#4	#89
SURGERY EXTRACT	#727.811	PLACEHOLD OTHER POSTOP DX_#5	#90
SURGERY EXTRACT	#727.811	RADIATION STATUS	#103
SURGERY EXTRACT	#727.811	MEDICAL SPECIALTY	#134
SURGERY EXTRACT	#727.811	ORGAN1	#135
SURGERY EXTRACT	#727.811	ORGAN2	#136
SURGERY EXTRACT	#727.811	ORGAN3	#137
SURGERY EXTRACT	#727.811	PATIENT DIVISION	#138

File Name	File Number	Field Name	Field Number
UNIT DOSE LOCAL EXTRACT	#727.809	RADIATION STATUS	#40
UNIT DOSE LOCAL EXTRACT	#727.809	PATIENT DIVISION	#90
CLINICS AND STOP CODES	#728.44	NON-OR DSS IDENTIFIER	#8
CLINICS AND STOP CODES	#728.44	MCA LABOR CODE	#13
MCA LABOR CODE	#728.442	MCA LABOR CODE	#.01
MCA LABOR CODE	#728.442	LABOR CODE DESCRIPTION	#1
MCA LABOR CODE	#728.442	STATUS	#2