Decision Support System 3.0

Technical Manual

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Revision History

Date	Revision	Description	Author
04/2023	2.3	Updated for Patch **ECX*3.0*187** Updated Table 1 DSS Reference Material Updated Table 7 Field Changes in DSS for Current Release	Booz Allen Hamilton
12/2022	2.2	Updated for Patch **ECX*3.0*185** Updated Table 1 DSS Reference Material Updated Table 7 Field Changes in DSS for Current Release, reflecting no changes.	Booz Allen Hamilton
4/2022	2.1	Updated for Patch **ECX*3.0*184** Added content to section 7.1 Integration Control Registrations Modified Table 2 to include name of new Pre-Extract Audit Report: Event Capture Pre-Extract Missing DSS Identifier Report Updated number of bytes per record in Table 9 Extract Name/Bytes per Record Updated Figure 1 Data Transmission Header	Booz Allen Hamilton
5/28/2021	2.0	Updated for Patch **ECX*3.0*181** Updated for Compliance with Current OIT Style Guide Updated for Compliance with Current TM Template	Liberty IT Solutions
5/28/2020	1.0	Initial Document	Liberty IT Solutions

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1 Introduction

The Decision Support System (DSS) is the designated Managerial Cost Accounting (MCA) System of the Department of Veterans Affairs (VA) as mandated in the Veterans Health Administration (VHA) Directive 1750 VHA Managerial Cost Accounting System (Decision Support System (DSS), March 24, 2015.

DSS is a derived database built from standard VHA data sources. The Managerial Cost Accounting Office (MCAO) uses clinical and financial data to provide state-of-the-art activity-based costing and clinical productivity analyses.

This is a design-to-schedule project with a compulsory Patch Release date of no later than November 1 of the new Fiscal Year (FY). This project enables the MCAO to accurately accommodate changes to the primary Clinical Transaction Systems made during the preceding year, ensuring the workload data has been accurately captured and costed to the Product Level.

MCA Cost Data is used at all levels of the VA for functions such as budgeting and resource allocation. Additionally, the system contains a rich repository of clinical information used to promote a proactive approach to the care of high-risk (e.g., diabetes and acute coronary patients) and high-cost patients.

1.1 Purpose

The DSS Technical Manual serves the following purposes:

- Provides technical information to aid Automated Data Processing Application Coordinators (ADPACs) and Office of Information and Technology (OIT) service staff responsible for implementing and maintaining the software.
- Provides technical information to aid Database Administrator (DBA) personnel responsible for maintaining database files.
- Provides security information for Information Security Officer (ISO) and Regional Information Security Officer (RISO) staff.

1.2 Overview

The DSS Extracts Version 3.0 software provides a means of exporting data from selected Veterans Health Information Systems and Technology Architecture (VistA) software modules and transmitting it to a DSS database residing at the Austin Information Technology Center (AITC).

This transfer is accomplished through a set of extract routines, intermediate files, and transmission routines. Data from VistA packages is stored by the extract routines in the intermediate files, where it is temporarily available for local use and auditing. The data is then transmitted to the AITC, where it is formatted and uploaded into commercial software. After the data has been successfully uploaded into the commercial software, it is purged from the intermediate files.

1.2.1 Functions of the Software

The DSS Extracts software provides the following functionalities:

- Implements Extracts Processes
- Schedules Extracts
- Verifies Extracts against other VistA Reports
- Transmits Extracts to Commercial Software
- Verifies Transmissions
- Allows Deletion of Extracts
- Allows Purging of Holding Files for the Intravenous (IV) Detail Extract (IVP), the Unit Dose Local Extract (UDP), and the VistA Blood Establishment Computer Software (VBECS) Blood Bank Extract (LBB)

1.3 Document Orientation

The intended audience for this document is local IT support, management, and development personnel for nationally released software. It provides sufficient technical information about the software for developers and technical personnel to operate and maintain the software with only minimal assistance from Product Support staff.

The namespace assigned to the DSS Extracts software is ECX.

The References section of this document lists DSS resources that can be found on the VA Software Document Library (VDL).

Package security information is located in the Security Keys sections of this manual.

Notes

- User responses in the examples presented in this manual are displayed in **bold** type.
- Internal document links and VDL links in this manual are displayed in blue type.

1.3.1 Disclaimers

1.3.1.1 Software Disclaimer

This software was developed at the Department of Veterans Affairs (VA) by employees of the Federal Government in the course of their official duties. Pursuant to title 17 Section 105 of the United States Code this software is not subject to copyright protection and is in the public domain. VA assumes no responsibility whatsoever for its use by other parties, and makes no guarantees, expressed or implied, about its quality, reliability, or any other characteristic. We would appreciate acknowledgement if the software is used. This software can be redistributed and/or modified freely provided that any derivative works bear some notice that they are derived from it, and any modified versions bear some notice that they have been modified.

1.3.1.2   Documentation Disclaimer

The appearance of external hyperlink references in this manual does not constitute endorsement by the Department of Veterans Affairs (VA) of this Web site or the information, products, or services contained therein. The VA does not exercise any editorial control over the information you may find at these locations. Such links are provided and are consistent with the stated purpose of the VA.

1.3.2   References

Table 1 lists the manuals related to DSS that are available to view in the VA Software Document Library (VDL) for DSS.

Table 1 DSS Reference Material

File Name	Manual Name	Description
ecx_3_187_dibr	DSS FY24 (ECX*3*187) Deployment, Installation, Back-out, and Rollback Guide	Provides instructions on the installation of DSS Extracts application software.
ecx_3_187_ddd	DSS FY24 (ECX*3*187) Data Definitions Document	Provides detailed information that defines the data terminology.
ecx_3_187_ug	DSS FY24 (ECX*3*187) User Guide	Provides guidance for users of the DSS application software.

2 Implementation and Maintenance

The Management Menu enables the Extract Manager or designee to perform a variety of functions, listed in Table 2.

Refer to the DSS Installation/Rollback Guide (DIBR) for more information about installing and implementing the software.

Table 2 Management Menu Options and Activities

Option	Activity
Maintenance	Produce the Community Based Outpatient Clinic (CBOC) Activity Report
	Perform Current Procedural Terminology (CPT) and International Classification of Diseases (ICD) Inquiries
	Perform DSS Ward Management Activities
	Add or Modify Pharmacy IV Room Division Entries
	Print the Pharmacy IV Room Worksheet
	Perform Pharmacy Menu National Drug Code (NDC) Lookup
	Perform Pharmacy Volume Log Maintenance Activities
	Print the Feeder Key Listings
	Print the Feeder Location Listings
	Print Stations and Divisions
	Produce the Prosthetics Reports
	Maintain Prosthetics Extract Quantity Information
	Perform DSS Clinic Setup Activities
	Produce the DSS Clinic Setup Reports
	Perform Inpatient Census Setup Activities
	Produce the Test Patient List
	View Gains and Losses (G&L) Corrections Listings
Pre-Extract Audit Reports	Produce the Event Capture Pre-Extract Missing DSS Identifier Report
	Produce the Event Capture Pre-Extract Unusual Volume Report
	Produce the Laboratory Blood Bank (LBB) Pre-Extract Audit
	Produce the Pharmacy Pre-Extract Incomplete Feeder Key Reports
	Produce the Pharmacy Pre-Extract Unusual Cost Reports
	Produce the Pharmacy Pre-Extract Unusual Volume Reports
	Produce the IVP/UDP Source Audit Reports
	Produce the Prosthetic Pre-Extract Unusual Cost Report
	Produce the Surgery Pre-Extract Volume Report
	Produce the Surgery Pre-Extract Unusual Volume Report
	Produce the Surgery Pre-Extract Observation Report
Package Extracts	Generate the Admissions Extract
	Generate the BCMA Extract
	Generate the Blood Bank Extract
	Generate the Clinic Visit Extract
	Generate the Event Capture Extract
	Generate the IV Extract
	Generate the Lab Extract
	Generate the Prescription Extract

	Generate the Prosthetics Extract Generate the Radiology Extract Generate the Surgery Extract Generate the Transfer and Discharge Extract Generate the Treating Specialty Change Extract Generate the Unit Dose Extract
SAS Extract Audit Reports	Produce the SAS Prescription Audit Report Produce the SAS Radiology Audit Report Produce the SAS Surgery Audit Report
Extract Audit Reports	Create Extract Audit Reports Produce the Radiology Extract CPT Code Audit Report Produce the Extract Stop Code Validity Report
Transmission Management	Review Extracts for Transmission Transmit Extract Files Produce the Summary Report of Extract Logs Delete Extract Files Purge Extract Holding Files Recreate Extract Holding Files

2.1   System Requirements

This VistA software is a Kernel Installation and Distribution System (KIDS) software release.

2.1.1   Hardware Requirements

N/A

2.1.2   Software Requirements

The DSS Extract Package relies on the following external packages based upon the minimum software versions depicted in Table 3.

Table 3 External Package Minimum Versions Required

Software Product Name	Acronym	Minimum Version Required
Admission Discharge Transfer	ADT	5.3
Bar Code Medication Administration	BCMA	3.0
DSS Extracts	DSS	3.0
Event Capture	-	2.0
FileMan	-	22.2
Health Level 7	HL7	1.6
Kernel	-	8.0
Laboratory	-	5.2
Lab: Blood Bank	-	5.2
MailMan	-	8.0

Software Product Name	Acronym	Minimum Version Required
Mental Health	-	5.01
Order Entry/Results Reporting	OE/RR	3.0
Patient Care Encounter	PCE	1.0
Pharmacy: Data Management	PDM	1.0
Pharmacy: Inpatient Medications	-	5.0
Pharmacy: National Drug File	NDF	4.0
Pharmacy: Outpatient Pharmacy	-	7.0
Prosthetics	-	3.0
Radiology	-	5.0
Registration	-	5.3
Scheduling	-	5.3
Surgery	-	3.0

2.1.3   Database Requirements

Perform the steps in Table 4 from the FORUM Menu to obtain the DBIAs for DSS Extracts 3.0.

Table 4 Steps to Obtain DBIAs

Step	Custodial Package	Subscriber Package
1	DBA MENU	DBA MENU
2	INTEGRATION CONTROL REGISTRATIONS (ICR)	INTEGRATION CONTROL REGISTRATIONS
3	Custodial Package Menu	Subscriber Package Menu
4	ACTIVE ICRs by Custodial Package	Print ACTIVE by Subscribing Package
5	Select PACKAGE NAME: **DSS**	START WITH SUBSCRIBING PACKAGE: A// **DSS**
6	DEVICE: HOME// <**Enter**> SSH VIRTUAL TERMINAL <**Enter**> Note: Secure Shell (SSH)	GO TO SUBSCRIBING PACKAGE: ZZZ//**DSS**
7	N/A	DEVICE: <**Enter**> SSH VIRTUAL TERMINAL

2.2　System Setup and Configuration

Decision Support System does not require site parameters.

2.2.1　Background Job Options

There are no routine background jobs that must run to maintain normal package operation for DSS Extracts. However, when running a DSS data extract, users must execute it as a background task (queued through TaskManager).

Both Statistical Analysis System (SAS) and Extract Audit reports can be displayed on the user's screen, printed immediately to a print device, or queued to a print device. All other reports can only be printed as queued background jobs and cannot be stopped through the TaskMan User [XUTM USER] option.

Table 5 lists the functions that must be queued as background tasks.

Table 5 Required Queued Background Task

Function	Menu Option	Details
Transmit extract data	[ECXTRANS]	Transmit Data from Extract Files
Stop extract Background Task	[XUTM USER]	TaskMan user option. Users can stop the Extract Background Task while it is running by using the TaskMan user [XUTM USER] option. If queued as a background task, users can stop the background task while it is running by using the TaskMan user [XUTM USER] option.
Delete extract data	[ECXDELEF]	Delete Extract Files Data in any resulting incomplete extract should be deleted using the Delete Extract Files [ECXDELEF] option.
Purge extract holding files	[ECXPURG]	Purge Extract Holding Files. Data in the holding files for the IVP, UDP and VBECS files can be purged using the Purge Extract Holding Files [ECXPURG] option.

3 Files

This section contains information pertaining to the files manipulated by the DSS application software.

3.1 Global Placement

DSS Extracts use one global file for data storage: ^ECX. During first-time installation, use global protection and placement when appropriate.

3.2 File List

The DSS Extracts software, with all patches installed, exports the files that appear in Table 6. Use the Systems Manager Menu > VA FileMan > Data Dictionary Utilities > List File Attributes option to print the Data Dictionary (DD).

> **Note:**
> - VA Directive 6402, Modifications to Standardized National Software, August 28, 2013 prohibits local modification of these files.

Table 6 lists the file names, associated file numbers, and extract abbreviations (where applicable).

Table 6 DSS File List

File Number	Abbreviation	File Name
727	-	DSS EXTRACT LOG
727.1	-	EXTRACT DEFINITIONS
727.2	-	DSS LAB TESTS
727.29	-	DSS LOINC FILE
727.3	-	DSS DIVISION IDENTIFIER
727.4	-	DSS WARD
727.5	-	DSS MH TESTS
727.7	-	LAB RESULTS TRANSLATION
727.802	ADM	ADMISSION EXTRACT
727.804	-	CLINIC NOSHOW EXTRACT
727.805	-	NURSING EXTRACT
727.806	-	DENTAL EXTRACT
727.808	MOV	PHYSICAL MOVEMENT EXTRACT
727.809	UDP	UNIT DOSE LOCAL EXTRACT
727.81	PRE	PRESCRIPTION EXTRACT
727.811	SUR	SURGERY EXTRACT
727.812	-	MENTAL HEALTH EXTRACT
727.813	LAB	LABORATORY EXTRACT

File Number	Abbreviation	File Name
727.814	RAD	RADIOLOGY EXTRACT
727.815	ECS	EVENT CAPTURE LOCAL EXTRACT
727.816	-	CLINIC I EXTRACT
727.817	TRT	TREATING SPECIALTY CHANGE EXTRACT
727.818	-	CLINIC II EXTRACT
727.819	IVP	IV DETAIL EXTRACT
727.82	-	ADMISSION SETUP EXTRACT
727.821	-	PHYSICAL MOVEMENT SETUP EXTRACT
727.822	-	TREATING SPECIALTY CHANGE SETUP EXTRACT
727.823	-	PAI EXTRACT
727.824	-	LAB RESULTS EXTRACT
727.826	PRO	PROSTHETICS EXTRACT
727.827	CLI	CLINIC EXTRACT
727.829	LBB	BLOOD BANK EXTRACT
727.831	-	DSS TREATING SPECIALTY TRANSLATION
727.832	-	NUTRITION EXTRACT
727.833	BCM	BCMA EXTRACT
728	-	DSS EXTRACTS
728.113	-	IV EXTRACT DATA
728.44	-	CLINICS AND STOP CODES
728.441	-	NATIONAL CLINIC
728.442	-	MCA LABOR CODE
728.45	-	DSS NUTRITION PRODUCT WORKSHEET
728.46	-	DSS NUTRITION DIVISION WORKSHEET
728.506	-	DSS DRUG PRODUCT CODE
728.904	-	UNIT DOSE EXTRACT DATA
729	-	DSS PRODUCTION UNIT

3.3   Field List

The modifications associated with the release of DSS FY24 Extract Sustainment Patch ECX*3.0*187 include the following list (Table 7) of modified field names and numbers by extract.

Table 7   Field Changes in DSS for Current Release

Extract File Name	Abbrev.	File Number	VistA Field Number	Field Name
ADMISSION EXTRACT	ADM	727.802	59	AGENT ORANGE LOCATION
BCMA EXTRACT	BCM	727.833	65	AGENT ORANGE LOCATION
BCMA EXTRACT	BCM	727.833	94	DISPENSE UNIT
CLINIC EXTRACT	CLI	727.827	67	AGENT ORANGE LOCATION
EVENT CAPTURE LOCAL EXTRACT	ECS	727.815	63	AGENT ORANGE LOCATION
IV DETAIL EXTRACT	IVP	727.819	55	AGENT ORANGE LOCATION
IV DETAIL EXTRACT	IVP	727.819	99	PRICE PER DISPENSE UNIT
IV DETAIL EXTRACT	IVP	727.819	100	DISPENSE UNIT
PRESCRIPTION EXTRACT	PRE	727.81	63	AGENT ORANGE LOCATION
PRESCRIPTION EXTRACT	PRE	727.81	111	PRICE PER DISPENSE UNIT
PRESCRIPTION EXTRACT	PRE	727.81	112	DISPENSE UNIT
PROSTHETICS EXTRACT	PRO	727.826	61	AGENT ORANGE LOCATION
SURGERY EXTRACT	SUR	727.811	56	AGENT ORANGE LOCATION
UNIT DOSE LOCAL EXTRACT	UDP	727.809	42	AGENT ORANGE LOCATION
UNIT DOSE LOCAL EXTRACT	UDP	727.809	95	PRICE PER DISPENSE UNIT
UNIT DOSE LOCAL EXTRACT	UDP	727.809	96	DISPENSE UNIT

3.3.1   Templates and File Flow

Perform the steps listed in Table 8 from the Systems Manager Menu. These steps are used to obtain information about the templates and mapped file-flow relationships for DSS Extracts when all patches are installed.

Table 8 Steps to List DSS Templates and Map Menu Options

Step	Actions/Menu Options for Templates	Actions/Menu Options for File Flows (Relationships between Files)
1	VA FileMan	VA FileMan
2	Print File Entries	Data Dictionary Utilities
3	OUTPUT FROM WHAT FILE: **Print Template** or **Sort Template**	Map Pointer Relations
4	SORT BY: NAME// **Name**	Select PACKAGE NAME: **DSS EXTRACTS**
5	START WITH NAME: FIRST// **ECX**	Remove FILE: <**Enter**>
6	GO TO NAME: LAST// **ECXZ**	Add FILE: > Enter name or number for files to include in the output. **Note:** This prompt will repeat
7	WITHIN NAME, SORT BY: <**Enter**>	Add FILE:<**Enter**>
8	FIRST PRINT FIELD: **Name**	Enter name of file group for optional graph header: DSS EXTRACTS// <**Enter**>
9	THEN PRINT FIELD: <**Enter**>	DEVICE: <**Enter**> HOME (CRT) <**Enter**>
10	Heading (S/C): PRINT TEMPLATE LIST// <**Enter**>	Not Applicable (N/A)
11	START AT PAGE: 1// <**Enter**>	N/A
12	DEVICE: <**Enter**> HOME (CRT) Right Margin: 80// <**Enter**>	N/A

3.4   Resource Requirements

Table 9 provides information on extract files. The bytes per record estimates in this table include the file cross-reference.

Table 9 Extract Name/Bytes per Record

Extract Name	Bytes per Record (Estimated Mean Size)
ADM - Admission Extract	350
BCM – BCMA Extract	450
CLI - Clinic Extract	485
ECS - Event Capture Local Extract	472

Extract Name	Bytes per Record (Estimated Mean Size)
IVP - IV Detail Extract	552
LAB - Laboratory Extract	272
LBB - Blood Bank Extract	222
MOV - Physical Movement Extract	247
PRE - Prescription Extract	447
PRO - Prosthetics Extract	422
RAD - Radiology Extract	357
SUR - Surgery Extract	447
TRT - Treating Specialty Change Extract	297
UDP - Unit Dose Local Extract	397

3.5   Special Note on IVP and UDP Extracts

IV orders will accumulate in the IV EXTRACT DATA file (#728.113); Unit Dose orders will accumulate in the UNIT DOSE EXTRACT DATA file (#728.904). These files are loaded dynamically as Pharmacy orders for IV and unit dose medicines are processed. Each record in these files uses approximately 100 bytes.

Extreme caution must be used when performing maintenance on the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904). If data in either file is purged, the IVP or UDP monthly extract may be incomplete. It is strongly recommended that, at a minimum, sites maintain all data from the current fiscal year.

The holding files for IVP and UDP can be purged. Two functions were created to regenerate purged IVP and UDP holding file data. The steps shown in Table 10 must be executed from the Extract Manager's Options menu to access these options.

Note:

- Holding files can become quite large if appropriate purging is not performed. The option, Purge Extract Holding Files [ECXPURG], purges holding files from IVP and UDP by date range.

Table 10 Steps to Recreate IVP and UDP Holding Files

Step	Action/Menu Option
1	Extract Manager's Options
2	Transmission Management
3	Recreate Extract Holding Files

3.6   Special Note on Pharmacy Extract Files

The Pharmacy DSS Extract files shown in Table 11 are audited when entries are edited through the menu option Pharmacy Volume Edit [ECX PHA VOL EDIT]. Entries are stored in the AUDIT file (#1.1).

Table 11 Audited fields when Updates Occur

File	File #	Audited Fields
PRESCRIPTION EXTRACT	#727.81	The QUANTITY and UNIT OF ISSUE fields are audited.
UNIT DOSE LOCAL EXTRACT	#727.809	Only updates to the QUANTITY field are audited.
IV DETAIL EXTRACT	#727.819	Updates to the QUANTITY and TOTAL DOSES PER DAY fields are audited.
BCMA EXTRACT	#727.833	Updates to the COMPONENT DOSE GIVEN and COMPONENT UNITS fields are audited.

3.7   Run Time Estimates for Extracts

Extracts generally require approximately two to four minutes per 1000 records extracted and should be queued to run during a non-peak system usage period.

Table 12 contains examples of approximate run times for extracts.

Table 12 Extract Run Time Estimates

Extract Name	Approximate Length of Time
Admission (ADM)	Less than ten minutes
Clinic (CLI)	5 hours for 48,000 records
Laboratory (LAB)	6 hours for 100,000 records
Physical Movement (MOV)	Less than ten minutes
Prescription (PRE)	3.5 hours for 49,000 records
Treating Specialty Change (TRT)	Less than ten minutes

4 Routines

This section describes relevant technical aspects of DSS Application routines.

4.1 Routine List

From the Systems Manager Menu, perform the steps outlined in Table 13 to obtain a list of routines contained in the DSS package.

Table 13 Steps to List DSS Routines

Step	Action/Menu Option
1	Programmer Options
2	Routine Tools
3	First Line Routine Print
4	All Routines? No => <**Enter**>
5	Routine: **ECX***
6	Routine: <**Enter**>
7	(A)lpha, (D)ate, (P)atched, OR (S)ize ORDER: A// <**Enter**>
8	Include line (2), Include lines 2&(3), (N)one: None/ <**Enter**>
9	DEVICE: HOME// <**Enter**> HOME (CRT) Right Margin: 80//<**Enter**>

4.2 XINDEX

This option analyzes the structure of a routine(s) to determine if the routine(s) adhere(s) to VistA Programming Standards. The XINDEX output includes the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references

When the user executes XINDEX for a specified set of routines, deviations from VistA Programming Standards in the selected routine(s) and routine interactions (including routines called or called by other routines) are displayed.

To run XINDEX for the DSS software, specify the following namespaces at the "routine(s)?>" prompt: **ECX***.

When XINDEX runs the DSS initialization routines residing in the User Class Identifier (UCI), compiled template routines and local routines found within the ECX namespace should be omitted at the "routine(s) ?>" prompt. To omit routines from selection, prefacing the namespace with a minus sign (-) is required.

5 Exported Options

This section provides an overview of the main menu and submenus available in the DSS application. The user must hold the appropriate security keys in order to access all options.

5.1 Decision Support System Security Keys

Security keys are assigned in VistA using the menu option **Key Management**, and then choosing the submenu **Allocation of Security Keys**.

- **ECXMGR**: Gives a user access to the ECX Management Menu. This key should be allocated to the DSS manager or his/her designee to perform data extraction from VistA files and transmit this data to the commercial DSS database.
- **ECXPVE**: Gives a DSS user access to the 'Pharmacy Volume Edit and Edit Log' option.
- **ECX DSS TEST**: Gives a DSS user access to the ECX FISCAL YEAR EXTRACT option. This key should be given only to holders of the ECXMGR key whenever the site has been enrolled as an official DSS test site for the fiscal year conversion. This key should be removed from the user(s) whenever the national released version of the DSS Fiscal Year patch is installed.

5.2 Menu Outline

The DSS Extracts software contains one primary menu option, Extract Manager's Options [ECXMGR], which contains options for the following six submenus. These options are fixed and are not subject to modification except by the software developers. These options are accessed by entering Extract Manager's Options from the Systems Manager Menu; the menu options are listed in Table 14.

Table 14 Extract Manager's Options

Menu Option	Description
M	Maintenance
R	Pre-Extract Audit Reports
P	Package Extracts
S	SAS Extract Audit Reports
E	Extract Audit Reports
T	Transmission Management

5.3   Menu Diagrams

From the Systems Manager Menu, perform the steps listed in Table 15 to obtain information concerning the menus exported with the DSS Extracts software.

Table 15 Steps to Obtain Information on Exported Menus

Step	Action/Menu Option
1	Menu Management
2	Display Menus and Options
3	Menu Diagrams (with Entry/Exit Actions)
4	Select USER (U.xxxxx) or OPTION (O.xxxxx) name: **ECXMGR**
5	DEVICE: HOME// **<Enter>** HOME (CRT) Right Margin: 80// **<Enter>**

6   Mail Groups, Alerts, and Bulletins

DSS Extracts utilize several mail groups. The name of each mail group is prefaced with the letters "DSS". There is a mail group for each type of data extract (e.g., DSS-BCM, DSS-ADM, etc.) for the purpose of receiving messages when extracts are generated and data is transmitted to the AITC. DSS also utilizes mail groups DMS, DMV and DMU for the purpose of receiving confirmation messages from the AITC. DSS Extracts do not utilize alerts.

7   Public Interfaces

There is no special interfacing required for the VistA DSS Extracts software.

7.1   Integration Control Registrations

This section lists the Integration Control Registrations (ICRs) created and/or used by DSS. They are categorized by the subscriber relationship to the software. No private ICRs are documented below.

Subscriber:

ICR # 103
- Type: File
- File: #130
- Root: SRF(

ICR # 218 - DBIA218-A
- Type: File
- File: #45.3
- Root: DIC(45.3,

ICR # 322 - DBIA322
- Type: File
- File: #45.7
- Root: DG(45.7,

ICR # 363
- Type: File

- File: #405.2
- Root: DG(405.2,

ICR # 417
- Type: File
- File: #40.8
- Root: DG(40.8

ICR #427
- Type: File
- File: #8
- Root: DIC(8,

ICR # 524 - DBIA67-B
- Type: File
- File: #61
- Root: LAB(61,

ICR # 525 - DBIA67-C
- Type: File
- File: #63
- Root: LR(

ICR # 557
- Type: File
- File: #40.7
- Root: DIC(40.7,

ICR # 1337
- Type: File
- File: #42.4
- Root: DIC(42.4,

ICR # 1848 - DBIA184
- Type: File
- File: #42
- Root: DIC(42,

ICR # 1850
- Type: File
- File: #2
- Root: DPT(

ICR # 1860
- Type: File
- File: #79.1
- Root: RA(79.1,

ICR # 1861
- Type: File
- File: #10
- Root: DIC(10,

ICR # 1865
- Type: File
- File: #405
- Root: DGPM(

ICR # 1873
- Type: File
- File: #721
- Root: ECH(

ICR # 1874
- Type: File
- File: #725
- Root: EC(725,

ICR # 1876 - DBIA1876
- Type: File
- File: #59
- Root: PS(59,

ICR # 1884 - DBIA1884
- Type: File
- File: #59.5
- Root: PS(59.5,

ICR # 1894 — DBIA1889-F
- Custodial Package: PCE PATIENT CARE ENCOUNTER
- Usage: Controlled Subscription
- Type: Routine
- Routine: PXAPI

ICR # 1910 — DBIA1910
- Type: File
- File: #409.68
- Root: SCE(

ICR # 1949 - LAB DSS EXTRACT
- Type: File
- File: #64
- Root: LAM(

ICR # 2233
- Type: File
- File: #43
- Root: DG(43,

ICR # 2237
- Type: File
- File: #133
- Root: SRO(133

ICR # 2248 — DBIA2248
- Custodial Package: Registration
- Usage: Controlled Subscription
- Type: Routine
- Routine: DGACT

ICR # 2480
- Type: File
- File: #70
- Root: RADPT

ICR # 2533 — DBIA2533
- Custodial Package: KERNEL
- Usage: Controlled Subscription
- Type: Routine
- Routine: XUSER

ICR # 2817
- Type: File
- File: #40.8
- Root: DG(40.8

ICR # 2849
- Type: File
- File: #100
- Root: OR(100,

ICR # 3260 - Imaging 3260 - Lab Referral file.
- Type: File
- File: #67
- Root: LRT(67

```
ICR # 3628 — SET VARIABLES FOR
OPERATION REPORT
    • Custodial Package: SURGERY
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: SROVAR

ICR # 3629 — PRINT OPERATION REPORT
    • Custodial Package: SURGERY
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: SROPRPT1

ICR # 3812 — DBIA3812
    • Custodial Package: Registration
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: DGENA

ICR # 3860 — DBIA3860
    • Custodial Package: Registration
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: DGPFAPI

ICR # 3989 — DBIA398c
    • Custodial Package: Event Capture
    • Usage: Supported
    • Type: Routine
    • Routine: ECPRVMUT

ICR # 3989 — DBIA3989
    • Custodial Package: Enrollment
      Application
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: EASUER

ICR # 4069
    • Type: File
    • File: #772
    • Root: HL(772,
```

```
ICR # 4532 — NPI UTILITIES
    • Custodial Package: KERNEL
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: XUSNPI

ICR # 4652 — CLNCHK - SDUTL2
(RESTRICTING STOP CODE)
    • Custodial Package: PCE PATIENT
      CARE ENCOUNTER
    • Usage: Supported
    • Type: Routine
    • Routine: SDUTL2

ICR # 4658 — DBIA4658
    • Custodial Package: CLINICAL
      PROCEDURES
    • Usage: Supported
    • Type: Routine
    • Routine: MCARDSS

ICR # 4658 — DBIA4658
    • Custodial Package: Lab Service
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: LRRPU

ICR # 4872
    • Type: File
    • File: #136
    • Root: SRO(136

ICR # 5379 — DBIA5379
    • Custodial Package: Registration
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: DGENA

ICR # 6888 — NPIUSED
    • Custodial Package: KERNEL
    • Usage: Controlled Subscription
    • Type: Routine
    • Routine: XUSNPI1
```

7.2   Application Programming Interfaces

N/A

7.3   Remote Procedure Calls

N/A

7.4   HL7 Messaging

N/A

7.5   Web Services

N/A

8   Standards and Conventions Exemptions

N/A

8.1   Internal Relationships

All the DSS Extracts options have been designed to be stand-alone options. Each option may be independently invoked.

8.2   Software-wide Variables

The DSS Extracts software does not contain any package-wide variables that must be defined or are required for the package to run.

9   Security

There are no additional security management related concerns associated with the DSS application.

The DSS Extracts software does not impose any additional legal requirements on the user, nor does it relieve the user of any legal requirements.

9.1   Security Menus and Options

N/A

9.2   Security Keys and Roles

From the Systems Manager's Menu, perform the steps listed in Table 16 to obtain the security keys information contained in the DSS Extracts Package.

Table 16 Steps to Obtain Security Key Information

Step	Action/Menu Option
1	VA FileMan
2	Print File Entries
3	Output from what File: AUDIT// **SECURITY KEY**
4	Sort by: NAME// <**Enter**>
5	Start with NAME: FIRST// **ECX**
6	Go to NAME: LAST// **ECXZ**
7	Within NAME, Sort by: <**Enter**>
8	First Print FIELD: **NAME**
9	Then Print FIELD: **DESCRIPTION** (word-processing)
10	Then Print FIELD: <**Enter**>
11	Heading (S/C): SECURITY KEY List// <**Enter**>

Step	Action/Menu Option
12	START at PAGE: 1// **<Enter>**
13	DEVICE: HOME (CRT) Right Margin: 80// **<Enter>**

9.3   File Security

Table 17 lists the recommended VA FileMan access codes for the DSS Extract Software.

Table 17 VA FileMan Access Codes

File Name	File #	Data Definition (DD)	Read Access (RD)	Write Access (WR)	Delete Access (DEL)	Learn-As- You- Go (LAYGO)
DSS EXTRACT LOG	727	@	N/A	@	@	@
EXTRACT DEFINITIONS	727.1	^	N/A	^	^	^
DSS LOINC FILE	727.29	^	N/A	^	^	^
DSS DIVISION IDENTIFIER	727.3	^	N/A	^	^	^
DSS WARD	727.4	^	N/A	^	^	^
DSS MH TESTS	727.5	^	N/A	^	^	^
LAB RESULTS TRANSLATION	727.7	@	N/A	N/A	N/A	N/A
ADMISSION EXTRACT	727.802	@	@	@	@	@
CLINIC NOSHOW EXTRACT	727.804	N/A	N/A	N/A	N/A	N/A
NURSING EXTRACT	727.805	N/A	N/A	N/A	N/A	N/A
DENTAL EXTRACT	727.806	N/A	N/A	N/A	N/A	N/A
PHYSICAL MOVEMENT EXTRACT	727.808	@	@	@	@	@
UNIT DOSE LOCAL EXTRACT	727.809	@	@	@	@	@
PRESCRIPTION EXTRACT	727.81	@	@	@	@	@
SURGERY EXTRACT	727.811	@	@	@	@	@
LABORATORY EXTRACT	727.813	@	@	@	@	@
RADIOLOGY EXTRACT	727.814	@	@	@	@	@
EVENT CAPTURE LOCAL EXTRACT	727.815	@	@	@	@	@
CLINIC I EXTRACT	727.816	N/A	N/A	N/A	N/A	N/A
TREATING SPECIALTY CHANGE EXTRACT	727.817	@	@	@	@	@
CLINIC II EXTRACT	727.818	N/A	N/A	N/A	N/A	N/A

File Name	File #	Data Definition (DD)	Read Access (RD)	Write Access (WR)	Delete Access (DEL)	Learn-As-You-Go (LAYGO)
IV DETAIL EXTRACT	727.819	@	@	@	@	@
ADMISSION SETUP EXTRACT	727.82	@	@	@	@	@
PHYSICAL MOVEMENT SETUP EXTRACT	727.821	@	@	@	@	@
TREATING SPECIALTY CHANGE SETUP EXTRACT	727.822	@	@	@	@	@
PAI EXTRACT	727.823	N/A	N/A	N/A	N/A	N/A
LAB RESULTS EXTRACT	727.824	N/A	N/A	N/A	N/A	N/A
PROSTHETICS EXTRACT	727.826	@	@	@	@	@
CLINIC EXTRACT	727.827	@	@	@	@	@
BLOOD BANK EXTRACT	727.829	@	@	@	@	@
DSS TREATING SPECIALTY TRANSLATION	727.831	@	@	@	@	@
BCMA EXTRACT	727.833	@	@	@	@	@
DSS EXTRACTS	728	@	N/A	@	@	@
IV EXTRACT DATA	728.113	@	@	@	@	@
CLINICS AND STOP CODES	728.44	@	N/A	@	@	@
NATIONAL CLINIC	728.441	@	N/A	@	@	@
DSS DRUG PRODUCT CODE	728.506	N/A	N/A	N/A	N/A	N/A
UNIT DOSE EXTRACT DATA	728.904	@	@	@	@	@
DSS PRODUCTION UNIT	729	^	N/A	^	^	^

9.4   Electronic Signatures

The DSS Extracts software does not use electronic signatures.

9.5   Secure Data Transmission

Data is transmitted to the AITC using VA MailMan mail messages. The first line of each message is a header that identifies the following entities: Site, Extract, Year and Month, SAS version identifier, and Fiscal Year Logic in the format shown in Figure 1.

Figure 1 Data Transmission Header

```
New header: 552ADM2021020072022
Site ID: 552
Extract: ADM
Year and Month of the Extract:202102
Version ID: 007
FY Logic :2022
```

9.5.1   Remote Systems

DSS Extracts transmit messages containing extracted data to a specified queue located at the AITC. Data is transmitted via VA MailMan at the site's discretion. Confirmation messages are received from the AITC indicating the extract messages were successfully transmitted.

10   Archiving

DSS Extracts have no archiving capability. There is an option to delete the local extract files after transmission to the commercial software. See section 10.1.

10.1   Deleting or Purging

DSS Extracts export the Delete Extract Files [ECXDELEF] option which can be used to delete individual extracts residing in files #727.802 through #727.833, or a range of extracts.

Data that resides in the holding files for VBECS (VBECS DSS EXTRACT file (#6002.03)), IVP (IV EXTRACT DATA file (#728.113)), and UDP (UNIT DOSE EXTRACT DATA file (#728.904)) extracts can be purged using the Purge Extract Holding Files [ECXPURG].

Extreme caution should be exercised when purging or deleting data for the following reasons:

- Any existing extract may be deleted (including transmitted and un-transmitted), as well as extracts that did not run to completion due to errors or system problems.
- Choosing a range of extracts or holding files sometimes results in an excessively large number of records to be deleted or purged, and may be very resource intensive. These tasks should be scheduled for non-peak hours, and the number of deleted or holding files purged should be limited to a single queued session.
- Extreme caution must be used when performing maintenance to the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904). If data in

either file is purged, the IVP or UDP monthly extract may be incomplete. It is strongly recommended that, at a minimum, sites maintain all data from the *current fiscal year*.

- A user can only delete extracts that are associated with the division assigned in their NEW PERSON file (#200).
- Two functions were created to regenerate IVP and UDP holding file data that has been purged. These functions are located at:
- Extract Manager Options > Transmission Management > Recreate Extract Holding Files

The functions are listed in Table 18.

Table 18 Recreate IVP and UDP Holding File Options

Option	Description
I	Recreate IVP Extract Holding File (#728.113)
U	Recreate UDP Extract Holding File (#728.904)

10.1.1   Recommendations

Purging of any local VistA extract data or VistA source of extract data (i.e., lab data, etc.) is not recommended until a facility has successfully created extracts, transmitted them to the AITC, audited the counts, loaded the data into DSS, and the validation results are successful.

The IV EXTRACT DATA file (#728.113) and UNIT DOSE EXTRACT DATA file (#728.904) can become quite large if appropriate purging is not performed. The file purge option, Purge Extract Holding Files [ECXPURG], removes the data from these files by date range. It is recommended that records over two fiscal years old should be purged from the IV EXTRACT DATA file (#728.113) and the UNIT DOSE EXTRACT DATA file (#728.904).

VBECS holding files can also be purged. The VBECS holding file cannot be regenerated; therefore, extreme care must be used when purging these files.

11   Non-Standard Cross-References

N/A

12   Troubleshooting

Technical users of the DSS software should ensure that a local contingency plan is used in the event of application problems in a live environment. The plan should identify the procedure(s) for maintaining the functionality provided by the DSS Extracts software in the event of a system outage. Field Station ISOs can get assistance from the Regional ISO.

12.1   Special Instructions for Error Correction

Specific error correction guidance is provided in the ECX*3.0*187 DIBR, which can be found in the VA Software Document Library (VDL).

12.2   National Service Desk and Organizational Contacts

The Enterprise Service Desk (ESD) Provides critical IT support to Veterans Affairs. Contact information can be found online at the VA YourIT service portal.

12.3   Generating Online Resources

This section describes some of the various methods for users to access DSS Technical documentation. Online DSS technical documentation pertaining to the DSS software, in addition to that which is located in the Help prompts and Online Help screens, are imbedded throughout the DSS package and can be accessed through utilization of several KERNEL options. These include, but are not limited to, *XINDEX, Menu Management Inquire Option File, Print Option File,* and *FileMan List File Attributes*.

Entering question marks at the "Select ... Option:" prompt provides users with valuable technical information. For example:

- A single question mark (?) lists all options accessible from the current option.
- Entering two question marks (??) lists all options accessible from the current option displaying the formal name and lock for each.
- Three question marks (???) displays a brief description for each option in a menu.
- An option name preceded by a single question mark (?) displays extended Help, if available, for that option.

To obtain a listing of the available options and additional information about other utilities for online technical information, refer to the VA Software Document Library (VDL) for Kernel documentation.

12.3.1   Inquire to Option File

To access information about DSS options, the user must specify the name or namespace of the desired option(s). The Menu Manager option provides the following information about user-specified option(s):

- Option name
- Menu text
- Option description
- Type of option
- Lock (if any)

12.3.2   Print Options File

Use this utility to generate a listing of options from the OPTION file (#19). Users can choose to print all of the entries in this file specifying a single option or a range of options. To obtain a list of DSS options, enter "ECX" when prompted for the namespace.

12.3.3   List File Attributes

Use the "List Attributes" option in FileMan to generate documentation pertaining to files and file structures. Use the Standard format option to obtain the following data dictionary information for a specified file(s):

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files which point to the file specified
- Input, print, and sort templates

In addition, the following information is supplied for each field in the selected file:

- Field name and number
- Global location
- Description
- Help prompt
- Cross-reference(s)
- Input transform
- Date last edited
- Notes

Use the Global Map format option to generate an output listing of the following:

- All cross-references for the selected file
- Global location of each field in the file
- Input, print, and sort templates

Appendix A Acronyms and Abbreviations

Abbreviations and acronyms used throughout the DSS Technical Manual appear in Table 19.

Table 19 Acronyms and Abbreviations

Acronym	Description
ADM	Admission Extract
ADPAC	Automated Data Processing Application Coordinator
ADT	Admission Discharge Transfer
AITC	Austin Information Technology Center
API	Application Programmer Interface
BCM	BCMA Extract
BCMA	Bar Code Medication Administration
CBOC	Community Based Outpatient Clinic
CLI	Clinic Extract
CPRS	Computerized Patient Record System
CPT	Current Procedural Terminology
CRT	Cathode Ray Tube
DBA	Database Administrator
DBIA	Database Integration Agreement
DD	Data Dictionary
DSS	Decision Support System
ECS	Event Capture Local Extract
ECX	DSS Extracts Namespace
HL7	Health Level 7
ICD	International Classification of Diseases
ICR	Integration Control Registration
IEN	Internal Entry Number
ISO	Information Security Officer
IV	Intravenous
IVP	IV Detail Extract
LAB	Laboratory Extract
LAYGO	Learn-As-You-Go
LBB	Blood Bank Extract
LOINC	Logical Observation Identifiers, Names, and Codes
MCAO	Managerial Cost Accounting Office
MOV	Physical Movement Extract

Acronym	Description
N/A	Not Applicable
NDC	National Drug Code
NDF	National Drug File
OE/RR	Order Entry/Results Reporting
OIT	Office of Information and Technology
PCE	Patient Care Encounter
PDM	Pharmacy Data Management
PRE	Prescription Extract
PRO	Prosthetics Extract
RAD	Radiology Extract
RD	Read Access
RISO	Regional Information Security Officer
SAS	Statistical Analysis System
SSH	Secure Shell
SUR	Surgery Extract
TRT	Treating Specialty Change Extract
UCI	User Class Identifier
UDP	Unit Dose Local Extract
VA	Department of Veterans Affairs
VBECS	VistA Blood Establishment Computer Software
VDL	VA Software Document Library
VHA	Veterans Health Administration
VistA	Veterans Health Information Systems and Technology Architecture

Appendix B Glossary

Table 20 lists terms used throughout the Technical Manual.

Table 20 Glossary

Term	Definition
FileMan	This system implements the VistA database engine and is the basis for several patient safety controls, as well as fiscal integrity controls. It implements security, confidentiality, and privacy controls, and is a critical component in meeting the requirements of Enterprise Architecture.
Kernel	This system implements security, confidentiality, and privacy controls for VistA, including user authentication algorithms. It provides many tools for the safe construction of local software, and it implements many national control files, including, but not limited to, New Person, Institution, State, etc. This system is a critical component in meeting the requirements of Enterprise Architecture.
Remote Procedure Call (RPC)	This system supports client and/or server messaging used by CPRS, Bar Code Medication Administration (BCMA), and others, to access the MUMPS database through APIs. It provides a development kit for local development, and it implements security, confidentiality, and privacy controls. This system is a critical component in meeting the requirements of Enterprise Architecture.

Appendix C Index