



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Distribution Management**

(ADS)

## **Technical Manual**

Version 1.0 Patch 6  
February 2025

Office of Information Technology  
Division of Information Technology

# Table of Contents

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.0</b>	<b>Implementation and Maintenance.....</b>	<b>2</b>
2.1	General Information .....	2
2.2	System Requirements .....	2
2.3	Package-wide Variables .....	2
2.4	Security Keys .....	2
<b>3.0</b>	<b>Routine Descriptions .....</b>	<b>3</b>
<b>4.0</b>	<b>Files and Tables .....</b>	<b>4</b>
4.1	File List .....	4
4.2	File Access .....	4
4.3	Cross References .....	4
4.4	Parameters.....	7
<b>5.0</b>	<b>External Relations.....</b>	<b>9</b>
5.1	Callable Routines.....	9
5.2	Published Entry Points.....	9
5.3	Exported Options .....	9
<b>6.0</b>	<b>Internal Relations .....</b>	<b>11</b>
<b>7.0</b>	<b>Archiving and Purging.....</b>	<b>12</b>
<b>8.0</b>	<b>Documentation Resources .....</b>	<b>13</b>
8.1	System Documentation.....	13
8.1.1	%INDEX .....	13
8.1.2	Inquire Options.....	14
8.1.3	Print Option File .....	14
8.1.4	List File Attributes .....	14
8.2	Online Help.....	15
<b>9.0</b>	<b>SAC Requirements and Exemptions .....</b>	<b>16</b>
	<b>Acronym List.....</b>	<b>17</b>
	<b>Contact Information .....</b>	<b>18</b>

## Revision History

Version	Date	Author	Section	Page Number	Summary of Change
1.0	April 2020	Ken Halfpenny	All	All	New release
1.1	January 2021	Arlis Acord	All	All	Patch 1 updates
1.2	September 2021	Brian Everett	All	All	Patch 2 updates
1.3	September 2022	Anne Fugatt	All	All	Patch 3 updates
1.4	February 2023	Anne Fugatt	All	All	Patch 4 updates
1.5	October 2023	Anne Fugatt	All	All	Patch 5 updates
1.6	September 2024	Anne Fugatt	All	All	Patch 6 updates

## Preface

This technical manual describes the InterSystems License Report and related options in the Distribution Management (ADS) package.

## 1.0 Introduction

This manual provides IHS site managers with a technical description of the ADS routines, files, menus, cross references, globals, and other necessary information required to effectively manage the system.

All routines, files, options, and keys are namespaced starting with the letters “ADS.”

The file number range for this package is 9002290–9002299.

## 2.0 Implementation and Maintenance

### 2.1 General Information

Refer to the *Distribution Management (ADS) Installation Guide and Release Notes* for maintenance and implementation information, specifically, information on the set up of the TaskMan task and where to locate the option in the menus.

### 2.2 System Requirements

- Distribution Management (ADS) v1.0 p5
- VA FileMan (DI) v22.0 p1020 or higher
- VA Kernel (XU) v8.0 p1020 or higher
- IHS Standard Terminology v2.0 p1 or later

### 2.3 Package-wide Variables

There are no package-wide variables in the ADS package.

### 2.4 Security Keys

Table 2-1 lists security key names and their associated descriptions.

Table 2-1: Security Key Names and descriptions

Key Name	Description
ADSZMENU	Assigned to any IT staff that needs access to the ADS Reports.

## 3.0 Routine Descriptions

Table 3-1 lists routines and their associated descriptions.

Table 3-1: ADS routines and descriptions

Routine	Description
ADS1P01	ADS v1.0 p1 Post Install
ADS1P02	ADS v1.0 p2 Environmental Checking/Post Install
ADS1P03	ADS v1.0 p3 Environmental Checking/Post Install
ADS1P04	ADS v1.0 p4 Environmental Checking/Post Install
ADS1P05	ADS v1.0 p5 Environmental Checking/Post Install
ADS1P06	ADS v1.0 p6 Environmental Checking/Post Install
ADSCLAS	Post install to install Class
ADSDDCS	Compare data dictionary checksums
ADSDDRP	Print DD checksum reports
ADSFAC	ADS Package ASUFAC Report
ADSI ZPR	ADS IZ Parameter Export
ADSLRPT	ADS Log Report
ADSMON	ADS "BSTSPROCQ" Log Monitor
ADSPKG	ADS Package PKG Report
ADSPST	InterSystems License Report–Post Install Routine
ADSRPT	InterSystems License Report–Main Compile Routine
ADSR TNCS	Compares checksum values and sends results to DTS
ADSR TN GD	Sends Gold checksum values to DTS
ADSR TN RP	Prints routine checksum reports
ADSSOL	ADS Sign-on Log Export
ADSSAT	Send log stats to DTS central server
ADSTASK	Various tasked jobs
ADSUTL	ADS Package utility routine

## 4.0 Files and Tables

The following tables include information regarding file lists and file access.

### 4.1 File List

Table 4-1 details file numbers and names.

Table 4-1: ADS file numbers and names

File #	Filename
9002290	ADS LICENSE CONFIGURATION
9002291	ADS LICENSE REPORT HISTORY
9002292	ADS PARAMETERS
9002292.1	ADS EXPORT LOG
9002293.1	ADS ROUTINES
9002293.2	ADS DATA DICTIONARIES
9002299.1	ADS CLASS TRANSPORT FILE

### 4.2 File Access

Table 4-2 lists file access information.

Table 4-2: File access information

File #	Filename	GL	RD	WR	LYG	DD	DEL
9002290	ADS LICENSE CONFIGURATION	^ADS(9002290,	@	@	@	@	@
9002291	ADS LICENSE REPORT HISTORY	^ADSRPT(9002291,	@	@	@	@	@
9002292	ADS PARAMETERS	^ADSPARM(	@	@	@	@	@
9002292.1	ADS EXPORT LOG	^ADSXPLOG(	@	@	@	@	@
9002293.1	ADS ROUTINES	^ADSROU(	@	@	@	@	@
9002293.2	ADS DATA DICTIONARIES	^ADSDD(	@	@	@	@	@
9002299.1	ADS CLASS TRANSPORT FILE	^ADSCLS(	@	@	@	@	@

### 4.3 Cross References

Figure 4-1 displays the ADS files that all use the standard B cross reference as defined by FileMan.



FILE: ADS LICENSE CONFIGURATION FILE				
GLOBAL: ^ADS(9002290,				
FILE #: 9002290				
FIELD #	FIELD NAME	SUBSCRIPT	PIECE TYPE	
=====				
.01	ID	D0,0	1	N
	X: B			
	1) S ^ADS(9002290,"B",\$E(X,1,30),DA)=""			
.02	INSTALL DATE	"	2	D
.03	LAST RESET DATE/TIME	"	3	D
.04	TASK NUMBER	"	4	N
.05	SYSTEM TYPE	"	5	S
.06	LAST PACKAGE VERSION DATE	"	6	D
FILE: ADS LICENSE REPORT HISTORY FILE				
GLOBAL: ^ADSRPT(9002291,				
FILE #: 9002291				
FIELD #	FIELD NAME	SUBSCRIPT	PIECE TYPE	
=====				
.01	REPORT DATE/TIME	D0,0	1	D
	X: B			
	1) S ^ADSRPT(9002291,"B",\$E(X,1,30),DA)=""			
.02	FACILITY	"	2	F
.03	KEY CUSTOMER NAME	"	3	F
.04	LUMX CONSUMED	"	4	N
.05	LUMAX DATE/TIME	"	5	F
.06	LUMAX RESET DATE/TIME	"	6	F
.07	STAR DATE/TIME	"	7	F
.08	FULL VERSION	"	8	F
.09	OS VERSION	"	9	F
1.01	SERVER FQDN	D0,1	1	F
1.02	SERVER IP	"	2	F
1.03	NAMESPACE	"	3	F
1.04	AUTO OR MANUAL	"	4	S
2	KEY LICENSE CAPACITY	D0,2	2	F
3.01	LICENSE KEY	D0,3	1	F
3.02	KEY EXPIRATION DATE	"	2	D
3.03	HS4	"	3	F
3.04	HLU	"	4	F
3.05	LICENSE KEY ORDER NUMBER	"	5	N
FILE: ADS PARAMETERS				
GLOBAL: ^ADSPARM(				
FILE #: 9002292				
FIELD #	FIELD NAME	SUBSCRIPT	PIECE TYPE	
=====				
.01	NAME	D0,0	1	N
	X: B			
	1) S ^ADSPARM("B",\$E(X,1,30),DA)=""			
11.1	SO EARLIEST DATE EXPORTED	D0,11	1	D
11.2	SO LATEST DATE EXPORTED	"	2	D
11.3	SO EXPORT SWITCH	"	3	S
11.4	DOW TO RUN SO EXTRACT	"	4	S

12.1	CHKSM EXPORT SWITCH	D0,12	1	S
12.2	RTN CHKSM LAST UPDATED	"	2	D
12.3	DD CHKSM LAST UPDATED	"	3	D
13.1	CURR BMW VERSION	D0,13	1	F
13.2	CURR BMW VERSION DATE	"	2	D
13.3	PREV BMW VERSION	"	3	F
13.4	PREV BMW VERSION DATE	"	4	D

FILE: ADS EXPORT LOG

GLOBAL: ^ADSXPLOG(

FILE #: 9002292.1

FIELD #	FIELD NAME	SUBSCRIPT	PIECE TYPE	
=====				
.01	DATE	D0,0	1	D
	X: B			
	1) S ^ADSXPLOG("B", \$E(X,1,30), DA)=""			
.02	DATA TYPE	"	2	S
.03	NUMBER OF RECORDS	"	3	N

FILE: ADS ROUTINES

GLOBAL: ^ADSRou(

FILE #: 9002293.1

FIELD #	FIELD NAME	SUBSCRIPT	PIECE TYPE	
=====				
.01	NAME	D0,0	1	F
	X: B			
	1)= S ^ADSRou("B", \$E(X,1,30), DA)=""			
.02	ISINIT	"	2	S
1.1	LOCAL CHECKSUM VALUE	D0,1	1	F
1.2	LOCAL CHECKSUM DATE	"	2	D
1.3	LOCAL PREVIOUS CHECKSUM VALUE	"	3	F
1.4	LOCAL PREVIOUS CHECKSUM DATE	"	4	D
2.1	DTS CHECKSUM VALUE	D0,2	1	F
2.2	DTS CHECKSUM DATE	"	2	D
2.3	DTS PREVIOUS CHECKSUM VALUE	"	3	F
2.4	DTS PREVIOUS CHECKSUM DATE	"	4	D

FILE: ADS DATA DICTIONARIES

GLOBAL: ^ADSDD(

FILE #: 9002293.2

FIELD #	FIELD NAME	SUBSCRIPT	PIECE TYPE	
=====				
.01	NAME	D0,0	1	F
	X: B			
	1)= S ^ADSDD("B", \$E(X,1,30), DA)=""			
.02	FILE NUMBER	D0,0	2	N
.03	FILE NAME	"	3	F
.04	FIELD NUMBER	"	4	N
.05	FIELD NAME	"	5	F
1.1	LOCAL CHECKSUM VALUE	D0,1	1	F
1.2	LOCAL CHECKSUM DATE	"	2	D
1.3	LOCAL PREVIOUS CHECKSUM VALUE	"	3	F
1.4	LOCAL PREVIOUS CHECKSUM DATE	"	4	D
2.1	DTS CHECKSUM VALUE	D0,2	1	F
2.2	DTS CHECKSUM DATE	"	2	D

2.3	DTS PREVIOUS CHECKSUM VALUE	"	3	F
2.4	DTS PREVIOUS CHECKSUM DATE	"	4	D
FILE: ADS CLASS TRANSPORT GLOBAL: ^ADSCLS( FILE #: 9002299.1				
FIELD #	FIELD NAME	SUBSCRIPT	PIECE	TYPE
=====				
.01	NAME	D0,0	1	F
	X: B 1)= S ^ADSCLS("B", \$E(X,1,30), DA)=""			
1.02	RPMS STATUS	D0,1	2	S
1.03	RPMS DATE/TIME INSTALLED	"	3	D
10	XML	D0,10		W
11	CLASS	D0,11		W

Figure 4-1: Example ADS files FileMan B cross-reference

## 4.4 Parameters

ADS Patch 3 introduces a new ADS Parameters file. This is a FileMan file that holds the various parameters used by the ADS package. There should only be one entry in this file and it is named the number 1.

Table 4-3 lists the parameter information.

Table 4-3: Parameter information

Field	Value(s)	Description
.01 NAME	1	The name of the parameter, must be 1
11.1 SO EARLIEST DATE EXPORTED	Date	The earliest Sign-On Log date that has been exported to the DTS central server. Set by system
11.2 SO LATEST DATE EXPORTED	Date	The latest Sign-On Log date that has been exported to the DTS central server. Set by system
11.3 SO EXPORT SWITCH	0=OFF 1=ON	On/Off switch. Set to 1 ON to turn on the Sign-On Log exports to the DTS central server.
11.4 DOW TO RUN EXTRACT	SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY	The day of the week that the Sign-On log data should be exported to the DTS central server. ADS patch 3 sets this parameter to THURSDAY. Setting to FRIDAY or SATURDAY could impact the DTS Server's data processing.
12.1 CHKSM EXPORT SWITCH	0=OFF 1=ON	Used to determine whether the local checksum data should automatically be updated and differences sent to DTS.

Field	Value(s)	Description
12.2 RTN CHKSM LAST UPDATED	Date	The date/time that the checksums in the ADS ROUTINES and ADS DATA DICTIONARIES files were last updated. This is entered by the system.
12.3 DD CHKSM LAST UPDATED	Date	The date that the data dictionary checksum process was last run. This is entered by the system.
13.1 CURR BMW VERSION	Free Text	The version of the BMW package currently in use
13.2 CURR BMW VERSION DATE	Date	The date that the current version of BMW was installed
13.3 PREV BMW VERSION	Free Text	The previous version of the BMW package
13.4 PREV BMW VERSION DATE	Date	The date that the previous version of BMW was installed.

## 5.0 External Relations

### 5.1 Callable Routines

Table 5-1 displays the available list of callable routines.

Table 5-1: Callable routines

Routine Called	Description
\$\$FIND^ADSPST	Find an entry in the option file.
\$\$FMTMDY^ADSRPT	Convert \$H DATE/TIME format to MM/DD/YY HH:MM:SS format (NOTE: time portion is optional)
\$\$SITE^VASITE()	Returns the Institution file pointer^Institution name^station number with suffix

### 5.2 Published Entry Points

There are no published entry points in the ADS package.

### 5.3 Exported Options

Table 5-2 displays the available option names and descriptions.

Table 5-2: Options names and descriptions

Option Name	Description
ADS ASUFAC REPORT	This option will display site location and institution file information sent to the DTS server.
ADS LICENSE REPORT	<p>This option runs the InterSystems License Report and sends the current maximum number of License Units used (and other associated information) to a central server for aggregation with other licensing info. This option is normally scheduled to be checked on a daily basis and sends the report every 30 days.</p> <p>This option may be run manually to reset the license counts if an unusual circumstance such as a runaway process has occurred, which artificially inflated the counts.</p> <p>This option may also be run at any time without resetting the counts to keep tabs on the current license counts for the system.</p>
ADS LOG REPORT	This option will display a log of information that has been sent to the DTS server. Users select from a list; ASU, IZP, License, and PKG events.

Option Name	Description
ADS PACKAGE REPORT	This option will display a list of installed package history which will be sent to the DTS server. It displays the packages, their version, patch and date installed in an RPMS system.
ADSDDRP PRT DD CHECKSUM REPORT	This option prints a list of data dictionaries and their checksums.
ADSLICRPT	This option runs the Intersystems License Report and sends the current maximum number of License Units used (and other associated information) to a central server for aggregation with other licensing info. This option is normally scheduled to be checked on a daily basis and sends the report every 30 days.
ADSMENU	Main menu for ADS reports.
ADSRTNCS REC/SEND RSUMS MAN	This option can be used to manually update the checksum data in the ADS ROUTINES and ADS DATA DICTIONARIES files.
ADSRPNGD SEND GLD DATA	This routine gathers and sends routine data from the HQ SQA Gold Database to the DTS Central server. It should be autoqueued to run in the background. It should only run on the HQ SQA Gold database and nowhere else.
ADSRNRP PRT CHECKSUM REPORT	This option prints a list of routines and their checksums.
ADSSITEEXPORT	This option will compile and export information to the IHS Central Repository database.

## 6.0 Internal Relations

There are no internal relations in the ADS package.

## **7.0 Archiving and Purging**

No archiving or purging is necessary with the ADS package.



## 8.0 Documentation Resources

This section describes a few of the methods used to generate online technical documentation.

### 8.1 System Documentation

Online ADS package system documentation can be generated through the use of several Kernel options, including, but not limited to:

- %INDEX
- Menu Management
- Inquire Option
- Print Option File
- VA FileMan
- Data Dictionary Utilities
- List File Attributes

For more option listings and further information about other utilities that supply online technical information, refer to the *Decentralized Hospital Computer Program (DHCP) Kernel Reference Manual*.

#### 8.1.1 %INDEX

The %INDEX option analyzes the structure of a routine to determine in part, if the routine adheres to RPMS programming standards. The output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references
- Running %INDEX for a specified set of routines allows users to discover any deviations from RPMS programming standards that exist, and to see how routines interact with one another (i.e., which routines call or are called by other routines).
- To run %INDEX for the ADS package:
- At the “Routine(s)?” prompt, type the **ADS** namespace.

### 8.1.2 Inquire Options

The Inquire menu management option provides the following information about a specified option:

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

In addition, all items on the menu are listed for each menu option. To secure information about ADS package options, specify the ADS namespace.

### 8.1.3 Print Option File

The Print Option File utility generates a listing of options from the Option file (#19). Users can print all of the entries or a single option or range of options.

### 8.1.4 List File Attributes

This VA FileMan option allows users to generate documentation pertaining to files and file structure. The standard format of this option provides the following data dictionary information for a specified file:

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

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
- Global location
- Help prompt
- Cross-references
- Input transform
- Date last edited
- Notes

Using the Global Map format of this option generates an output that lists the following information:

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

For a comprehensive listing of ADS files, refer to Section 4.0.

## 8.2 Online Help

In addition to system documentation, RPMS includes special help displays for most menu options and data entry prompts. Typing one or more question marks (?) at the “Select . . . Option” prompt displays information related to the current option, as shown in Table 8-1.

Table 8-1: Online help prompts and displays

Typing:	Displays:
One question mark (?)	A list of all options accessible from the current option.
Two question marks (??)	A list of all accessible options and their formal names.
Three question marks (???)	A brief description for each option in a menu.
One question mark (?), followed by an option name (?option)	Extended help, if available, for that option.

## 9.0 SAC Requirements and Exemptions

Applicable standards are listed in Table 9-1.

Table 9-1: Table of standards and descriptions

Standard Number	Description
2.2.3.3.2	Intrinsic Variables direct use is prohibited

### Reasons for Exemption

The code for ADS v1.0 is collecting system data, including InterSystems license and version information and the IP address and FQDN (fully qualified domain name) for the RPMS server. This information can only be obtained from methods found in the \$SYSTEM objects and methods provided by InterSystems. These are listed by the SAC Checker as Intrinsic Variables under \$SYSTEM.

### SAC Exemption Approval list

Table 9-2 lists specific code updates that have been approved for a SAC exemption in addition to any generic approvals listed above.

Table 9-2: Table of SAC Exemption Approvals

Patch	Program	Line	Exception	Date Approved
ADSV1.0	ADSRPT	+201	Use of \$SYSTEM.InetInfo.LocalHostName()	1/14/2021
ADSV1.0	ADSRPT	+202	Use of \$SYSTEM.InetInfo.HostNameToAddr()	1/14/2021
ADSV1.0	ADSRPT	+203	Use of \$SYSTEM.InetInfo.AddrToHostName()	1/14/2021
ADSV1.0	ADSRPT	+206	Use of \$SYSTEM.License.KeyCustomerName()	1/14/2021
ADSV1.0	ADSRPT	+207	Use of \$SYSTEM.License.KeyLicenseCapacity()	1/14/2021
ADSV1.0	ADSRPT	+229	Use of \$SYSTEM.Version.GetISCPProduct()	1/14/2021
ADSV1.0	ADSRPT	+238	Use of \$SYSTEM.License.LUMaxConsumed()	1/14/2021
ADSV1.0	ADSRPT	+252	Use of \$SYSTEM.License.LUMaxConsumedReset("")	1/14/2021
ADS*1.0*2	ADSRPT	+210	Use of \$SYSTEM.License.KeyAuthorizationKey()	1/14/2021
ADS*1.0*2	ADSRPT	+211	Use of \$SYSTEM.License.KeyExpirationDate()	1/14/2021
ADS*1.0*3	ADSRPT	+216	Use of \$SYSTEM.License.KeyOrderNumber()	1/14/2021

## Acronym List

Acronym	Term Meaning
DHCP	Decentralized Hospital Computer Program
FQDN	Fully Qualified Domain Name
IHS	Indian Health Service
IT	Information Technology
IP	Internet Protocol
PIMS	Patient Information Management System
RPMS	Resource and Patient Management System
SAC	Standards and Conventions

## Contact Information

If you have any questions or comments regarding this distribution, please contact the IHS IT Service Desk.

**Phone:** (888) 830-7280 (toll free)

**Web:** <https://www.ihs.gov/itsupport/>

**Email:** [itsupport@ihs.gov](mailto:itsupport@ihs.gov)