VistA Patch Display Page: 1

=============================================================================

Run Date: SEP 20, 2016 Designation: DI\*22.2\*2 TEST v5

Package : VA FILEMAN Priority : MANDATORY

Version : 22.2 Status : UNDER DEVELOPMENT

=============================================================================

Associated patches: (u)DI\*22.2\*3 <<= must be installed BEFORE `DI\*22.2\*2'

Subject: EXTENSIBLE DATA TYPES AND META DD EHNANCEMENTS

Category: ROUTINE

DATA DICTIONARY

ENHANCEMENT

OTHER

INPUT TEMPLATE

Description:

===========

The Veterans Information Systems and Technology Architecture (VistA)

Evolution program to modernize VistA includes modernizing Veterans Affairs

(VA's) enterprise data management capabilities. Modernizing FileMan will

functionally standardize VistA's database. This will enable structured

data query and exchange across all VistA instances, creating an enterprise

view of VistA data in standardized, computable form. This modernized

FileMan is called FileMan Enterprise for its enterprise data management

capabilities.

This specific patch contains new datatypes for FileMan 22.2 as well as

enhancements to the FileMan Meta Data Dictionary.

1. This build introduces the following new data types:

a. BOOLEAN: A version of the SET data type with only two entry

choices - TRUE or FALSE.

b. MUMPS LABEL: A version of the FREETEXT data type that allows

the storage of a tag and routine entry of the format, TAG^ROUTINE.

c. TIME: Allows the input of date/time entries but will only store

the TIME portion of the user input.

d. YEAR: Allows the input of date/time entries but will only store

the YEAR portion of the user input.

e. FT DATE: Similar to the DATE/TIME DATA TYPE but internally stores

the free text that was inputted by the user to determine the date.

f. FT POINTER: Similar to the POINTER data type but internally stores

the external value of the pointed to field.

g. UNIVERSAL TIME: Allows the input of date/time entries and stores

the Greenwich Mean Time in normal date/time format but also

includes the offset from the current timezone.

h. RATIO: Accept two numbers with a colon (":") between the two

numbers. It is formatted and stored like a mathematical ratio.

When defining a field with a DATA TYPE of RATIO the user will be

asked for the minimum and maximum of each number in the ratio.

2. A new Fileman API (UTC^DIUTC) was created that allows the conversion

of an internal Fileman date/time into Greenwich Mean Time and offset.

The API needs to know the location, which is done by passing the

Country and TimeZone as input parameters, passing an Institution as

a parameter, which has Country and TimeZone fields definded or

using the Institution derived by the default Institution setup for the

user.

3. The FileMan Meta Data Dictionary provides each site's specification

of the FileMan files, the associated FileMan fields within each of

those files, and descriptive metadata about the site data for each

individual VistA instance. This patch adds functionality to do

partial updates (deltas) to the Meta Data Dictionary.

Patch Components:

-----------------

Files & Fields Associated:

File Name (#) New/Modified/

Sub-file Name (#) Field Name (#) Deleted

------------------- ----------------------------- -------------

DATA TYPE (#.81) NUMBER (#.001) New

NAME (#.01) Modified

INTERNAL REPRESENTATION (#1) Modified

STANDARD PROMPT (#2) New

SORT BY EXTERNAL (#3) New

SHORT DESCRIPTION (#11) New

DESCRIPTION (#21) New

FIELDS DEFINED BY THIS TYPE (#41) New

FIELD DEFINED BY THIS TYPE (#.01) New

PROPERTY (#101) New

PROPERTY (#.01) New

ORDER (#1) New

PROMPT? (#10) New

VALUE (#31) New

METHOD (#201) New

METHOD (#.01) New

M CODE (#31) New

DATA TYPE PROPERTY (#.86) NUMBER (#.001) New

NAME (#.01) New

ABBREVIATION (#1) New

SHORT DESCRIPTION (#11) New

DESCRIPTION (#21) New

DATA TYPE (#41) New

DIR(0) (#42) New

DATA TYPE METHODS (#.87) NUMBER (#.001) New

NAME (#.01) New

SHORT DESCRIPTION (#11) New

DESCRIPTION (#21) New

META DATA DICTIONARY (#.9) NAME (#.01) Modified

OBJECT NAME (#.06) Modified

LAST UPDATED (#.07) New

WORLD TIMEZONES (#1.71) NAME (#.01) New

TIMEFRAME (#1) New

TIMEFRAME (#.01) New

OFFSET (#.02) New

CODE (#.03) New

COUNTRY (#1) (multiple under TIMEFRAME) New

COUNTRY (#.01) New

WORLD DAYLIGHT SAVINGS (#1.72)

COUNTRY (#.01) New

TIME SAME AS (#.03) New

YEAR (#1) New

YEAR (#.01) New

START DATE/TIME (#.02) New

END DATE/TIME (#.03) New

INSTITUTION (#4) LOCATION TIMEZONE (#800) New

COUNTRY (#801) New

TIMEZONE EXCEPTION (#802) New

Forms Associated:

Form Name File # New/Modified/Deleted

--------- ------ --------------------

DIP81S #.81 New

DIP86S #.86 New

DIP87S #.87 New

Mail Groups Associated:

Mail Group Name New/Modified/Deleted

--------------- --------------------

N/A

Options Associated:

Option Name Type New/Modified/Deleted

----------- ---- --------------------

ENTER OR EDIT DATA TYPE FILE [DI DATA TYPE FILE]

run routine New

ENTER OR EDIT DATA TYPE METHOD FILE [DI DATA TYPE METHOD FILE]

run routine New

DATA TYPE OPTIONS [DI DATA TYPE OPTIONS]

menu New

ENTER OR EDIT DATA TYPE PROPERTY FILE [DI DATA TYPE PROPERTY FILE]

run routine New

Protocols Associated:

Protocol Name New/Modified/Deleted

------------- --------------------

N/A

Security Keys Associated:

Security Key Name

-----------------

N/A

Templates Associated:

Template Name Type File Name (Number) New/Modified/Deleted

------------- ---- ------------------------- --------------------

DIP81IT INPUT DATA TYPE (#.81) New

DIP86IT INPUT DATA TYPE PROPERTY (#.86) New

DIP87IT INPUT DATA TYPE METHOD (#.87) New

Additional Information:

-----------------------

N/A

New Service Requests (NSRs):

----------------------------

N/A

Patient Safety Issues (PSIs):

-----------------------------

N/A

Remedy Ticket(s) & Overview:

----------------------------

N/A

Blood Bank Clearance:

---------------------

TBD

Test Sites:

-----------

N/A

Software and Documentation Retrieval Instructions:

--------------------------------------------------

Documentation describing the new functionality introduced by this patch

is available.

The preferred method is to retrieve files from download.DNS med.DNS .

This transmits the files from the first available server. Sites may

also elect to retrieve files directly from a specific server.

Sites may retrieve the software and/or documentation directly using

Secure Transfer Protocol (SFTP) from the ANONYMOUS.SOFTWARE directory

at the following OI Field Offices:

Albany: DNS .med.DNS

Hines: DNS .med.DNS

Salt Lake City: DNS .med.DNS

Documentation can also be found on the VA Software Documentation Library

at: http://www.DNS /vdl/

Title File Name SFTP Mode

-----------------------------------------------------------------

FileMan 22.2 Advanced User Manual FM22\_2UM2.PDF Binary

FileMan 22.2 User Manual FM22\_2UM1.PDF Binary

FileMan 22.2 Developer Guide FM22\_2DG.PDF Binary

FileMan 22.2 Technical Manual FM22\_2TM.PDF Binary

Backout and Rollback Procedure:

-------------------------------

The rollback plan for VistA applications is complex and not able to be

a 'one size fits all' solution. The general strategy for VistA rollback

is to repair the code with a follow-on patch. The development team

recommends that sites log a CA Service Desk Manager (SDM) ticket if a

patch needs to be backed-out.

During the VistA Installation Procedure of the KIDS build, the installer

should back up the modified routines by the use of the 'Backup a

Transport Global' action (step 3a in the Installations Instructions

below). The installer can restore the routines using the MailMan message

that were saved prior to installing the patch. The backout procedure for

data dictionary, options, forms, template, and data loads is more

complex and may require the issuance of a follow-on patch to ensure all

components are properly removed. Note that all rollback of all software

components, including routines must be restored to their previous state

at the same time and in conjunction with restoration of the data.

Patch Installation:

Pre/Post Installation Overview:

-------------------------------

There is a post-install routine DINIT220 that will create the DATA TYPE

(#.81), DATA TYPE PROPERTY (#.86), and DATA TYPE METHODS (#.87) files.

This post-install should not be deleted.

There is a manual step that should be run at the end of the installation.

Please see the Post-Installation Instructions for additional information.

Pre-Installation Instructions:

------------------------------

It is HIGHLY RECOMMENDED that ALL Users be off the system and VISTA

Background jobs be STOPPED before this patch is installed. TaskMan

should be stopped or placed in a wait state.

Failure to do so may result in 'source routine edited' errors during

a database update. Edits may be lost and records may be left in an

inconsistent state. An error that occurs before a cross-reference

is executed, for example, may lead to corrupted data or hard errors

in the future.

Also, please make sure that no other patches are installed until

installation for this patch has completed.

Installation will take approximately 5 minutes.

Installation Instructions:

--------------------------

1. Choose the PackMan message containing this patch.

2. Choose the INSTALL/CHECK MESSAGE PackMan option.

3. From the Kernel Installation and Distribution System Menu, select

the Installation Menu. From this menu, you may elect to use the

following options. When prompted for the INSTALL NAME enter DI\*22.2\*2.

a. Backup a Transport Global - This option will create a backup

message of any routines exported with this patch. It will not

backup any other changes such as Data Dictionaries (DDs) or

templates.

b. Compare Transport Global to Current System - This option will

allow you to view all changes that will be made when this patch

is installed. It compares all components of this patch

(routines, DDs, templates, etc.).

c. Verify Checksums in Transport Global - This option will allow

you to ensure the integrity of the routines that are in the

transport global.

4. In accordance with the warning at the beginning of the installation

instructions, make sure ALL interactive processes, and ALL

non-interactive background jobs are stopped following your site

specific procedures. TaskMan should be stopped or placed in a wait

state. All users should be off the system. NOT performing this step

could result in 'source routine edited' error during database updates,

and records may be left in an inconsistent state.

5. From the Installation Menu, select the Install Package(s) option and

When prompted for the INSTALL NAME, enter DI\*22.2\*2.

6. When prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of

Install? NO//' respond NO.

7. When prompted "Want KIDS to INHIBIT LOGONs during the install?

NO//" respond NO.

8. When prompted "Want to DISABLE Scheduled Options, Menu Options,

and Protocols? NO//" respond NO.

9. If prompted "Delay Install (Minutes): (0 - 60): 0//" respond 0.

Post-Installation Instructions:

-------------------------------

1) Re-enable all processes stopped in step 4 of the Installation

Instructions.

2) In order to update the META DATA DICTIONARY File, run the UPDATE THE

META DATA DICTIONARY [DDU UPDATE META DD] option, which is located on

the DATA DICTIONARY UTILITIES [DI DDU] menu of VA FileMan [DIUSER].

3) Update INSTITUTION file for the local sites:

In order for the new UNIVERSAL TIME datatype to function properly, the

institutions used by the current system will need to populate the

LOCATION TIMEZONE (#800) and COUNTRY (#801) field and possibly the

TIMEZONE EXCEPTION (#802) file of the INSTITUTION (#4). Eventually,

these fields will be populated by the Master File update process so

this is temporary solution until the Master File process is updated

to update these fields from the Central Server.

For each institution that is used on the system you will need to know

the timezone, country and if there is a daylight saving time exception.

For example Arizona is in the Mountain Timezone but for most of the

state it does not observe daylight saving time and local time stays

at UTC-7.

Most sites will be able to skip editing the TIMEZONE EXCEPTION field

and will only need to edit fields LOCATION TIMEZONE (#800) and

COUNTRY (#801) fields.

If the facility is in one of the TIMZONE EXCEPTION areas: Arizona

(outside the Navajo Nation), Hawaii, Puerto Rico, U.S. Virgin Islands,

American Samoa, Guam and Northern Mariana Islands, then you will also

edit TIMEZONE EXCEPTION (#802) field. For this field you will enter

a 0 (zero).

1) Determine Timezone, Country and if the facility/institution is in an

area that has a timezone exception.

2) From the programmer prompt get into FileMan and at the

"Select INSTITUTION NAME:" prompt you will put in your institution's

name or site number.

D P^DI

Example 1: for just editing fields LOCATION TIMEZONE (#800) and

COUNTRY (#801) fields:

---------------------i--------------------------------------

VA FileMan 22.2

Select OPTION: Enter OR EDIT FILE ENTRIES

Input to what File: 4 INSTITUTION (xxxx entries)

EDIT WHICH FIELD: ALL// 800 LOCATION TIMEZONE

THEN EDIT FIELD: 801 COUNTRY

THEN EDIT FIELD:

Select INSTITUTION NAME: Salem Pharmacy SALEM PHARMACY VA PHARM

LOCATION TIMEZONE: EAST

1 EASTERN

2 EASTERN EUROPEAN

CHOOSE 1-2: 1 EASTERN

COUNTRY: USA United States

Select INSTITUTION NAME:

Example 2: Editing fields LOCATION TIMEZONE (#800), COUNTRY (#801)

and TIMEZONE EXCEPTION (#802) fields for a facility in an exception

area:

-------------------------------------------------------------------

Select OPTION: ENTER OR EDIT FILE ENTRIES

Input to what File: INSTITUTION// 4 INSTITUTION (xxxx entries)

EDIT WHICH FIELD: ALL// 800 LOCATION TIMEZONE

THEN EDIT FIELD: 801 COUNTRY

THEN EDIT FIELD: 802 TIMEZONE EXCEPTION

THEN EDIT FIELD:

Select INSTITUTION NAME: Phoenix Pharmacy PHOENIX PHARMACY AZ PHARM

LOCATION TIMEZONE: MOUNTAIN

COUNTRY: USA United States

TIMEZONE EXCEPTION: 0 SST Only

Select INSTITUTION NAME:

Routine Information:

====================

The second line of each of these routines now looks like:

;;22.2;VA FileMan;\*\*[Patch List]\*\*;Jan 05, 2015;Build 114

The checksums below are new checksums, and

can be checked with CHECK1^XTSUMBLD.

Routine Name: DDD

Before: B10838418 After: B37279555 \*\*2\*\*

Routine Name: DDGFU

Before: B30665174 After: B18422124 \*\*2\*\*

Routine Name: DDS02

Before: B17073915 After: B16448956 \*\*2\*\*

Routine Name: DDS11

Before: B29500378 After: B29438650 \*\*2\*\*

Routine Name: DI

Before: B1429151 After: B741162 \*\*2\*\*

Routine Name: DIALOGZ

Before: B31531395 After: B33929177 \*\*2\*\*

Routine Name: DICATT

Before: B17660563 After: B16854656 \*\*2\*\*

Routine Name: DICATT1

Before: B11875453 After: B15743433 \*\*2\*\*

Routine Name: DICATT2

Before: B23559444 After: B23954266 \*\*2\*\*

Routine Name: DICATT22

Before: B11464555 After: B13874568 \*\*2\*\*

Routine Name: DICATT4

Before: B28137187 After: B27330981 \*\*2\*\*

Routine Name: DICATTD

Before: B27978166 After: B30235300 \*\*2\*\*

Routine Name: DICATTD0

Before: B2307008 After: B3050592 \*\*2\*\*

Routine Name: DICATTDE

Before: B31229801 After: B35121776 \*\*3,2\*\*

Routine Name: DICATTDM

Before: B12766660 After: B14726239 \*\*2\*\*

Routine Name: DICATTUD

Before: n/a After: B29085998 \*\*2\*\*

Routine Name: DICM1

Before: B18002840 After: B18641200 \*\*2\*\*

Routine Name: DICN

Before: B19431875 After: B19381820 \*\*2\*\*

Routine Name: DICOMP0

Before: B23226068 After: B22156667 \*\*2\*\*

Routine Name: DICQ1

Before: B37466935 After: B36630576 \*\*2\*\*

Routine Name: DICUIX

Before: B22242347 After: B23469834 \*\*2\*\*

Routine Name: DID1

Before: B28866184 After: B31978041 \*\*2\*\*

Routine Name: DIDU

Before: B40609213 After: B41062933 \*\*2\*\*

Routine Name: DIDX

Before: B16519592 After: B17097084 \*\*2\*\*

Routine Name: DIED

Before: B41585163 After: B45438022 \*\*2\*\*

Routine Name: DIEQ

Before: B14901755 After: B16148316 \*\*2\*\*

Routine Name: DIETLIB

Before: n/a After: B10466888 \*\*2\*\*

Routine Name: DIETLIBF

Before: n/a After: B28380296 \*\*2\*\*

Routine Name: DIEZ0

Before: B20800523 After: B20760534 \*\*2\*\*

Routine Name: DIFMEDT1

Before: n/a After: B1665680 \*\*2\*\*

Routine Name: DILL

Before: B11498371 After: B11299059 \*\*2\*\*

Routine Name: DINIT0

Before: B11557024 After: B11032015 \*\*2\*\*

Routine Name: DINIT0F4

Before: B55946103 After: B56458182 \*\*2\*\*

Routine Name: DINIT11

Before: B18791706 After: B20257296 \*\*2\*\*

Routine Name: DINIT11C

Before: B22387975 After: B22913064 \*\*2\*\*

Routine Name: DINIT20

Before: B36574363 After: B30578805 \*\*2\*\*

Routine Name: DINIT22

Before: B5025069 After: B73036249 \*\*2\*\*

Routine Name: DINIT220

Before: B2043695 After: B41195919 \*\*2\*\*

Routine Name: DINIT221

Before: n/a After: B30934674 \*\*2\*\*

Routine Name: DINIT295

Before: B61001773 After: B58919250 \*\*2\*\*

Routine Name: DINIT3

Before: B17341309 After: B17998419 \*\*2\*\*

Routine Name: DIO0

Before: B21842242 After: B23281270 \*\*2\*\*

Routine Name: DIOU

Before: B13380985 After: B15960039 \*\*2\*\*

Routine Name: DIP

Before: B34639315 After: B33018692 \*\*2\*\*

Routine Name: DIP12

Before: B17779972 After: B18737523 \*\*2\*\*

Routine Name: DIQ

Before: B71954744 After: B72853770 \*\*2\*\*

Routine Name: DIQG

Before: B41416251 After: B40363768 \*\*2\*\*

Routine Name: DIQGDD

Before: B18255834 After: B33805210 \*\*2\*\*

Routine Name: DIQGDDU

Before: B5433403 After: B5335189 \*\*2\*\*

Routine Name: DIR

Before: B37985105 After: B39636773 \*\*2\*\*

Routine Name: DIR1

Before: B33938437 After: B34818915 \*\*2\*\*

Routine Name: DIR2

Before: B21976864 After: B24251267 \*\*2\*\*

Routine Name: DIS

Before: B24614952 After: B24350192 \*\*2\*\*

Routine Name: DIUTC

Before: n/a After: B31448968 \*\*2\*\*

Routine Name: DIVR

Before: B50776190 After: B53021728 \*\*2\*\*

=============================================================================

User Information:

Entered By : DIMICELI,RON Date Entered : FEB 24,2016

Completed By: Date Completed:

Released By : Date Released :

=============================================================================