

CRISP Automation Systems Documentation
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Subject: Data Retrieval User's Guide Date Created: July 21, 2002
Revision 1.0 Date Revised: 07/21/2002

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Revision History

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Introduction

The CRISP Central Administration product includes the "Remote Record Retrieval" facility to retrieve data from CRISP systems. The system administrator configures the facility when the Central Administration product is installed.

The system administrator issues accounts to retrieval users. The accounts do not have VMS command prompt access, and allow "read-only" access to CRISP/32 systems.

Should the user attempt to "break out" to the command prompt, the following error message will be displayed, and the user will be logged out:

```
%DCL-E-CAPTINT, captive account - interactive access denied
```

Use

Users must log into their accounts using a DEC-compatible terminal session of VT100 or later (VT220, VT420, etc.). A DECterm is also acceptable. The retrieval script starts automatically upon login.

At most points in the script, pressing Ctrl-Z will return to the initial screen.

Pressing Ctrl-Z, Ctrl-C, or Ctrl-Y from the initial screen will log out the account. Ctrl-C and Ctrl-Y are ignored elsewhere in the script.

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Initial Screen

The initial screen looks like:

```
REMOTE RECORD RETRIEVAL  
Copyright 2002 by CRISP Automation Systems
```

Please select a node:

1. <This node>
2. KETTLL5
3. CRISP
4. FRED73

- Z. Logout

The first system is always the Central Administration node. If the Central Administration system has CRISP/32 installed, or the Standalone Log Server product installed, it can receive log messages from all other CRISP systems.

The other systems are those configured by the system administrator, in the order that they were configured.

From this screen, the user enters the number of the desired node to query, and then presses Enter.

Entering a value of "Z", followed by Enter, logs the user out.

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Operation Selection

Once a system has been selected, the user must choose what data to retrieve. There are three types of data that can be retrieved:

- CRISP log records, which are generated by CRISP/32 and its layered products.
- Secondary information. The system administrator selects a directory tree that holds "secondary" files.
- Historian data. The CRISP/32 product includes a capability to capture real-time data during operation, either on a trigger basis or on a periodic basis.

The user selects an option and then presses "Enter". The option screen appears as follows:

```
REMOTE RECORD RETRIEVAL  
Copyright 2002 by CRISP Automation Systems
```

Node: KETTL5

Please select an operation:

- A. Retrieve CRISP log records
- B. Retrieve operator audit from CRISP log records
- C. Retrieve secondary information
- D. Retrieve Historian data as a comma-separated-value file

- Z. Return to main menu

Or, press Ctrl-Z to return to main menu

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Retrieve CRISP Log Records

The user specifies a date range of records to retrieve. The user can also specify a string, which must appear in each record to be retrieved. The string is not case-sensitive; that is, a string of "A" matches either "a" or "A" in the data file.

DATE RANGE (Leave blank for all possible dates)

Starting date range YYYY-MM-DD [1900-01-01]: **2002-05-01**
Ending date range YYYY-MM-DD [2002-07-21]:

TEXT SEARCH

Leave blank to match all records. Text matching is not case-sensitive.

Search for text:

Search is running...

No files met the search parameters

Press Enter to try a different search:

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In the above screen, the user specified a starting date of May 1, 2002, by entering "2002-05-01" (as seen in the bold), and pressing Enter. The user pressed just Enter to accept the default ending date of July 21, 2002 (the current date is always the default). The user also pressed Enter to match all records. In this example, no records were found. Pressing Enter will allow the user to enter a different range of dates. Pressing Ctrl-Z will return to the initial screen.

Search is running...

26939 records were retrieved.

Press:

"P" and Enter to print the records
"R" and Enter to refine the search,
or just Enter to display the records.
(or press Ctrl-Z to return to the main menu)

In this example, a different date range returned a total of 26,939 records. If the user enters "P" and Enter, the records can be sent to a printer. If user enters "R" and Enter, the records that were retrieved can be filtered to be a smaller set by text entered by the user.

If the user presses "Enter" alone will display the records retrieved, one screen at a time, as follows. If the user presses Ctrl-Z, display of records will stop, and the user will be offered the opportunity to print the retrieved records.

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The print options are very simple.

```
2002-05-11 20:25:13 KETTL5::CRISP$DBCTRL 11-MAY-20 > %DBCTRL-S-
SYSDBINS, SYS$SYSROOT:[SYSLIB]NETMON.DBE;1222 installed as System
Database NETMON
2002-05-11 20:25:13 KETTL5::CRISP$DBCTRL 11-MAY-20 > %DBCTRL-S-
SYSDBINS, SYS$SYSROOT:[SYSLIB]WSDIR.DBE;1215 installed as System
Database WSDIR
2002-05-11 20:25:15 KETTL5::CRISP$DBASRV 11-MAY-20 > %DBASRV-S-
NETAVAIL, Network 0 is available, address AA-00-04-00-01-04 (12), device
_ESA0:
2002-05-11 20:25:15 KETTL5::CRISP$DBASRV 11-MAY-20 > %DBASRV-S-
UDPAVAIL, UDP/IP is available, listening 192.168.60.19 port 5000
2002-05-11 20:25:15 KETTL5::CRISP$MON 11-MAY-20 > %MON-I-SINGLE,
11-MAY-2002 20:25:15.30 This CRISP System is Single
```

Press RETURN to continue

The user specifies the print queue (SYS\$PRINT is the default). The user can add any modifiers to the PRINT command, such as /FORM=XYZ. The user then has an opportunity to press Enter to print, or Ctrl-Z to chicken out:

```
Name of the print queue [SYS$PRINT]:
Print command modifiers [(none)]:
```

Press Enter to print, or Ctrl-Z to return to the main menu

```
Job BATCH_RETRIEVAL_1_21A0071F (queue SYS$PRINT, entry 175) started on
SYS$PRINT
```

Refining a search works just like the initial search. Refinement can be done multiple times. The records that are retrieved are those that have all of the strings specified by the user.

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Retrieve Operator Audit

An Operator Audit is the set of CRISP/32 log records which log operator actions. These records have one or more of the following strings in them:

- %CIA-
- -CIA-
- CRISP\$PRINT

The first two strings are signaled when operators log in, log out, or their access is modified. The CRISP\$PRINT process logs modifications of database variables by CRISP workstations, including the Window Workstation.

The user specifies a date range of records to retrieve.

DATE RANGE (Leave blank for all possible dates)

Starting date range YYYY-MM-DD [1900-01-01]: **2002-05-01**
Ending date range YYYY-MM-DD [2002-07-21]:

Search is running...

No files met the search parameters

Press Enter to try a different search:

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In the above screen, the user specified a starting date of May 1, 2002, by entering "2002-05-01" (as seen in the bold), and pressing Enter. The user pressed just Enter to accept the default ending date of July 21, 2002 (the current date is always the default). In this example, no records were found. Pressing Enter will allow the user to enter a different range of dates. Pressing Ctrl-Z will return to the initial screen.
Search is running...

26939 records were retrieved.

Press:
"P" and Enter to print the records
"R" and Enter to refine the search,
or just Enter to display the records.
(or press Ctrl-Z to return to the main menu)

In this example, a different date range returned a total of 26,939 records. If the user enters "P" and Enter, the records can be sent to a printer. If user enters "R" and Enter, the records that were retrieved can be filtered to be a smaller set by text entered by the user.

```
2002-05-18 03:03:37 KETTL5::CRISP$CIA_CEN > 1 %CIA-I-CENREADY,  
CIA Central Administration process started  
2002-05-18 03:15:06 KETTL5::CRISP_1 > 1 %CIA-I-  
CENTRALFIL, Central CIA file is available  
2002-05-18 03:15:52 KETTL5::_FTA6: > 1 %CIA-I-  
CENTRALFIL, Central CIA file is available  
2002-05-18 03:22:55 KETTL5::_FTA6: > 1 %CIA-S-LOGIN_OK,  
18-MAY-2002 03:22:55.05 User FRED has logged in  
2002-05-18 03:22:55 KETTL5::_FTA6: > 1 -CIA-S-VALID,  
Username and password are correct  
2002-05-18 03:24:32 KETTL5::_FTA6: > 1 %CIA-S-LOGOUT_OK,
```

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18-MAY-2002 03:24:32.67 User FRED has logged out

Press RETURN to continue

If the user presses "Enter" alone will display the records retrieved, one screen at a time, as follows. If the user presses Ctrl-Z, display of records will stop, and the user will be offered the opportunity to print the retrieved records.

The print options are very simple. The user specifies the print queue (SYS\$PRINT is the default). The user can add any modifiers to the PRINT command, such as /FORM=XYZ. The user then has an opportunity to press Enter to print, or Ctrl-Z to chicken out:

Name of the print queue [SYS\$PRINT]:
Print command modifiers [(none)]:

Press Enter to print, or Ctrl-Z to return to the main menu

Job BATCH_RETRIEVAL_1_21A0071F (queue SYS\$PRINT, entry 175) started on
SYS\$PRINT

Refining a search can be done multiple times. The records that are retrieved are those that have all of the strings specified by the user. The search is not case-sensitive; that is, a string of "A" matches either "a" or "A" in the data file.

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Retrieve Secondary Information

“Secondary information” includes all the files in a directory tree. The user must enter a string, and that string must be present in the file names or one or more files. For example:

```
String to include in filename : qwertyuiop
```

```
No files were found.
```

```
String to include in filename :
```

In this example, no files were found whose names contained “qwertyuiop”. The user is offered another attempt. In this example, the search was successful:

```
String to include in filename : tank
```

```
16 files were found.
```

1. DISK\$USER: [CRISP.BATCH] ATANK5A.ALARM5A;1
2. DISK\$USER: [CRISP.BATCH] ATANK5A.BATCH5A;2
3. DISK\$USER: [CRISP.BATCH] ATANK5A.HEADER5A;1
4. DISK\$USER: [CRISP.BATCH] ATANK5A.STPT5A;2
5. DISK\$USER: [CRISP.BATCH] FTANK6AFORM.DAT;1
6. DISK\$USER: [CRISP.BATCH] FTANK6C.DAT;1
7. DISK\$USER: [CRISP.BATCH] FTANK6C_DRY.DAT;1
8. DISK\$USER: [CRISP.BATCH] FTANK6FORM.DAT;1
9. DISK\$USER: [CRISP.BATCH] FTANK6TEST.DAT;1
10. DISK\$USER: [CRISP.BATCH] ZTANK5.ALARM5;1
11. DISK\$USER: [CRISP.BATCH] ZTANK5.BATCH5;2
12. DISK\$USER: [CRISP.BATCH] ZTANK5.HEADER5;1
13. DISK\$USER: [CRISP.BATCH] ZTANK5.STPT5;2
14. DISK\$USER: [CRISP.BATCH] ZTANK671700.ALARM5;1
15. DISK\$USER: [CRISP.BATCH] ZTANK671700.BATCH5;1
16. DISK\$USER: [CRISP.BATCH] ZTANK671700.STPT5;1

```
Choose a file to display or print [1]:
```

Here, sixteen files were found with “TANK” in their names. If the user presses Enter at the prompt, the first file (DISK\$USER: [CRISP.BATCH] ATANK5A.ALARM5A;1) will

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be displayed, one screen at a time, as follows:

B A T C H H I S T O R Y T A N K # 5 A

Machine Number: Tank 5A
Batch Number: TANK5A
Formula Number: OQ_T5AFORM1
Product Name: T5A Test Formula
Part Number: OQ_T5APART1
Product Type: TANK5A
User Name: 4
Crisp Application Version: 3.0.0
PLC Application Version: 3.1.0
Batch Start Date: AUG-31-2000 17:48:30
Batch Complete Date: AUG-31-2000 17:56:46

Press RETURN to continue

If the user presses Ctrl-Z, display of records will stop, and the user will be offered the opportunity to print the retrieved records. The print options are very simple. The user specifies the print queue (SYS\$PRINT is the default). The user can add any modifiers to the PRINT command, such as /FORM=XYZ. The user then has an opportunity to press Enter to print, or Ctrl-Z to chicken out:

After the file is displayed or printed, the user returns to the

Batch Start Date: AUG-31-2000 17:48:30
Batch Complete Date: AUG-31-2000 17:56:46

Name of the print queue [SYS\$PRINT]:
Print command modifiers [(none)]:

Press Enter to print, or Ctrl-Z to return to the main menu

Job ATANK5A (queue SYS\$PRINT, entry 182) started on SYS\$PRINT
list of retrieved files.

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Retrieve Historian Data

CRISP/32 systems include a facility to capture real-time data on either a triggered or time basis, or both. The data are stored in "point files", one set of files per database symbol.

The user can retrieve values from up to six point files. The values from the point files are merged by time; point files entries which have the identical time are displayed as one record. Point files which do not have corresponding values are displayed as "".

The output is formatted as a set of comma-separated values (CSV). This allows direct import into spreadsheet or other tools for offline analysis. The user will be prompted for a filename, and the user can later FTP into the system and retrieve the file.

Note: For Historian data retrieval to succeed, CRISP/32 must be running on the target system. Otherwise, messages of "CRISP/32 is probably not running on remote node" will be displayed.

VMS Absolute Time Format

The user enters a start date and time, and an optional stop date and time, in VMS absolute time format. It's necessary in some cases to enter an exact time, to the nearest second, when searching near the start of the recorded data. If a date and time entered is before the start of recorded data, the retrieval will fail with the message, "%HSUB-E-TOOEARLY, Starting time is earlier than first recorded history point".

VMS absolute time format has the form:

DD-*MMM*-*YYYY* : *HH* : *MM* : *SS*

where:

DD is the day of the month; for example, "12".

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MMM is the name of the month; for example, "JAN".
YYYY is the year; for example, "2002".
HH is the hour in 24-hour format; for example, "17".
MM is the minute; for example, "23".
SS is the second; for example, "43".

In the above example, the time would be written as:

12-JAN-2002:17:23:43

If the hours, minutes, and seconds are omitted, midnight (00:00:00) is assumed.

Operation

In the following example, the user's entries are in bold type. The user specified a start time of August 28, 1990. The user pressed Enter for the stop time, so all data was retrieved. The user chose point files "hipid:saw" and "hipid:triangle" for retrieval. The user specified an output filename of "RESULT.CSV", and pressed Enter to display the data, one screen at a time.

Start time to retrieve, VMS absolute time format: **28-aug-1990**

Last time to retrieve, VMS absolute time format:

Point file, Database:Symbol format: **hipid:saw**

Point file, Database:Symbol format (blank line to end): **hipid:triangle**

Point file, Database:Symbol format (blank line to end):

hipid:saw: retrieving points 1 through 512: 109 points retrieved

hipid:triangle: retrieving points 1 through 512: 109 points retrieved

Merging data

hipid:saw: retrieving points 513 through 1024: No data retrieved

hipid:triangle: retrieving points 513 through 1024: No data retrieved

Name of file into which to save results: **RESULT.CSV**

Press:

"P" and Enter to print the file

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or just Enter to display the file.
(or press Ctrl-Z to return to the main menu)

```
"Date", "hipid:saw", "hipid:triangle"  
09/13/1990 13:21:02,      24,      -16  
09/13/1990 13:21:05,      25,      -19  
09/13/1990 13:21:08,      25,      -16  
09/13/1990 13:21:11,      26,      -13  
09/13/1990 13:21:14,      27,      -10  
09/13/1990 13:21:17,      28,       -7  
09/13/1990 13:21:20,      28,      -4
```

Press RETURN to continue

If the user presses Ctrl-Z, display of records will stop, and the user will be offered the opportunity to print the retrieved records. The print options are very simple. The user specifies the print queue (SYS\$PRINT is the default). The user can add any modifiers to the PRINT command, such as /FORM=XYZ. The user then has an opportunity to press Enter to print, or Ctrl-Z to chicken out:

```
Name of the print queue [SYS$PRINT]:  
Print command modifiers [(none)]:
```

Press Enter to print, or Ctrl-Z to return to the main menu

```
Job RESULT (queue SYS$PRINT, entry 183) started on SYS$PRINT
```

The user can then use FTP from another computer to retrieve RESULT.CSV, which holds the comma-separated-value file. An ASCII (text) transfer should be used.

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