TRACE INT

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Agenda

- Introducing interactive trace
- Showing it in action
- Source code modifications

TRACE INT

- An attempt to closely mimic Classic Rexx interactive tracing
  - Very helpful feature
- Only when interpreting code
  - -arg or -exec options
  - Warning issued when compiled

TRACE INT

- New 'trace int' instruction

- Applicable in method calls, but can be written anywhere where other trace instructions are allowed

TRACE INT

- When encountered, execution is interrupted and user is prompted for input
  - Single-step through program
  - Re-interpret current clause
  - Show source code
  - Interpret user-provided NetRexx clause
    - Must be a SAY instruction, method call or assignment

TRACE INT

- Output is shown as if 'trace results' is active (results=4, int=5)

- Read/write access to NetRexx' internal RxVarpool

  - Properties and variables can be accessed, complying with NetRexx' visibility

  - Methods can be called

- 'TRACE OFF' resumes program execution

TRACE INT

- Prompt is very rudimentary

- No history, limited editing capability

- Due to Java BufferedInputStream

  - needs [Enter]

  - ANSI tty possible on *nix

  - Avoid native code getch

Trace help

```
    *-> ?
```

Experimental interactive trace :

  press [Enter] to trace interactively

  type '=' to reinterpret current clause

  type '-[n]' to show previous n clause(s), shows current clause if n is absent

  type '+[n]' to show next n clause(s), shows next clause if n is absent

  type 'trace off' to stop tracing

  any other clause entered must be either an assignment or a SAY instruction

```
    *->
```

TRACE INT

- In action..

Source files

Limited amount of files updated, old behavior unmodified, maximal re-use of existing code

- netrexx/lang/RexxTrace.nrx
  - Defines INT as 5 (duplicates never implemented TERMS)
  - Updates levelwords
- org/netrexx/process/NetRexxC.properties
  - Addition of 'TRACE INT ignored when compiling'
- org/netrexx/process/NrTrace.nrx
  - Parsing updated to accept new 'TRACE INT' instruction
  - Sets level to RexxTrace.INT

Source files

- org/netrexx/process/RxClauser.nrx
  - Accepts optional RxSource on constructor
  - RxSource is prompt input disguised as RxFileReader from memory (KK)
- org/netrexx/process/RxParser.nrx
  - Accepts optional RxClauser on constructor
  - To parse prompt input as a clause
- org/netrexx/process/RxInterpreterHelper.nrx
  - Shows source
  - Moved code so RxInterpreter.nrx can compile with nodecimal
- org/netrexx/process/RxInterpreter.nrx
  - Main logic

Source files

- org/netrexx/process/RxProxy.nrx
  - Do not set final flag on Java field for constant properties
- org/netrexx/diag/DiagTrace.nrx
  - Calls itself by address, trace input from stem
  - Runs as part of build

Trace logic

- Exploring RxInterpreter.nrx

Next

- Reorganise documentation..