



# TINE Release 4.0 News

(May 6, 2011: That was the month that was !)

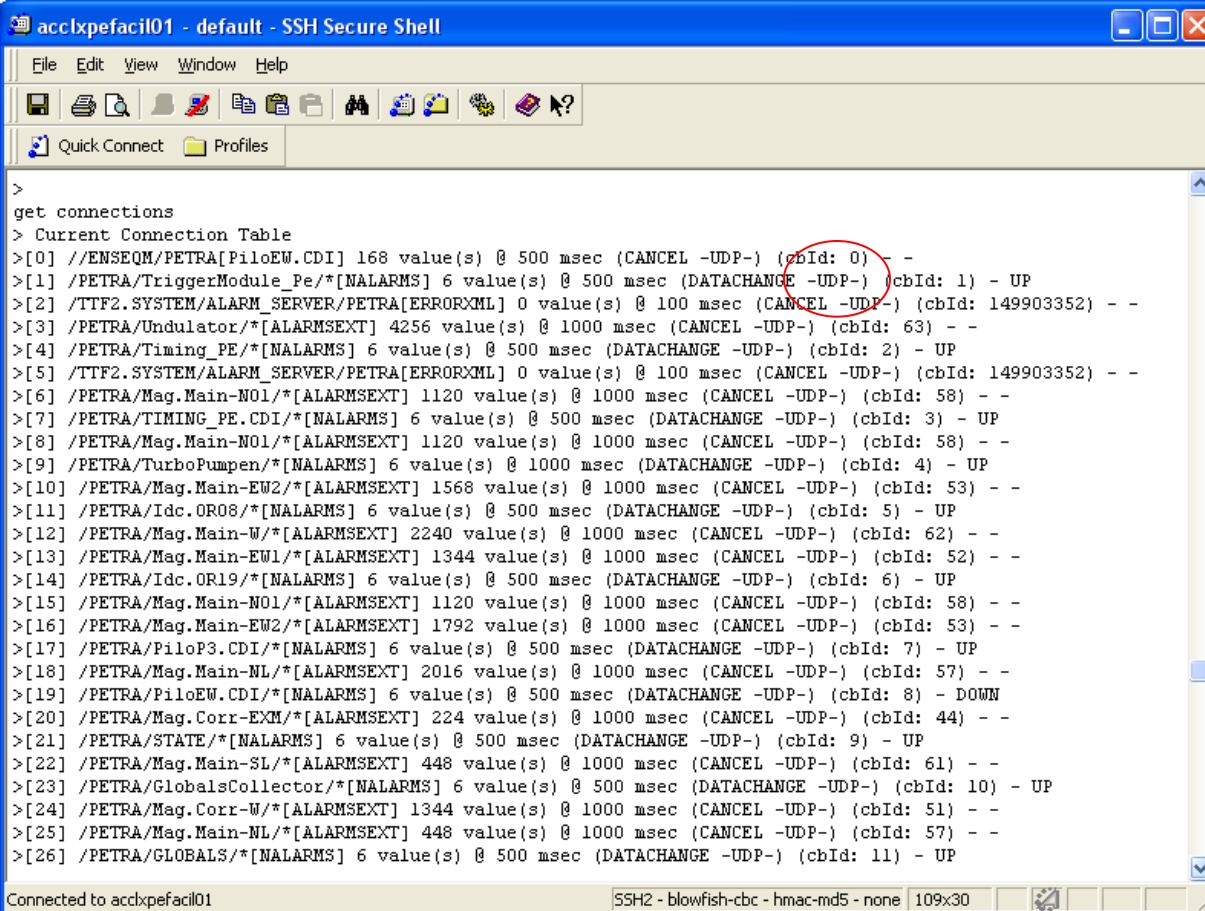
“What a long, strange trip it’s been ....”

# [ Release 4.2.2 ]

- **Tweaks** to version 4.2.2
  - *Improved debugging* and log output
  - Local History *snapshot boundary problem* fixed.
  - Java: problem with *missing alarm 'tags'* fixed.
  - Better *coordination of bitfield definitions* with CDI
- **MatLab API** improvements
- **Cosylab Application** news

# Release 4.2.2 Tweaks

- Runtime debugging and log files (client side)
  - 'get connections' now includes the **inet** protocol:

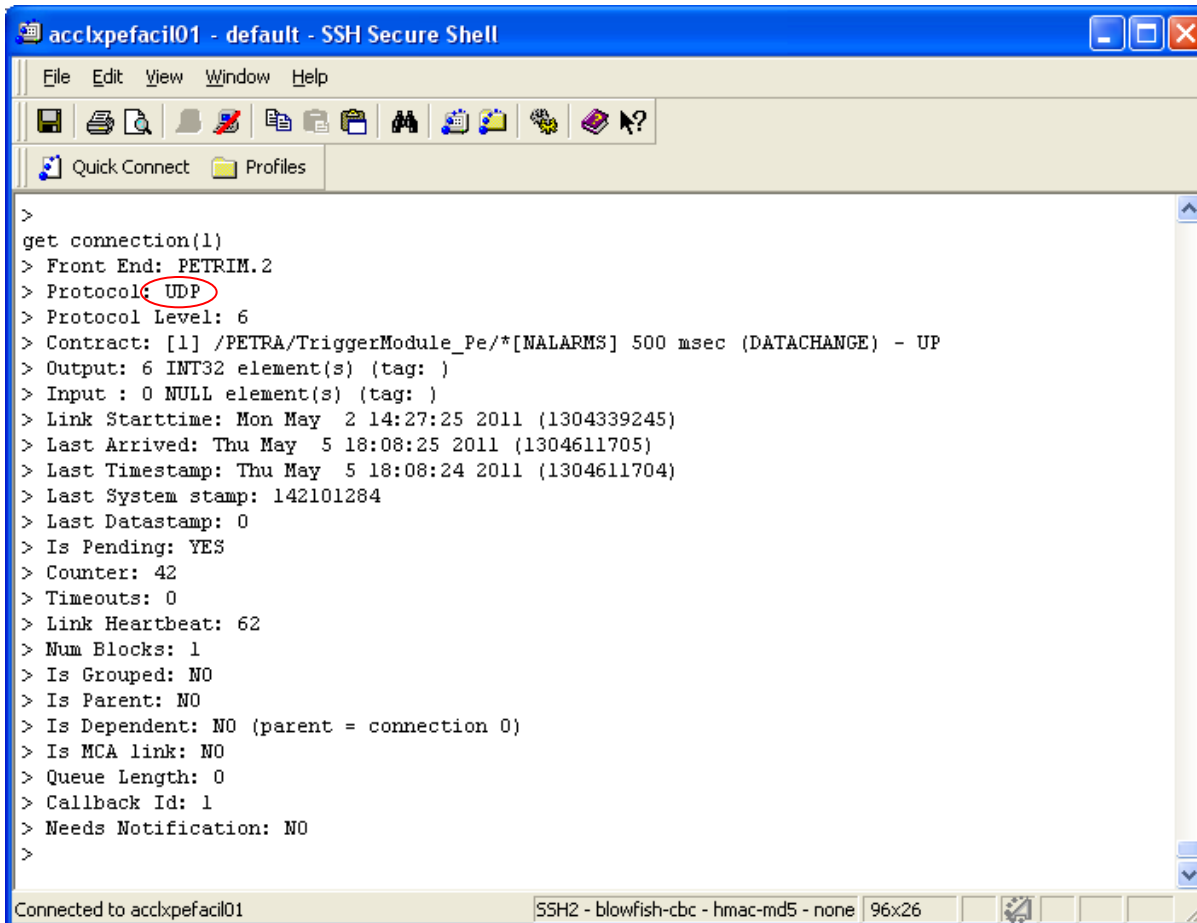


```
>
get connections
> Current Connection Table
>[0] //ENSEQM/PETRA[PiloEW.CDI] 168 value(s) @ 500 msec (CANCEL -UDP-) (cbId: 0) - -
>[1] /PETRA/TriggerModule_Pe/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 1) - UP
>[2] /TTF2.SYSTEM/ALARM_SERVER/PETRA[ERRORXML] 0 value(s) @ 100 msec (CANCEL -UDP-) (cbId: 149903352) - -
>[3] /PETRA/Undulator/*[ALARMSEXT] 4256 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 63) - -
>[4] /PETRA/Timing_PE/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 2) - UP
>[5] /TTF2.SYSTEM/ALARM_SERVER/PETRA[ERRORXML] 0 value(s) @ 100 msec (CANCEL -UDP-) (cbId: 149903352) - -
>[6] /PETRA/Mag.Main-N01/*[ALARMSEXT] 1120 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 58) - -
>[7] /PETRA/TIMING_PE.CDI/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 3) - UP
>[8] /PETRA/Mag.Main-N01/*[ALARMSEXT] 1120 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 58) - -
>[9] /PETRA/TurboPumpen/*[NALARMS] 6 value(s) @ 1000 msec (DATACHANGE -UDP-) (cbId: 4) - UP
>[10] /PETRA/Mag.Main-EW2/*[ALARMSEXT] 1568 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 53) - -
>[11] /PETRA/Idc.OR08/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 5) - UP
>[12] /PETRA/Mag.Main-W/*[ALARMSEXT] 2240 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 62) - -
>[13] /PETRA/Mag.Main-EW1/*[ALARMSEXT] 1344 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 52) - -
>[14] /PETRA/Idc.OR19/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 6) - UP
>[15] /PETRA/Mag.Main-N01/*[ALARMSEXT] 1120 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 58) - -
>[16] /PETRA/Mag.Main-EW2/*[ALARMSEXT] 1792 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 53) - -
>[17] /PETRA/PiloP3.CDI/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 7) - UP
>[18] /PETRA/Mag.Main-NL/*[ALARMSEXT] 2016 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 57) - -
>[19] /PETRA/PiloEW.CDI/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 8) - DOWN
>[20] /PETRA/Mag.Corr-EXM/*[ALARMSEXT] 224 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 44) - -
>[21] /PETRA/STATE/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 9) - UP
>[22] /PETRA/Mag.Main-SL/*[ALARMSEXT] 448 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 61) - -
>[23] /PETRA/GlobalsCollector/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 10) - UP
>[24] /PETRA/Mag.Corr-W/*[ALARMSEXT] 1344 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 51) - -
>[25] /PETRA/Mag.Main-NL/*[ALARMSEXT] 448 value(s) @ 1000 msec (CANCEL -UDP-) (cbId: 57) - -
>[26] /PETRA/GLOBALS/*[NALARMS] 6 value(s) @ 500 msec (DATACHANGE -UDP-) (cbId: 11) - UP
```

Connected to acclxpefacil01      SSH2 - blowfish-cbc - hmac-md5 - none    109x30

# Release 4.2.2 Tweaks

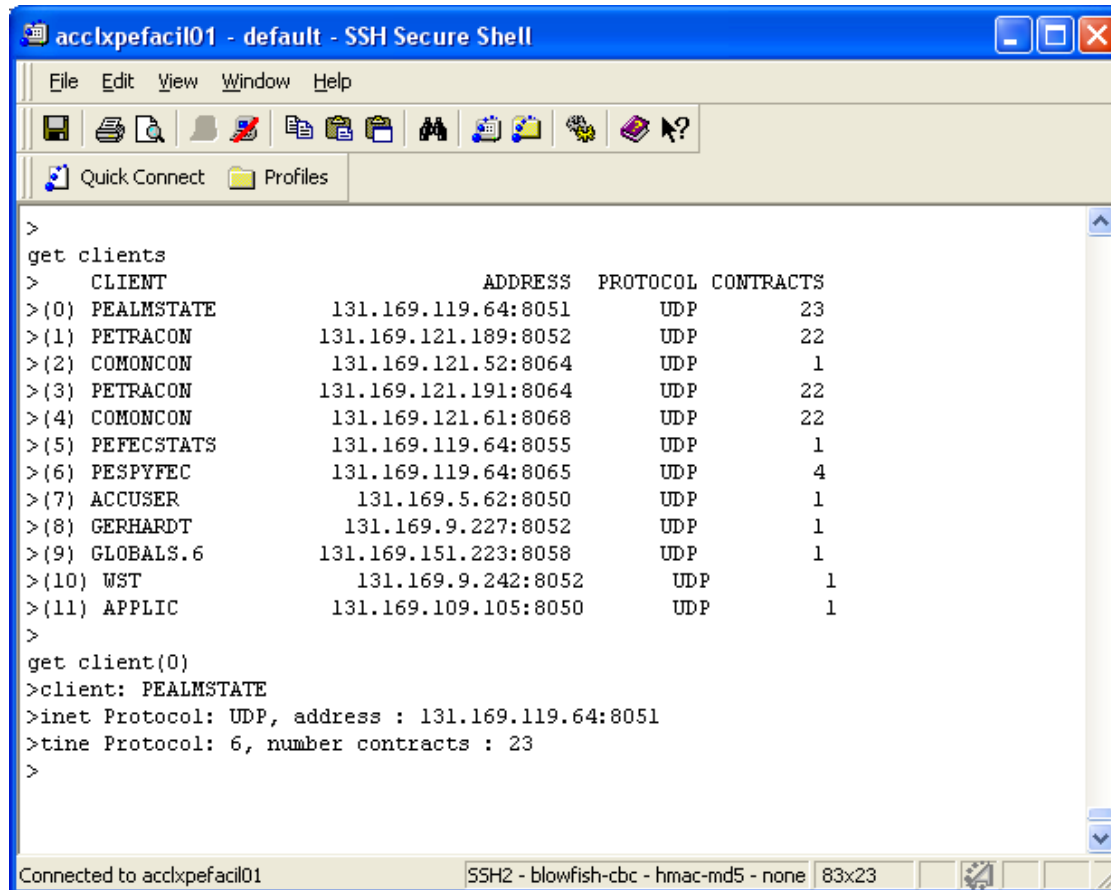
- Runtime debugging and log files (client side)
  - *'get connection(x)'* now includes the **inet** protocol:



```
acclxpefacil01 - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
>
get connection(1)
> Front End: PETRIM.2
> Protocol: UDP
> Protocol Level: 6
> Contract: [1] /PETRA/TriggerModule_Pe/*[NALARMS] 500 msec (DATACHANGE) - UP
> Output: 6 INT32 element(s) (tag: )
> Input : 0 NULL element(s) (tag: )
> Link Starttime: Mon May 2 14:27:25 2011 (1304339245)
> Last Arrived: Thu May 5 18:08:25 2011 (1304611705)
> Last Timestamp: Thu May 5 18:08:24 2011 (1304611704)
> Last System stamp: 142101284
> Last Datastamp: 0
> Is Pending: YES
> Counter: 42
> Timeouts: 0
> Link Heartbeat: 62
> Num Blocks: 1
> Is Grouped: NO
> Is Parent: NO
> Is Dependent: NO (parent = connection 0)
> Is MCA link: NO
> Queue Length: 0
> Callback Id: 1
> Needs Notification: NO
>
Connected to acclxpefacil01 SSH2 - blowfish-cbc - hmac-md5 - none 96x26
```

# Release 4.2.2 Tweaks

- Runtime debugging and log files (server side)
  - Client information now includes the port !



The screenshot shows a terminal window titled "acclxpefacil01 - default - SSH Secure Shell". The terminal displays the output of the "get clients" command, which lists 12 clients with their IDs, names, addresses, protocols, and contract counts. Below this, the "get client(0)" command is used to view details for the first client (PEALMSTATE), showing its IP address and contract count.

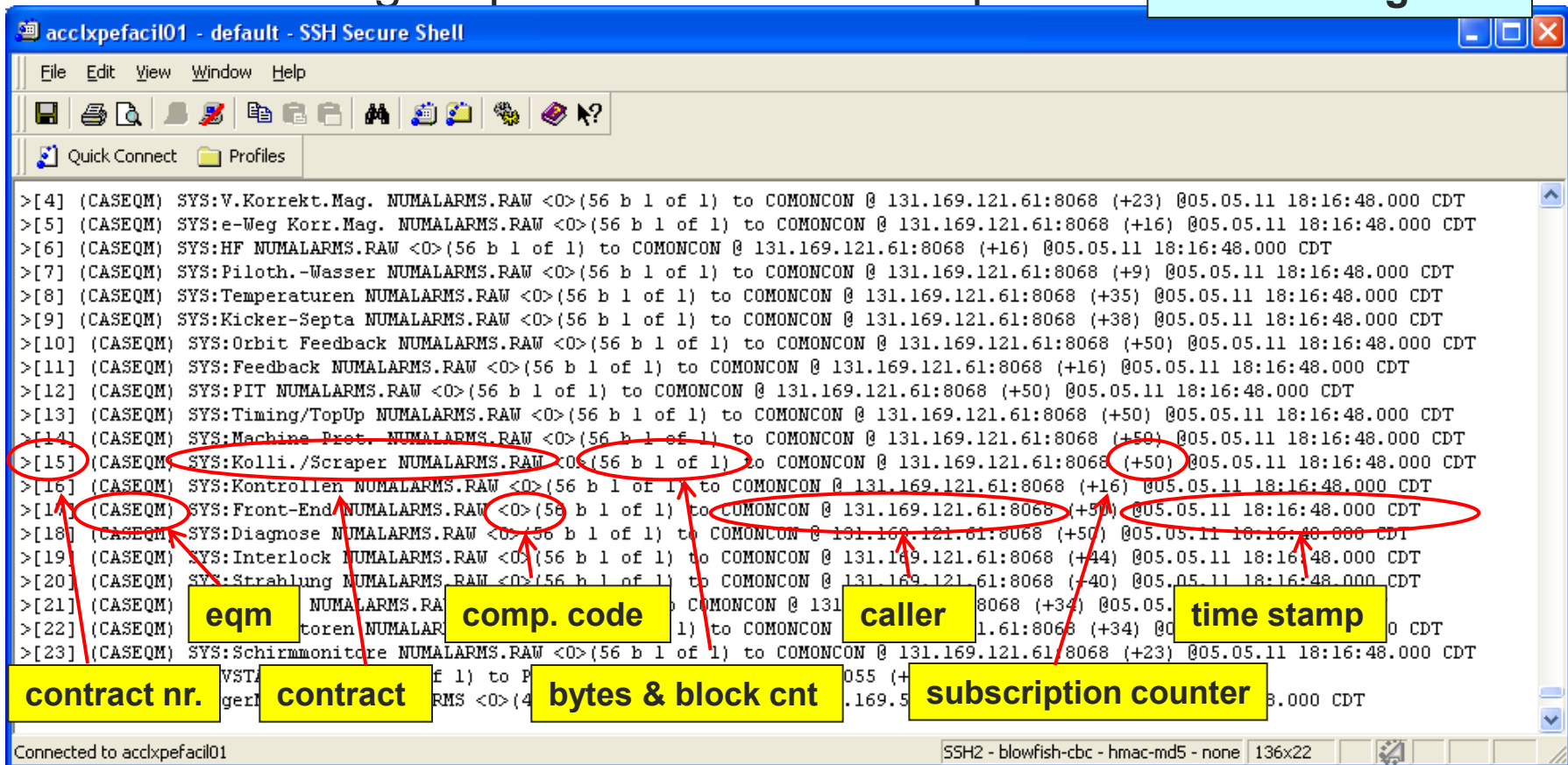
```
>
> get clients
> CLIENT ADDRESS PROTOCOL CONTRACTS
>(0) PEALMSTATE 131.169.119.64:8051 UDP 23
>(1) PETRACON 131.169.121.189:8052 UDP 22
>(2) COMONCON 131.169.121.52:8064 UDP 1
>(3) PETRACON 131.169.121.191:8064 UDP 22
>(4) COMONCON 131.169.121.61:8068 UDP 22
>(5) PEFECSTATS 131.169.119.64:8055 UDP 1
>(6) PESPYFEC 131.169.119.64:8065 UDP 4
>(7) ACCUSER 131.169.5.62:8050 UDP 1
>(8) GERHARDT 131.169.9.227:8052 UDP 1
>(9) GLOBALS.6 131.169.151.223:8058 UDP 1
>(10) WST 131.169.9.242:8052 UDP 1
>(11) APPLIC 131.169.109.105:8050 UDP 1
>
> get client(0)
>client: PEALMSTATE
>inet Protocol: UDP, address : 131.169.119.64:8051
>tine Protocol: 6, number contracts : 23
>
```

Connected to acclxpefacil01 SSH2 - blowfish-cbc - hmac-md5 - none 83x23

# Release 4.2.2 Tweaks

- Runtime debugging and log files (server side)
  - Debug output also includes the port !

Here: debug = 2 !



The screenshot shows an SSH terminal window titled "acclxpefacil01 - default - SSH Secure Shell". The terminal displays a series of log entries for "CASEQM" messages. Each entry follows a similar format: ">[line number] (CASEQM) SYS:[system name] NUMALARMS.RAW <0>(56 b 1 of 1) to COMONCON @ 131.169.121.61:8068 ([offset]) @05.05.11 18:16:48.000 CDT".

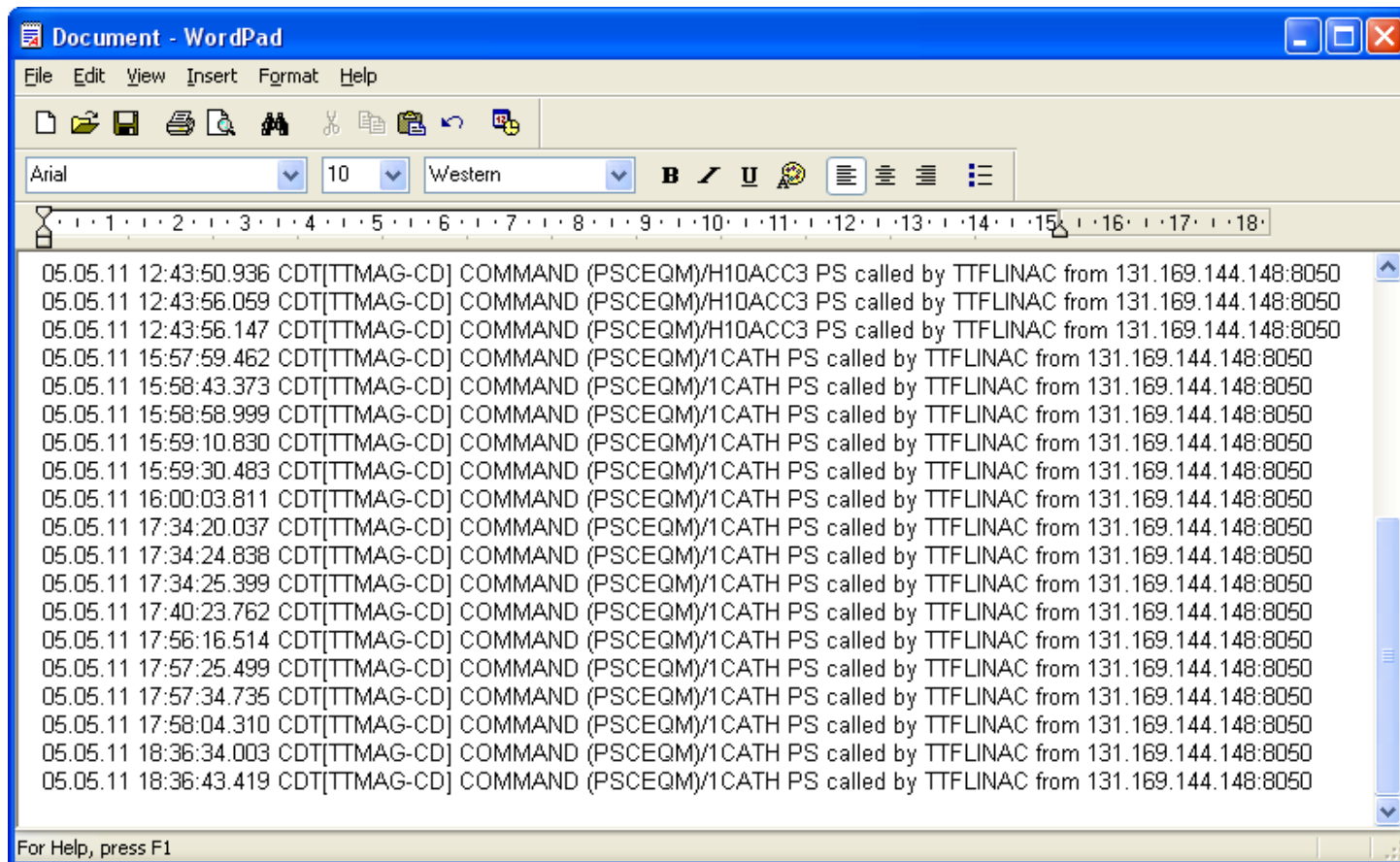
Annotations include:

- Red circles highlighting the line number (e.g., [15]), the system name (e.g., SYS:Kolli./Scrap), the contract number (e.g., 05), the contract name (e.g., Kolli./Scrap), the bytes and block count (e.g., 56 b 1 of 1), the caller (e.g., COMONCON @ 131.169.121.61:8068), the subscription counter (e.g., +50), and the time stamp (e.g., @05.05.11 18:16:48.000 CDT).
- Yellow boxes with arrows pointing to these fields, labeled: "contract nr.", "contract", "bytes & block cnt", "caller", "subscription counter", "eqm", "comp. code", and "time stamp".

At the bottom of the terminal, it shows "Connected to acclxpefacil01" and "SSH2 - blowfish-cbc - hmac-md5 - none 136x22".

# Release 4.2.2 Tweaks

- Runtime debugging and log files (server side)
  - COMMAND logging also include port:



The screenshot shows a WordPad window titled "Document - WordPad" with a menu bar (File, Edit, View, Insert, Format, Help) and a toolbar. The text area contains a log file with the following entries:

```
05.05.11 12:43:50.936 CDT[TTMAG-CD] COMMAND (PSCEQM)/H10ACC3 PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 12:43:56.059 CDT[TTMAG-CD] COMMAND (PSCEQM)/H10ACC3 PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 12:43:56.147 CDT[TTMAG-CD] COMMAND (PSCEQM)/H10ACC3 PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 15:57:59.462 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 15:58:43.373 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 15:58:58.999 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 15:59:10.830 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 15:59:30.483 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 16:00:03.811 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:34:20.037 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:34:24.838 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:34:25.399 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:40:23.762 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:56:16.514 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:57:25.499 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:57:34.735 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 17:58:04.310 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 18:36:34.003 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
05.05.11 18:36:43.419 CDT[TTMAG-CD] COMMAND (PSCEQM)/1CATH PS called by TTFLINAC from 131.169.144.148:8050
```

At the bottom of the window, it says "For Help, press F1".

# How to Find the Client Process

- e.g. Linux: (login to client's IP address)
  - `netstat -ltnup | grep 8050`

```
acclxpefacil01 - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$
fecadmin@acclxpefacil01:~$ netstat -ltnup | grep 8050
(Not all processes could be identified, non-owned process info
will not be shown, you would have to be root to see it all.)
udp      0      0 0.0.0.0:8050      0.0.0.0:*
fecadmin@acclxpefacil01:~$ netstat -ltnup | grep 8051
(Not all processes could be identified, non-owned process info
will not be shown, you would have to be root to see it all.)
udp      0      0 0.0.0.0:8051      0.0.0.0:*
fecadmin@acclxpefacil01:~$ netstat -ltnup | grep 8052
(Not all processes could be identified, non-owned process info
will not be shown, you would have to be root to see it all.)
udp      0      0 0.0.0.0:8052      0.0.0.0:*
fecadmin@acclxpefacil01:~$
```

port	pid	name
8050	27031	almstate
8051	27031	almstate
8052	20787	statesrv

Connected to acclxpefacil01      SSH2 - blowfish-cbc - hmac-md5 - none      97x20



# [ How to Find the Client Process ]

- Note: 'netstat' utility is on all platforms but behaves differently for each
  - linux: netstat -ltnup
  - windows: netstat /oab
  - solaris/mac os: netstat doesn't list pids: use 'lsof' instead (e.g.)  
lsof -i udp -n

# [ Release 4.2.2 Tweaks ]

- Local History snapshot *Bug Fix*
  - <prop>.HIST@
    - *Input*: a targeted time stamp
    - *Output*: the history record at the input time stamp OR at the next more recent time stamp!
    - Problem if target time stamp more recent than last stored data in a file set
      - e.g. target = 1 sec before midnight
    - *Now*: scan into next file set if target not found!

# [ Release 4.2.2 Tweaks ]

- Missing Alarm tags in **java** servers
  - Problem introduced with '*dynamic*' alarm tags for automatic **watch-table** alarms !
  - No **watch table** => no alarm tag !
  - **Fixed** as of April 18.

# [ Release 2.2 tweaks ]

- **Bitfield** access:
  - now respects '*field-decorated*' device names as well as property names
    - Common in CDI servers
  - CDI 1.0.6 now properly maps **bitfield** format types to CDI format types.
  - Note: **BITFIELD** type (or class) allows the definition of bits or bit 'fields' within a carrying integer type
    - (UINT8, UINT16, UINT32, etc.)

# [ BITFIELDS ]

- *Temptation:*

- In `cdiaddr.csv` define 8 (or 16 or 32) individual devices, each referring to a different bit of the same hardware i/o.
- Read all of these addresses out via CDI
- So you've just made the CDI hardware bus and the server 8x (16x, 32x, ...) busier than it needs to be!

- *Better:*

- Define a `bitfield`
- Read the `bitfield` address out once and make use of the individual fields where needed !

# MatLab News

- **64-bit Windows Problem solved !**
  - A build problem concerning 'tbufsrv64.dll'
    - Missing -DMULTITHREADED
    - Was not using real mutexes !
- **MatLab engine interface problem solved** (thank you Arthur!).
  - A doocs/tine server calls a MatLab routine during the property handling dispatch.
  - Invokes the MatLab 'engine' interface
  - IF 'clear all' is called with each dispatch:
    - Forces an 'unload' of all shared libraries
    - Takes a 'long' time to do this -> certain threads do not have time exit cleanly within the allotted 2 clock ticks.
    - (Is also a fairly 'silly' thing to do under almost all circumstances)
  - *Solution:* introduce a 'WaitForThreadTermination()' for the globals thread and the multicast listening thread.

# [ MatLab News ]

## ■ **New routines:**

- `tine_eventdata()`, `tine_eventlist()`,  
`tine_eventservers()`, `tine_eventtriggers()`,  
`tine_eventproperties()`, `tine_eventcomment()`
- `tine_history()`
- `tine_read()`, `tine_write()`, `tine_writeread()`, `tine_call()`
- `tine_callback.m`
- `tine_debug`
- *Will be documented soon!*
  
- *Legacy routines:* `tineread()`, `tinewrite()`,  
`tinewriteread()` still work fine.

# MatLab News ...

The screenshot shows the MATLAB Command Window with the following content:

```
Warning: Change notification handle for remote Z:\Projects\Service\MatLab\tineLib32 is not responsive.
This server does not appear to support UNIX-style directory timestamp updates.
Network latency may be causing delayed arrival of change notifications.
Type 'help changeNotification' for more info.

To get started, select MATLAB Help or Demos from the Help menu.

>> tine_call(224, '/TEST/SineServer/SineGen0[Amplitude]', 'float', 1, 1000, 'write')

ans =

    error: ''
    timestamp: '06.05.11 11:42:10.391 CDT'
           utc: '1304674930.391'
    Amplitude: 224

>> tine_read('/TEST/SineServer/SineGen0[Amplitude]')

ans =

    error: ''
    timestamp: '06.05.11 11:42:22.020 CDT'
           utc: '1304674942.021'
    Amplitude: [10x1 double]

>> tine_read('/TEST/SineServer/SineGen0[Amplitude]', 'float', 10, 1000)

ans =

    error: ''
    timestamp: '06.05.11 11:42:58.992 CDT'
           utc: '1304674978.992'
    Amplitude: [10x1 double]

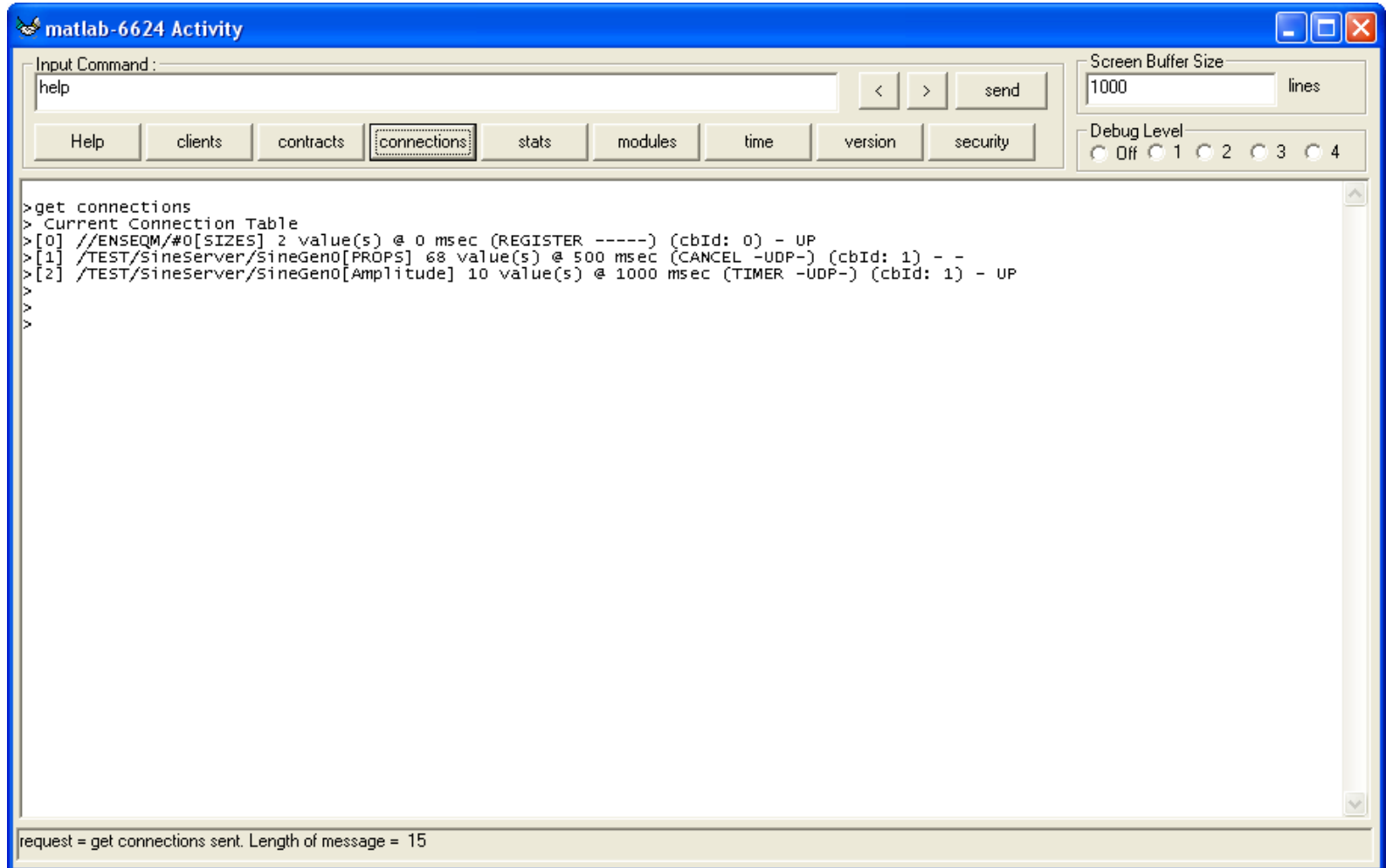
>> tine_debug
debug session launched>> |
```

Red arrows on the right side of the Command Window point to the following lines of code:

- Line 10: `>> tine_call(224, '/TEST/SineServer/SineGen0[Amplitude]', 'float', 1, 1000, 'write')`
- Line 20: `>> tine_read('/TEST/SineServer/SineGen0[Amplitude]')`
- Line 30: `>> tine_read('/TEST/SineServer/SineGen0[Amplitude]', 'float', 10, 1000)`
- Line 40: `>> tine_debug`



# MatLab News ...



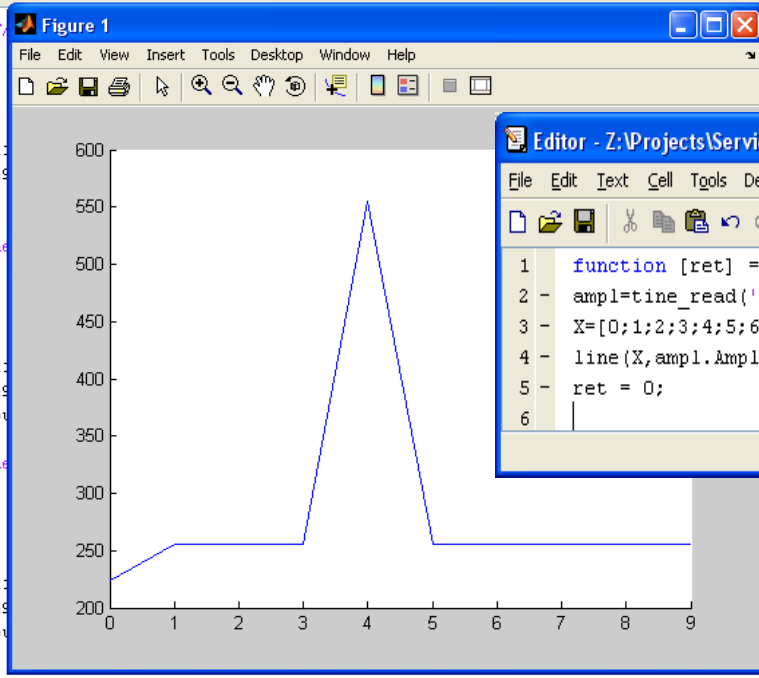
The screenshot shows the MATLAB Activity window with the following components:

- Title Bar:** matlab-6624 Activity
- Input Command:** help
- Buttons:** Help, clients, contracts, connections (highlighted), stats, modules, time, version, security
- Screen Buffer Size:** 1000 lines
- Debug Level:** Off, 1, 2, 3, 4
- Command Window Output:**

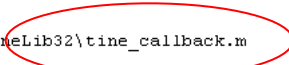
```
>get connections
> Current Connection Table
> [0] //ENSEQM/#0[SIZES] 2 value(s) @ 0 msec (REGISTER -----) (cbId: 0) - UP
> [1] /TEST/Sineserver/SineGen0[PROPS] 68 value(s) @ 500 msec (CANCEL -UDP-) (cbId: 1) - -
> [2] /TEST/Sineserver/SineGen0[Amplitude] 10 value(s) @ 1000 msec (TIMER -UDP-) (cbId: 1) - UP
>
>
>
```
- Status Bar:** request = get connections sent. Length of message = 15

# MatLab News ...

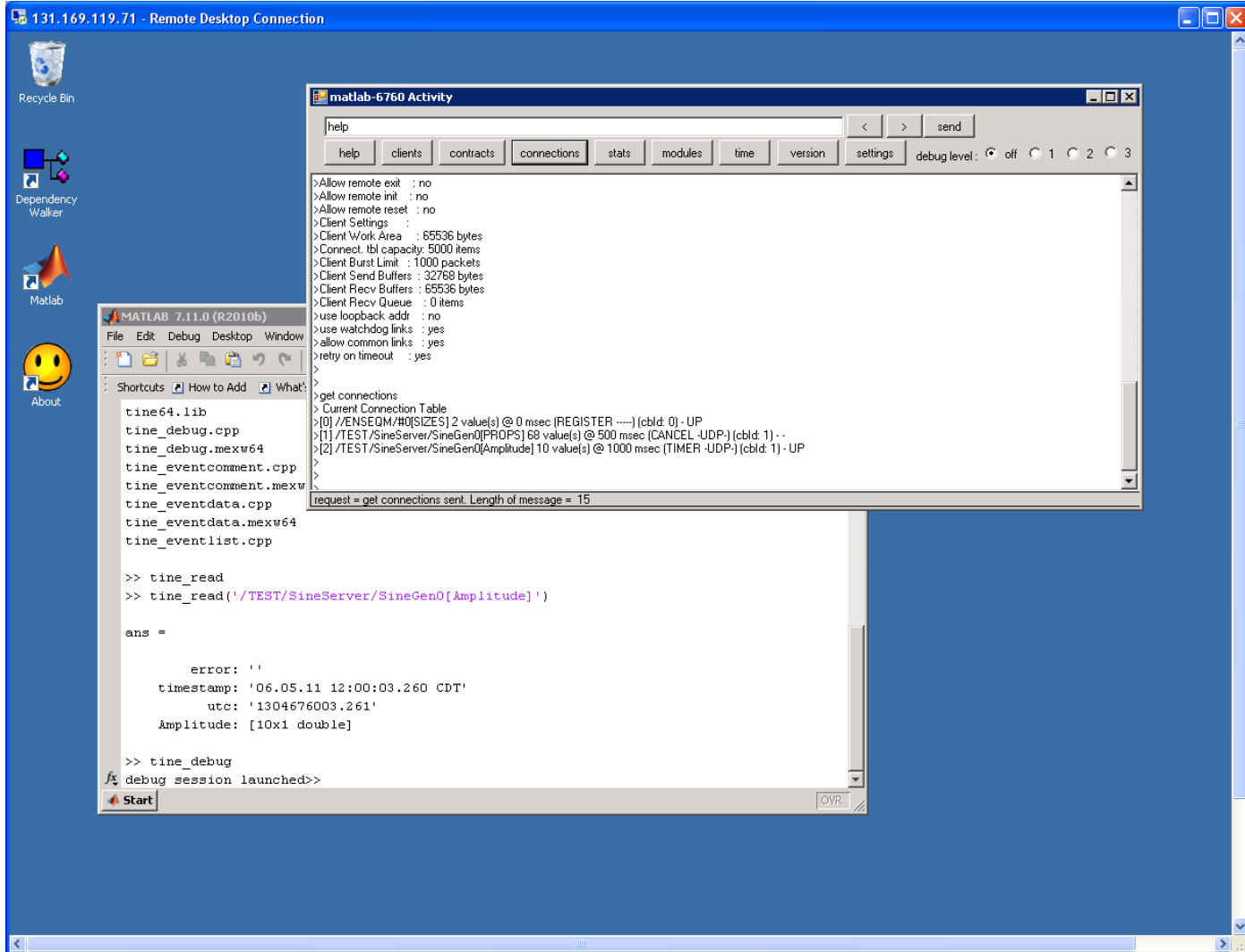
```
Current Directory: Z:\Projects\ServiceMatLab\tineLib32  
w  
b32 x Command Window  
>> tine_call(224, '/TEST/SineServer/SineGen0[Amplitude]', 'float', 10, 1000, 2)  
ans =  
    error: ''  
    timestamp: '06.05.11 11:47:55.996 CDT'  
    utc: '1304674996'  
    Amplitude: 224  
>> tine_read('/TEST/SineServer/SineGen0[Amplitude]', 'float', 10)  
ans =  
    error: ''  
    timestamp: '06.05.11 11:47:55.996 CDT'  
    utc: '1304674996'  
    Amplitude: [10x1 double]  
>> tine_read('/TEST/SineServer/SineGen0[Amplitude]', 'float', 10, 1000, 2)  
ans =  
    error: ''  
    timestamp: '06.05.11 11:47:55.996 CDT'  
    utc: '1304674996'  
    Amplitude: [10x1 double]  
Server/  
Server/  
>> tine_debug  
debug session launched>>  
>> tine_read('/TEST/SineServer/SineGen0[Amplitude]', 'float', 10, 1000, 2)  
ans =  
    error: ''  
    timestamp: '06.05.11 11:47:55.996 CDT'  
    utc: '1304675275.996'  
    Amplitude: [10x1 double]  
Server/  
Server/  
Server/  
Server/  
>> which tine_callback  
Z:\Projects\Service\MatLab\tineLib32\tine_callback.m
```



```
Editor - Z:\Projects\ServiceMatLab\tineLib32\tine_callback.m*  
File Edit Text Cell Tools Debug Desktop Window Help  
1 function [ret] = tine_callback(ID)  
2 - ampl=tine_read('/TEST/SineServer/SineGen0[Amplitude]', 'float', 10);  
3 - X=[0;1;2;3;4;5;6;7;8;9];  
4 - line(X, ampl.Amplitude);  
5 - ret = 0;  
6
```



# MatLab News: 64 bit as well...



131.169.119.71 - Remote Desktop Connection

matlab-6760 Activity

```
help
help clients contracts connections stats modules time version settings debug level: off 1 2 3

>Allow remote exit : no
>Allow remote init : no
>Allow remote reset : no
>Client Settings :
>Client Work Area : 65536 bytes
>Connect.tbl capacity: 5000 items
>Client Burst Limit : 1000 packets
>Client Send Buffers : 32768 bytes
>Client Recv Buffers : 65536 bytes
>Client Recv Queue : 0 items
>use loopback addr : no
>use watchdog links : yes
>allow common links : yes
>retry on timeout : yes
>
>
>get connections
> Current Connection Table
>[0] /ENSEQM/#[SIZES] 2 value(s) @ 0 msec (REGISTER ----) (cbld: 0) - UP
>[1] /TEST/SineServer/SineGen0[PROPS] 68 value(s) @ 500 msec (CANCEL_UDP-) (cbld: 1) -
>[2] /TEST/SineServer/SineGen0[Amplitude] 10 value(s) @ 1000 msec (TIMER_UDP-) (cbld: 1) - UP
>
request = get connections sent. Length of message = 15
```

MATLAB 7.11.0 (R2010b)

```
File Edit Debug Desktop Window
Shortcuts How to Add What:
tine64.lib
tine_debug.cpp
tine_debug.mexw64
tine_eventcomment.cpp
tine_eventcomment.mexw
tine_eventdata.cpp
tine_eventdata.mexw64
tine_eventlist.cpp

>> tine_read
>> tine_read('/TEST/SineServer/SineGen0[Amplitude]')

ans =

    error: ''
    timestamp: '06.05.11 12:00:03.260 CDT'
    utc: '1304676003.261'
    Amplitude: [10x1 double]

>> tine_debug
debug session launched>>
```

# [ MatLab News ]

## ■ **Planned:**

- Write clients in MatLab with link callbacks (instead of polling)
  - Note:
    - asynchronous listeners already reduce burden on the server!
    - but the MatLab client must still poll locally !
- Write servers in MatLab with the 'buffered server' API (a la LabView)
  - `tine_attachserver()` OR `tine_registerServer()`, `tine_registerProperty()`, etc.
  - `tine_pushdata()`
  - `tine_handleCommand()`

# COSY Application News

Archive Viewer Motto: Hold the Pickles, Hold the Lettuce...

File Navigate Options Help

- Data Options...
- Use Absolute X Scale
- Number of History Points...
- Central Archive
- Subsystem Browsing
- Local History Browsing
- Warn About Log Channels
- Debug Chart

Time:	UTC:	Status	Property [Device]	Value	Description	Log	
		<input checked="" type="checkbox"/>	Error	null[#0]	No Data	Sine Generator Inf...	<input type="checkbox"/>

Time Span Configurations Selector Chart & Trace View & Kino

Contexts: TEST

Server: WinSineServer

But they still have a problem with the server combo click event !

Refresh All Remove Selected Remove All History Mode Live Mode

12:18:00: Servers loaded.

# COSY Application News

