



# TINE Release 4.0 News

(Feb 7, 2013: That was the month that was !)

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

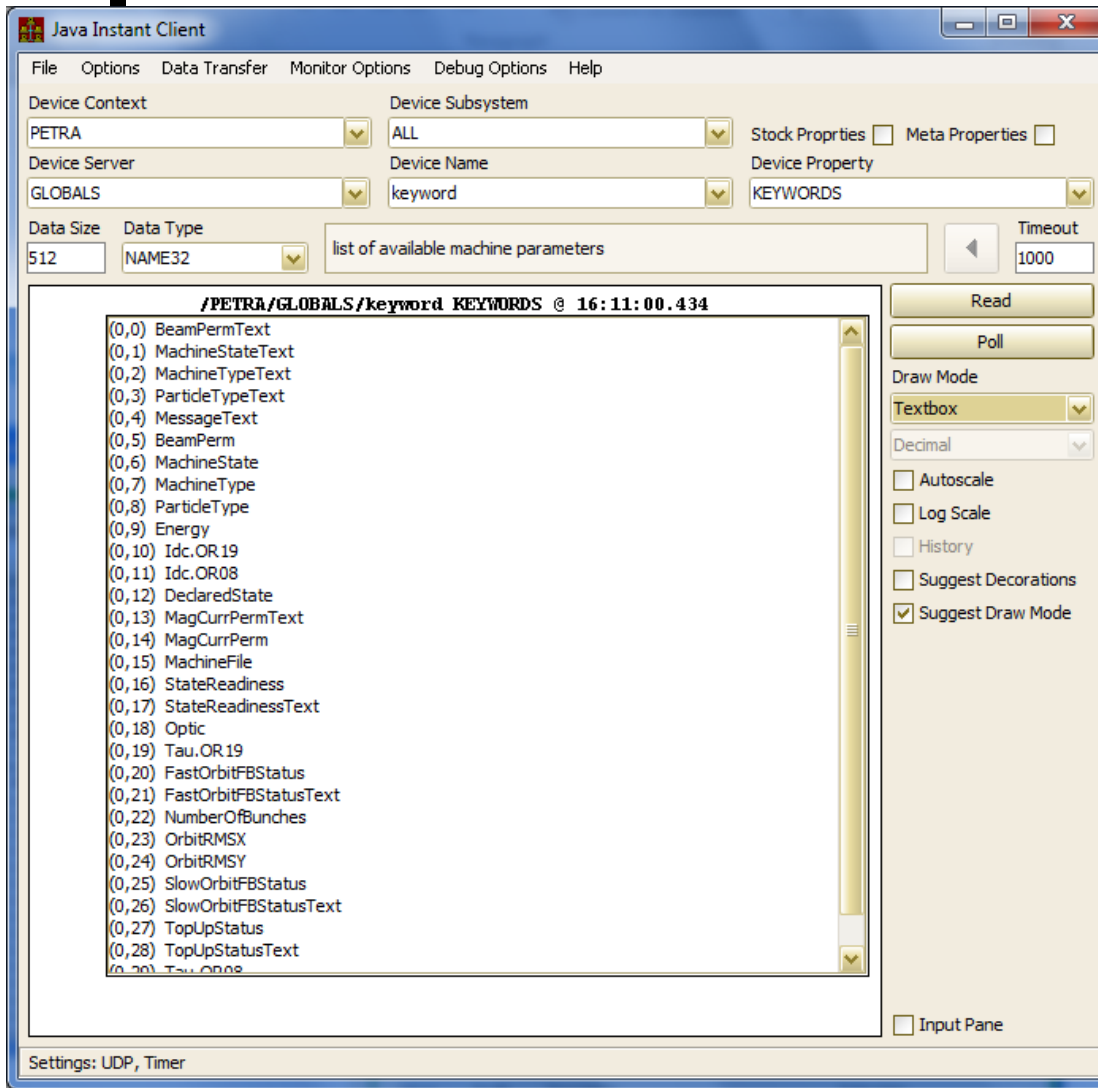
# [ Release 4.3.4 ]

- Globals variables are only accessible by receiving the multicasts!
- Local Histories
  - New data types: CF\_DBLTIME, CF\_NAME64TIME
  - Diagnostics
- Configuration/Logging
  - fec.xml extensions
  - fec and message log line formats
- System Stamps
  - Cycle numbers and pulse numbers
- Windows 7 setup

# [ Release 4.3.4 ]

- Embellishments/Bug fixes
  - GetPortOffset() now returns '1' if there is as yet no fec manifest.
  - Windows: property- and device-specific ACL files now properly scanned if no FEC\_HOME is set.
  - If users.csv or ipnets.csv is found but contains NO users :
    - Diagnostic warning on screen and in fec.log.

# Globals Server



## Systematics:

- **Server Name** = "GLOBALS"
- Configured 'globals' parameters are **multicast**ed at a pre-defined rate (default = 1 Hz) in Producer-Consumer Mode (sent out independent of clients).
- List of globals parameters retrievable via "**KEYWORDS**"
- Can be configured to **refuse synchronous calls** !
- **Source of globals data is not systematically specified** !
  - Usually not attached to hardware.
  - Reads a 'netmex' database.

# [ Globals Clients ]

- Modern libraries will **trap** any attempt to access a 'known' **GLOBALS** keyword and latch onto the multicast !
  - The **.execute()** method and **ExecLink()** call will
    - secretly start a globals link
    - buffer the incoming multicasts
    - Make the caller think he's getting this synchronously
  - **'tget'** will
    - launch a local **'repeater'** in the background
    - get the globals values from the repeater.

# [ Globals Clients ]

- How are globals links '*trapped*'?
  - is the server name = "GLOBALS" ?
    - case insensitive !
    - must match (not just name 'contains') ...
  - is the property a KEYWORD of the GLOBALS server ?
    - keyword list obtained and kept when first required
  - format conversion (if possible) happens at client.
- Local Histories
  - short term only
  - are available via synchronous calls
- Stock and meta-properties (& non-KEYWORD properties)
  - available via synchronous calls

# [ Release 4.3.4 ]

- Local History News ...
  - New data types: CF\_DBLTIME, NAME64TIME
    - Strong types for CF\_DBLDBL and CF\_NAME64DBL
    - Server-side: as an archived type
      - -> substitute stored data time value as the archive time
    - Client-side: interpret 2<sup>nd</sup> double as a UTC time stamp where applicable.
      - Also incorporated in the central archiver !

# Release 4.3.4

■ e.g. CF\_DBLTIME:

The image displays two screenshots of the Java Instant Client interface, illustrating the configuration and execution of a data transfer query.

**Left Screenshot:** Shows the configuration for a data transfer. The **Data Size** is set to 1000 and the **Data Type** is set to DBLDBL. The **Device Context** is PETRA, **Device Subsystem** is ALL, **Device Server** is HISTORY, and **Device Name** is BPM\_SWR\_13. The **Device Property** is Orbit.X. The **Timeout** is 1000. The data transfer results are displayed in a table:

Index	Value
(0,0)	[830106.0, 1.360104045937E9]
(0,1)	[832941.0, 1.36010584595E9]
(0,2)	[836357.0, 1.360106943921E9]
(0,3)	[835797.0, 1.360107844948E9]
(0,4)	[836474.0, 1.36010964496E9]
(0,5)	[828334.0, 1.360111444973E9]
(0,6)	[828483.0, 1.36011324396E9]
(0,7)	[827957.0, 1.360115041927E9]
(0,8)	[828990.0, 1.360116840917E9]
(0,9)	[828150.0, 1.360118639904E9]
(0,10)	[828737.0, 1.360120439914E9]
(0,11)	[828778.0, 1.360122238904E9]
(0,12)	[828067.0, 1.360124037891E9]

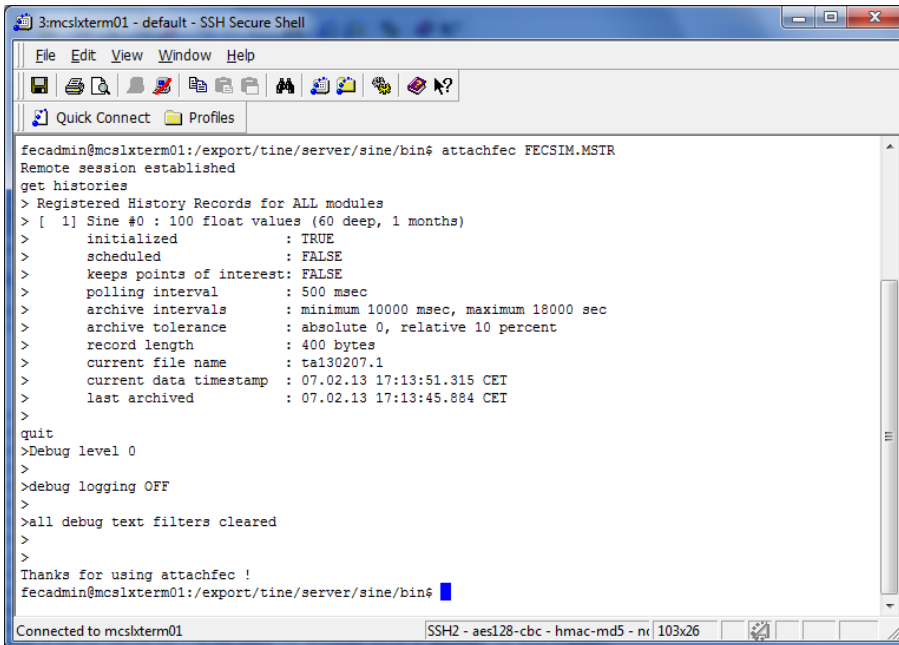
**Right Screenshot:** Shows the same configuration as the left screenshot, but with the **Data Type** set to DBLTIME. The **Device Property** is also set to Orbit.X. The data transfer results are displayed in a table:

Index	Value
(0,0)	[830106.0, 05.02.13 23:40:45.937 CET]
(0,1)	[832941.0, 06.02.13 00:10:45.950 CET]
(0,2)	[836357.0, 06.02.13 00:29:03.921 CET]
(0,3)	[835797.0, 06.02.13 00:44:04.948 CET]
(0,4)	[836474.0, 06.02.13 01:14:04.960 CET]
(0,5)	[828334.0, 06.02.13 01:44:04.973 CET]
(0,6)	[828483.0, 06.02.13 02:14:03.960 CET]
(0,7)	[827957.0, 06.02.13 02:44:01.927 CET]
(0,8)	[828990.0, 06.02.13 03:14:00.917 CET]
(0,9)	[828150.0, 06.02.13 03:43:59.904 CET]
(0,10)	[828737.0, 06.02.13 04:13:59.914 CET]
(0,11)	[828778.0, 06.02.13 04:43:58.904 CET]
(0,12)	[828067.0, 06.02.13 05:13:57.891 CET]

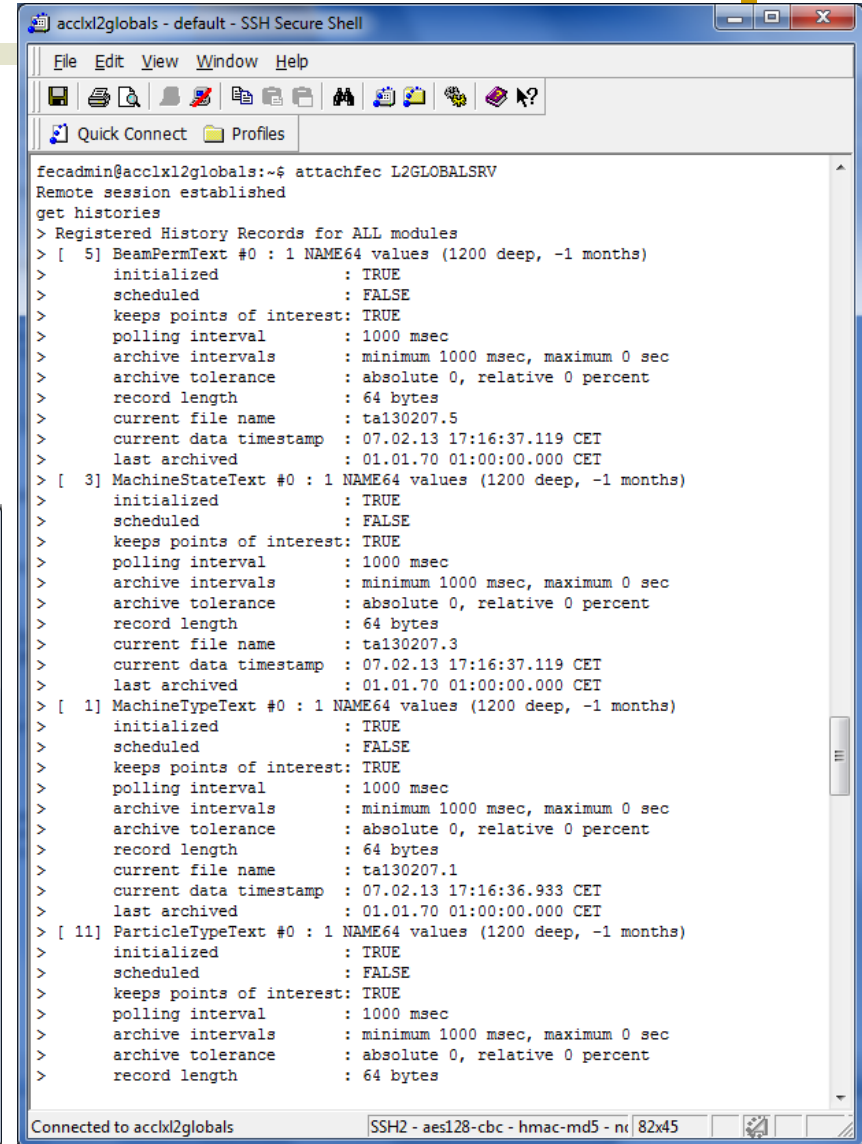


# Release 4.3.4

- Local History News ...
  - More diagnostics (C-Lib) for histories ...



```
3.mcslxterm01 - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
fecadmin@mcslxterm01:/export/tine/server/sine/bin$ attachfec FECSIM.MSTR
Remote session established
get histories
> Registered History Records for ALL modules
> [ 1 ] Sine #0 : 100 float values (60 deep, 1 months)
>   initialized      : TRUE
>   scheduled        : FALSE
>   keeps points of interest: FALSE
>   polling interval : 500 msec
>   archive intervals: minimum 10000 msec, maximum 18000 sec
>   archive tolerance: absolute 0, relative 10 percent
>   record length    : 400 bytes
>   current file name: ta130207.1
>   current data timestamp: 07.02.13 17:13:51.315 CET
>   last archived    : 07.02.13 17:13:45.884 CET
>
> quit
> Debug level 0
>
> debug logging OFF
>
> all debug text filters cleared
>
Thanks for using attachfec !
fecadmin@mcslxterm01:/export/tine/server/sine/bin$
```



```
acclx2globals - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
fecadmin@acclx2globals:~$ attachfec L2GLOBALSRV
Remote session established
get histories
> Registered History Records for ALL modules
> [ 5 ] BeamPermText #0 : 1 NAME64 values (1200 deep, -1 months)
>   initialized      : TRUE
>   scheduled        : FALSE
>   keeps points of interest: TRUE
>   polling interval : 1000 msec
>   archive intervals: minimum 1000 msec, maximum 0 sec
>   archive tolerance: absolute 0, relative 0 percent
>   record length    : 64 bytes
>   current file name: ta130207.5
>   current data timestamp: 07.02.13 17:16:37.119 CET
>   last archived    : 01.01.70 01:00:00.000 CET
> [ 3 ] MachineStateText #0 : 1 NAME64 values (1200 deep, -1 months)
>   initialized      : TRUE
>   scheduled        : FALSE
>   keeps points of interest: TRUE
>   polling interval : 1000 msec
>   archive intervals: minimum 1000 msec, maximum 0 sec
>   archive tolerance: absolute 0, relative 0 percent
>   record length    : 64 bytes
>   current file name: ta130207.3
>   current data timestamp: 07.02.13 17:16:37.119 CET
>   last archived    : 01.01.70 01:00:00.000 CET
> [ 1 ] MachineTypeText #0 : 1 NAME64 values (1200 deep, -1 months)
>   initialized      : TRUE
>   scheduled        : FALSE
>   keeps points of interest: TRUE
>   polling interval : 1000 msec
>   archive intervals: minimum 1000 msec, maximum 0 sec
>   archive tolerance: absolute 0, relative 0 percent
>   record length    : 64 bytes
>   current file name: ta130207.1
>   current data timestamp: 07.02.13 17:16:36.933 CET
>   last archived    : 01.01.70 01:00:00.000 CET
> [ 11 ] ParticleTypeText #0 : 1 NAME64 values (1200 deep, -1 months)
>   initialized      : TRUE
>   scheduled        : FALSE
>   keeps points of interest: TRUE
>   polling interval : 1000 msec
>   archive intervals: minimum 1000 msec, maximum 0 sec
>   archive tolerance: absolute 0, relative 0 percent
>   record length    : 64 bytes
```

# Release 4.3.4

## ■ Configuration

- fec.xml now offers full set of ACL settings
- property- and device-specific lists

## ■ fec.xml

- single file read vs. multiple reads
- VxWorks + file i/o via rsh ?

To specify the later, one includes a <NAME\_LIST> with a <NAME> tag specifically called with "USERS\_ALLOWED" and

For example:

```
<NAME_LIST>
  <NAME>USERS_ALLOWED</NAME>
  <MEMBER>Duval</MEMBER>
  <MEMBER>Bobnar</MEMBER>
  <MEMBER>&lt;win:mcs_user&gt;</MEMBER>
</NAME_LIST>
<NAME_LIST>
  <NAME>NETS_ALLOWED</NAME>
  <MEMBER>131.169.150.255</MEMBER>
  <MEMBER>131.169.9.255</MEMBER>
  <MEMBER>0.0.0.0</MEMBER>
  <MEMBER>131.169.119.0/24</MEMBER>
</NAME_LIST>
```

Note that in the above, both a users list and a networks list are being applied. Also note that the users list given co apply the string "<win:mcs\_user>" which itself contains '<' and '>' symbols, which necessitates the standardized '&

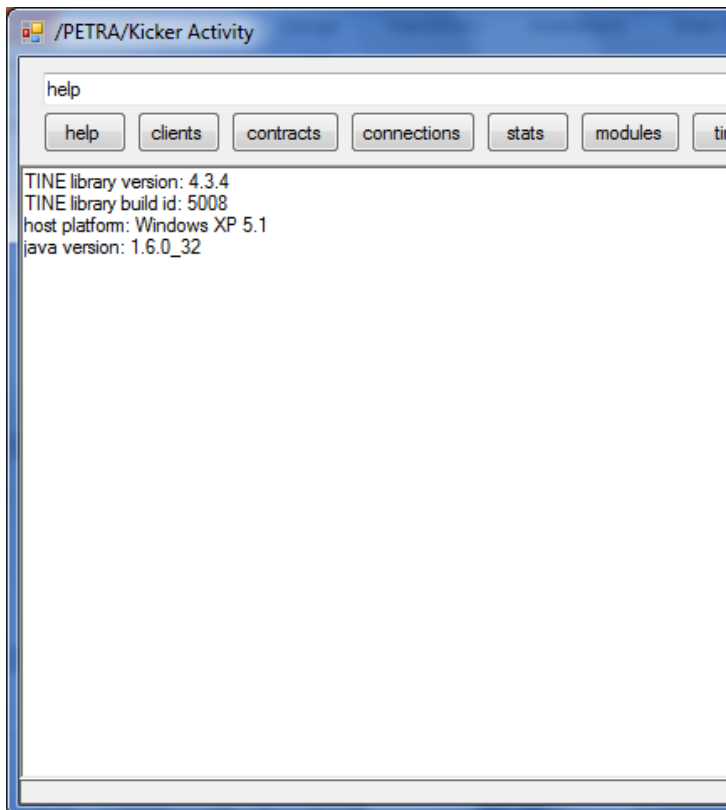
If such access lists are to be applied to specific devices or properties, the equivalent sections need only be embedd

To assign, for example, a specific property list to a device, one includes a <NAME\_LIST> section within the associate

```
<EQM>
  <NAME>SINEQM</NAME>
  <SERVER>WinSineServer</SERVER>
  <CONTEXT>TEST</CONTEXT>
  <SUBSYSTEM>TEST</SUBSYSTEM>
  ...
  <NAME_LIST>
    <NAME>SineGen0List</NAME>
    <MEMBER>Sine</MEMBER>
    <MEMBER>Amplitude</MEMBER>
  </NAME_LIST>
  ...
```

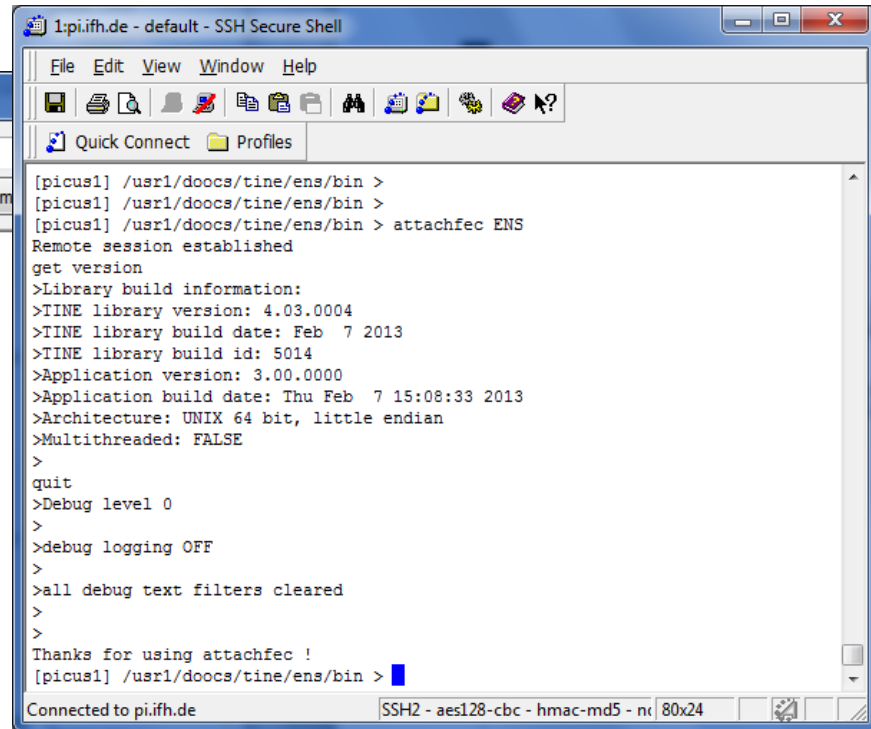
# Release 4.3.4

- Console output (attachfec)
  - Get version:



The screenshot shows the PETRA/Kicker Activity window. At the top, there is a 'help' label and a row of buttons: 'help', 'clients', 'contracts', 'connections', 'stats', 'modules', and 'time'. Below the buttons, the following text is displayed:

```
TINE library version: 4.3.4  
TINE library build id: 5008  
host platform: Windows XP 5.1  
java version: 1.6.0_32
```



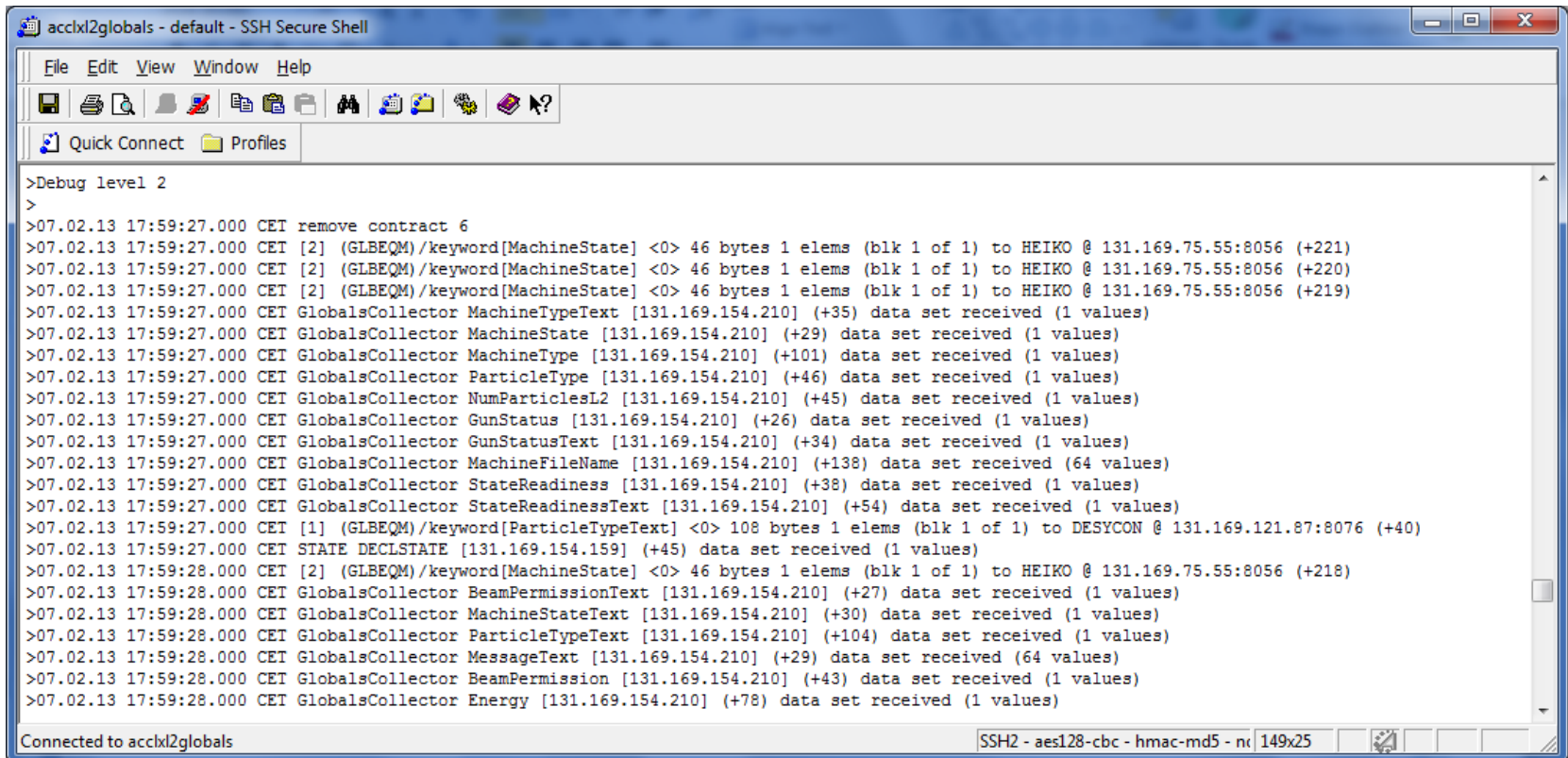
The screenshot shows an SSH Secure Shell window titled '1:pi.fh.de - default - SSH Secure Shell'. The window contains the following text:

```
[picus1] /usr1/doors/tine/ens/bin >  
[picus1] /usr1/doors/tine/ens/bin >  
[picus1] /usr1/doors/tine/ens/bin > attachfec ENS  
Remote session established  
get version  
>Library build information:  
>TINE library version: 4.03.0004  
>TINE library build date: Feb 7 2013  
>TINE library build id: 5014  
>Application version: 3.00.0000  
>Application build date: Thu Feb 7 15:08:33 2013  
>Architecture: UNIX 64 bit, little endian  
>Multithreaded: FALSE  
>  
>quit  
>Debug level 0  
>  
>debug logging OFF  
>  
>all debug text filters cleared  
>  
>  
Thanks for using attachfec !  
[picus1] /usr1/doors/tine/ens/bin > █
```

At the bottom of the window, it says 'Connected to pi.fh.de' and 'SSH2 - aes128-cbc - hmac-md5 - nc 80x24'.

# Release 4.3.4

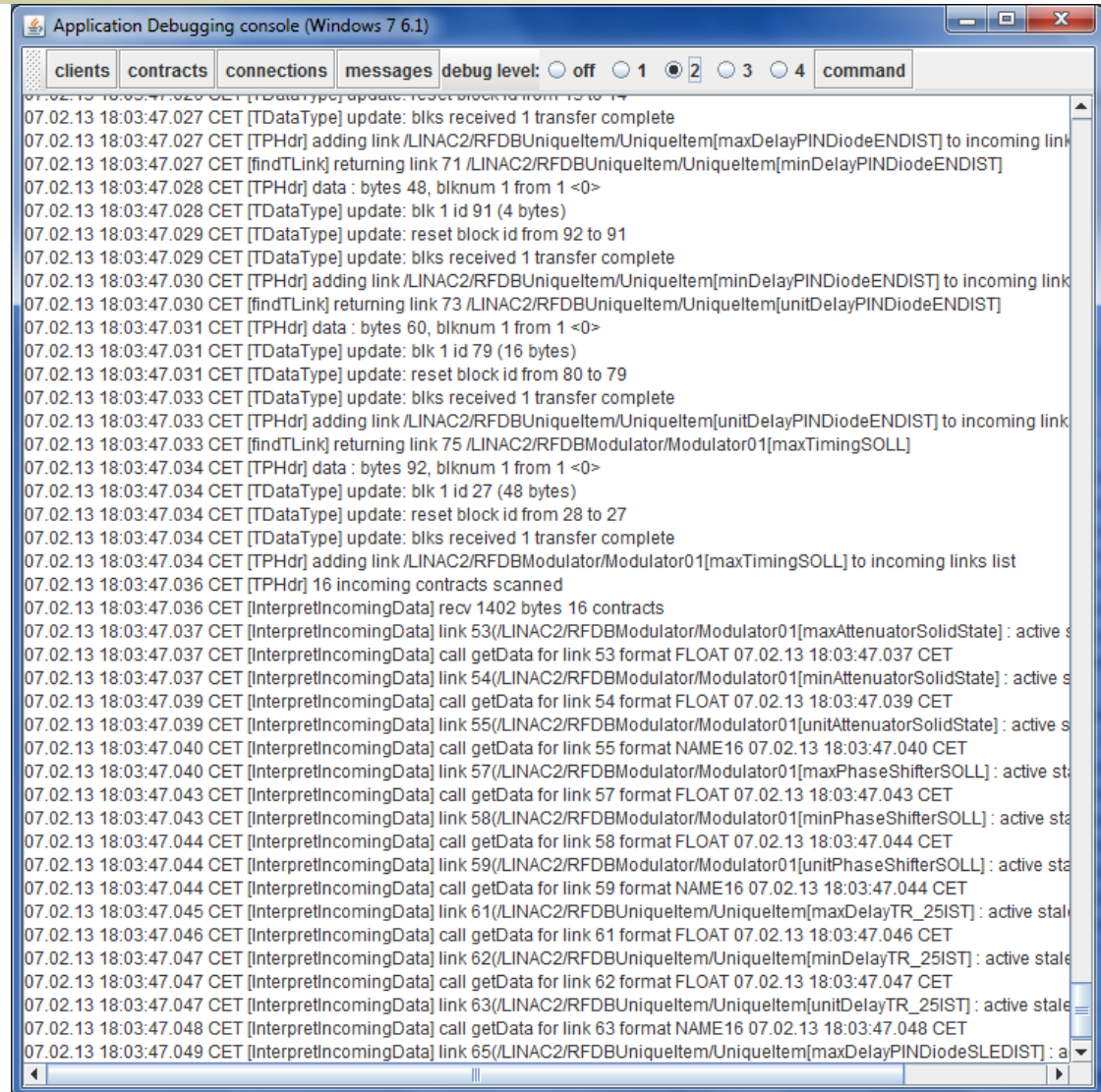
## ■ New debug and message formats:



```
acclx2globals - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
>Debug level 2
>
>07.02.13 17:59:27.000 CET remove contract 6
>07.02.13 17:59:27.000 CET [2] (GLBEQM)/keyword[MachineState] <0> 46 bytes 1 elems (blk 1 of 1) to HEIKO @ 131.169.75.55:8056 (+221)
>07.02.13 17:59:27.000 CET [2] (GLBEQM)/keyword[MachineState] <0> 46 bytes 1 elems (blk 1 of 1) to HEIKO @ 131.169.75.55:8056 (+220)
>07.02.13 17:59:27.000 CET [2] (GLBEQM)/keyword[MachineState] <0> 46 bytes 1 elems (blk 1 of 1) to HEIKO @ 131.169.75.55:8056 (+219)
>07.02.13 17:59:27.000 CET GlobalsCollector MachineTypeText [131.169.154.210] (+35) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector MachineState [131.169.154.210] (+29) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector MachineType [131.169.154.210] (+101) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector ParticleType [131.169.154.210] (+46) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector NumParticlesL2 [131.169.154.210] (+45) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector GunStatus [131.169.154.210] (+26) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector GunStatusText [131.169.154.210] (+34) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector MachineFileName [131.169.154.210] (+138) data set received (64 values)
>07.02.13 17:59:27.000 CET GlobalsCollector StateReadiness [131.169.154.210] (+38) data set received (1 values)
>07.02.13 17:59:27.000 CET GlobalsCollector StateReadinessText [131.169.154.210] (+54) data set received (1 values)
>07.02.13 17:59:27.000 CET [1] (GLBEQM)/keyword[ParticleTypeText] <0> 108 bytes 1 elems (blk 1 of 1) to DESYCON @ 131.169.121.87:8076 (+40)
>07.02.13 17:59:27.000 CET STATE DECLSTATE [131.169.154.159] (+45) data set received (1 values)
>07.02.13 17:59:28.000 CET [2] (GLBEQM)/keyword[MachineState] <0> 46 bytes 1 elems (blk 1 of 1) to HEIKO @ 131.169.75.55:8056 (+218)
>07.02.13 17:59:28.000 CET GlobalsCollector BeamPermissionText [131.169.154.210] (+27) data set received (1 values)
>07.02.13 17:59:28.000 CET GlobalsCollector MachineStateText [131.169.154.210] (+30) data set received (1 values)
>07.02.13 17:59:28.000 CET GlobalsCollector ParticleTypeText [131.169.154.210] (+104) data set received (1 values)
>07.02.13 17:59:28.000 CET GlobalsCollector MessageText [131.169.154.210] (+29) data set received (64 values)
>07.02.13 17:59:28.000 CET GlobalsCollector BeamPermission [131.169.154.210] (+43) data set received (1 values)
>07.02.13 17:59:28.000 CET GlobalsCollector Energy [131.169.154.210] (+78) data set received (1 values)
Connected to acclx2globals SSH2 - aes128-cbc - hmac-md5 - n 149x25
```

# Release 4.3.4

- Also in java:



The screenshot shows a Windows 7 6.1 Application Debugging console window. The window title is "Application Debugging console (Windows 7 6.1)". The interface includes a toolbar with tabs for "clients", "contracts", "connections", "messages", and "command". The "messages" tab is selected, and the "debug level" is set to 2. The main area displays a log of system events, including messages from the CET (Control Element Type) and TPHdr (Transfer Protocol Header) components. The log entries are timestamped and include details about data transfers, link management, and contract processing.

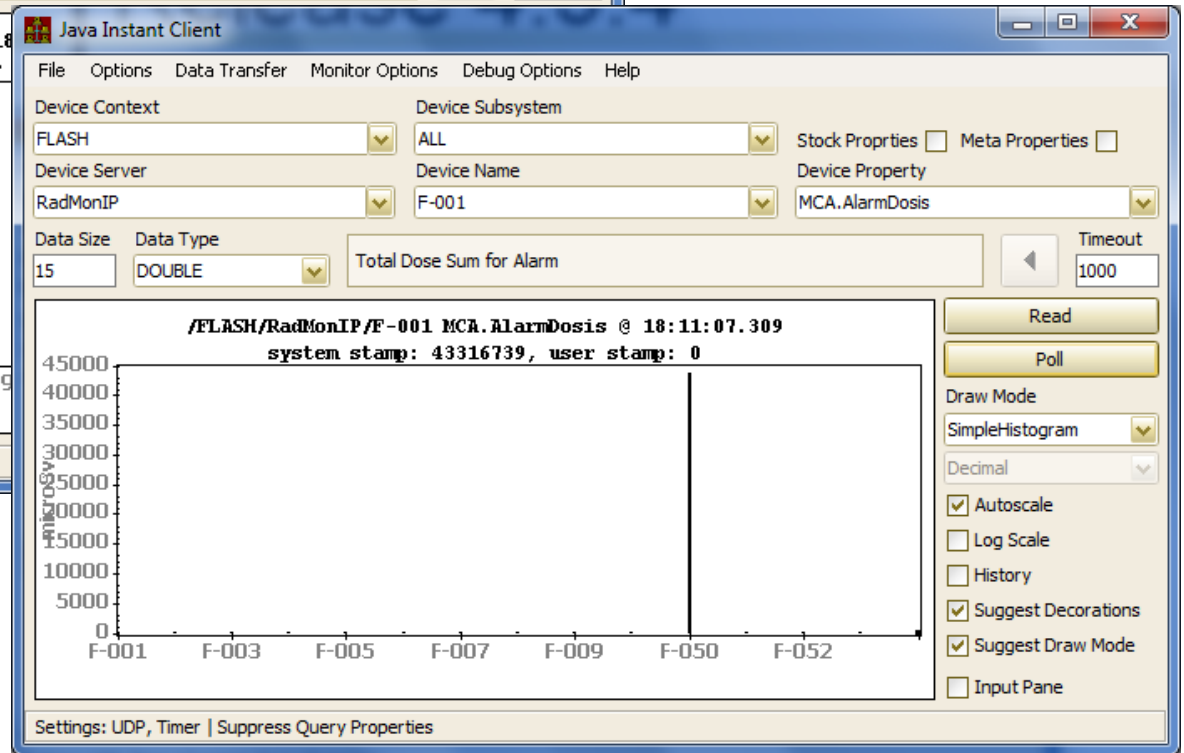
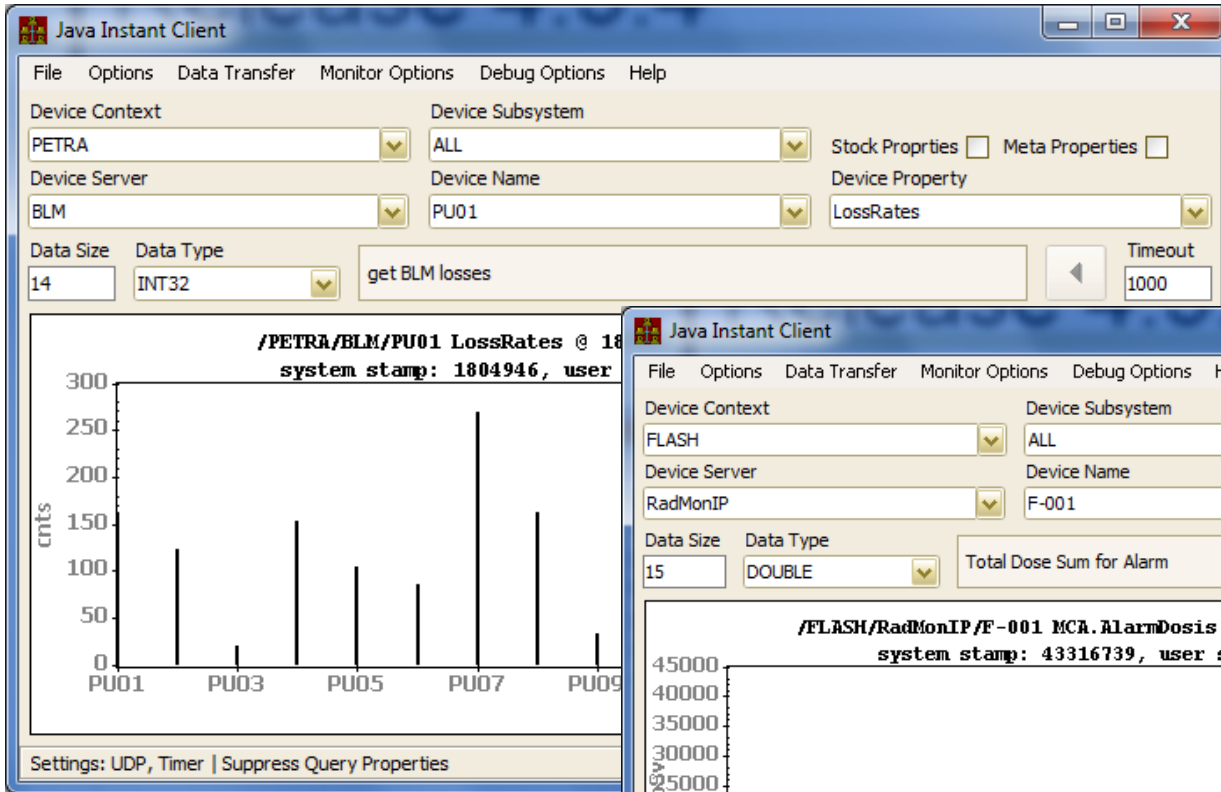
```
07.02.13 18:03:47.020 CET [TDataType] update: reset block id from 13 to 14
07.02.13 18:03:47.027 CET [TDataType] update: blks received 1 transfer complete
07.02.13 18:03:47.027 CET [TPHdr] adding link /LINAC2/RFDBUniqueltem/Uniqueltem[maxDelayPINDiodeENDIST] to incoming link
07.02.13 18:03:47.027 CET [findTLink] returning link 71 /LINAC2/RFDBUniqueltem/Uniqueltem[minDelayPINDiodeENDIST]
07.02.13 18:03:47.028 CET [TPHdr] data : bytes 48, blknum 1 from 1 <0>
07.02.13 18:03:47.028 CET [TDataType] update: blk 1 id 91 (4 bytes)
07.02.13 18:03:47.029 CET [TDataType] update: reset block id from 92 to 91
07.02.13 18:03:47.029 CET [TDataType] update: blks received 1 transfer complete
07.02.13 18:03:47.030 CET [TPHdr] adding link /LINAC2/RFDBUniqueltem/Uniqueltem[minDelayPINDiodeENDIST] to incoming link
07.02.13 18:03:47.030 CET [findTLink] returning link 73 /LINAC2/RFDBUniqueltem/Uniqueltem[unitDelayPINDiodeENDIST]
07.02.13 18:03:47.031 CET [TPHdr] data : bytes 60, blknum 1 from 1 <0>
07.02.13 18:03:47.031 CET [TDataType] update: blk 1 id 79 (16 bytes)
07.02.13 18:03:47.031 CET [TDataType] update: reset block id from 80 to 79
07.02.13 18:03:47.033 CET [TDataType] update: blks received 1 transfer complete
07.02.13 18:03:47.033 CET [TPHdr] adding link /LINAC2/RFDBUniqueltem/Uniqueltem[unitDelayPINDiodeENDIST] to incoming link
07.02.13 18:03:47.033 CET [findTLink] returning link 75 /LINAC2/RFDBModulator/Modulator01[maxTimingSOLL]
07.02.13 18:03:47.034 CET [TPHdr] data : bytes 92, blknum 1 from 1 <0>
07.02.13 18:03:47.034 CET [TDataType] update: blk 1 id 27 (48 bytes)
07.02.13 18:03:47.034 CET [TDataType] update: reset block id from 28 to 27
07.02.13 18:03:47.034 CET [TDataType] update: blks received 1 transfer complete
07.02.13 18:03:47.034 CET [TPHdr] adding link /LINAC2/RFDBModulator/Modulator01[maxTimingSOLL] to incoming links list
07.02.13 18:03:47.036 CET [TPHdr] 16 incoming contracts scanned
07.02.13 18:03:47.036 CET [InterpretIncomingData] rcv 1402 bytes 16 contracts
07.02.13 18:03:47.037 CET [InterpretIncomingData] link 53(/LINAC2/RFDBModulator/Modulator01[maxAttenuatorSolidState] : active s
07.02.13 18:03:47.037 CET [InterpretIncomingData] call getData for link 53 format FLOAT 07.02.13 18:03:47.037 CET
07.02.13 18:03:47.037 CET [InterpretIncomingData] link 54(/LINAC2/RFDBModulator/Modulator01[minAttenuatorSolidState] : active s
07.02.13 18:03:47.039 CET [InterpretIncomingData] call getData for link 54 format FLOAT 07.02.13 18:03:47.039 CET
07.02.13 18:03:47.039 CET [InterpretIncomingData] link 55(/LINAC2/RFDBModulator/Modulator01[unitAttenuatorSolidState] : active s
07.02.13 18:03:47.040 CET [InterpretIncomingData] call getData for link 55 format NAME16 07.02.13 18:03:47.040 CET
07.02.13 18:03:47.040 CET [InterpretIncomingData] link 57(/LINAC2/RFDBModulator/Modulator01[maxPhaseShifterSOLL] : active sta
07.02.13 18:03:47.043 CET [InterpretIncomingData] call getData for link 57 format FLOAT 07.02.13 18:03:47.043 CET
07.02.13 18:03:47.043 CET [InterpretIncomingData] link 58(/LINAC2/RFDBModulator/Modulator01[minPhaseShifterSOLL] : active sta
07.02.13 18:03:47.044 CET [InterpretIncomingData] call getData for link 58 format FLOAT 07.02.13 18:03:47.044 CET
07.02.13 18:03:47.044 CET [InterpretIncomingData] link 59(/LINAC2/RFDBModulator/Modulator01[unitPhaseShifterSOLL] : active sta
07.02.13 18:03:47.044 CET [InterpretIncomingData] call getData for link 59 format NAME16 07.02.13 18:03:47.044 CET
07.02.13 18:03:47.045 CET [InterpretIncomingData] link 61(/LINAC2/RFDBUniqueltem/Uniqueltem[maxDelayTR_25IST] : active stak
07.02.13 18:03:47.046 CET [InterpretIncomingData] call getData for link 61 format FLOAT 07.02.13 18:03:47.046 CET
07.02.13 18:03:47.047 CET [InterpretIncomingData] link 62(/LINAC2/RFDBUniqueltem/Uniqueltem[minDelayTR_25IST] : active stak
07.02.13 18:03:47.047 CET [InterpretIncomingData] call getData for link 62 format FLOAT 07.02.13 18:03:47.047 CET
07.02.13 18:03:47.047 CET [InterpretIncomingData] link 63(/LINAC2/RFDBUniqueltem/Uniqueltem[unitDelayTR_25IST] : active stak
07.02.13 18:03:47.048 CET [InterpretIncomingData] call getData for link 63 format NAME16 07.02.13 18:03:47.048 CET
07.02.13 18:03:47.049 CET [InterpretIncomingData] link 65(/LINAC2/RFDBUniqueltem/Uniqueltem[maxDelayPINDiodeSLEDIST] : a
```

# [ Release 4.3.4 ]

- System Stamp

- Systematically applied integer tag to all data objects
  - LINAC2, DESY2, PETRA -> cyclor number from MSK (6.25 Hz)
  - FLASH -> pulse number
  - REGAE ?

# Release 4.3.4: System Stamp



# Release 4.3.4: System Stamp

The screenshot displays the 'Archive Viewer: DESY2' application window. The title bar includes the motto 'Motto: Hold the Pickles, Hold the Lettuce...'. The 'Options' menu is open, highlighting the 'Use System Stamp' option, which is checked. The main plot area shows a red line graph with a blue horizontal line representing the system stamp. The x-axis represents time in scientific notation (e.g., 1.325e6 to 1.331e6), and the y-axis represents values from 0 to 14. Below the plot, a status bar shows the current time as 'Wed 06.02.2013 20:53:32.000 CET' and the system ID as 'System: 1326120'. A table lists the status of various channels:

Status	Property [Device]	Value	Description	Log
<input checked="" type="checkbox"/> OK	Particles	0.90 10 <sup>9</sup>	Desy-2 Particles	<input type="checkbox"/>
<input checked="" type="checkbox"/> OK	ParticlesPIA	12.48 10 <sup>9</sup>	PIA Particles	<input type="checkbox"/>
<input checked="" type="checkbox"/> OK	Energy	6.30 GeV	Energy	<input type="checkbox"/>

At the bottom of the window, there are buttons for 'Refresh All', 'Remove Selected', and 'Remove All'. A status message at the bottom left reads '18:12:59: History data for selected channels loaded.' The bottom right corner features 'History Mode' and 'Live Mode' buttons, along with a green bug icon.



# [ Release 4.3.4: System Stamp ]

- Pitfalls:

- LINAC2, DESY2, PETRA cyclers are VxWorks servers that start at '0' every time they are restarted!
  - Needs to read last stored data from some reference server
    - cycler number will be stored as well !
  - Estimate the best startup cycle number
    - Based on timestamp & cycle of a reference archive

# Release 4.3.4 : Setup

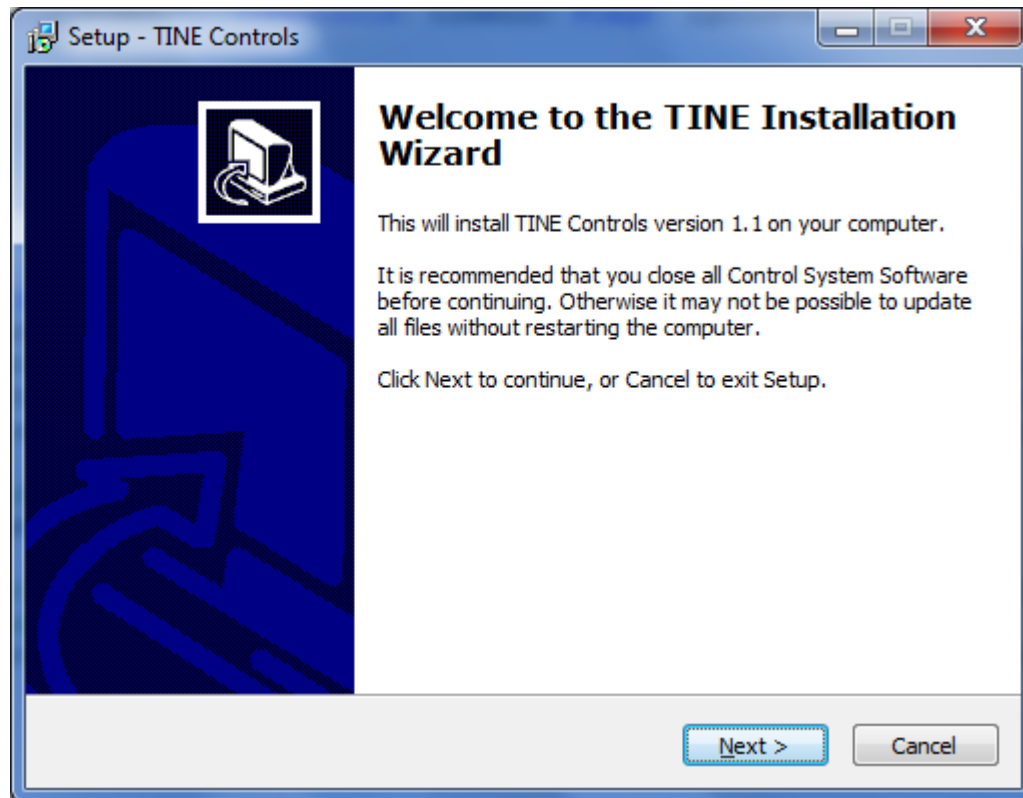
- Windows 7 setup.exe
  - Made using inno setup

## TINE Downloads

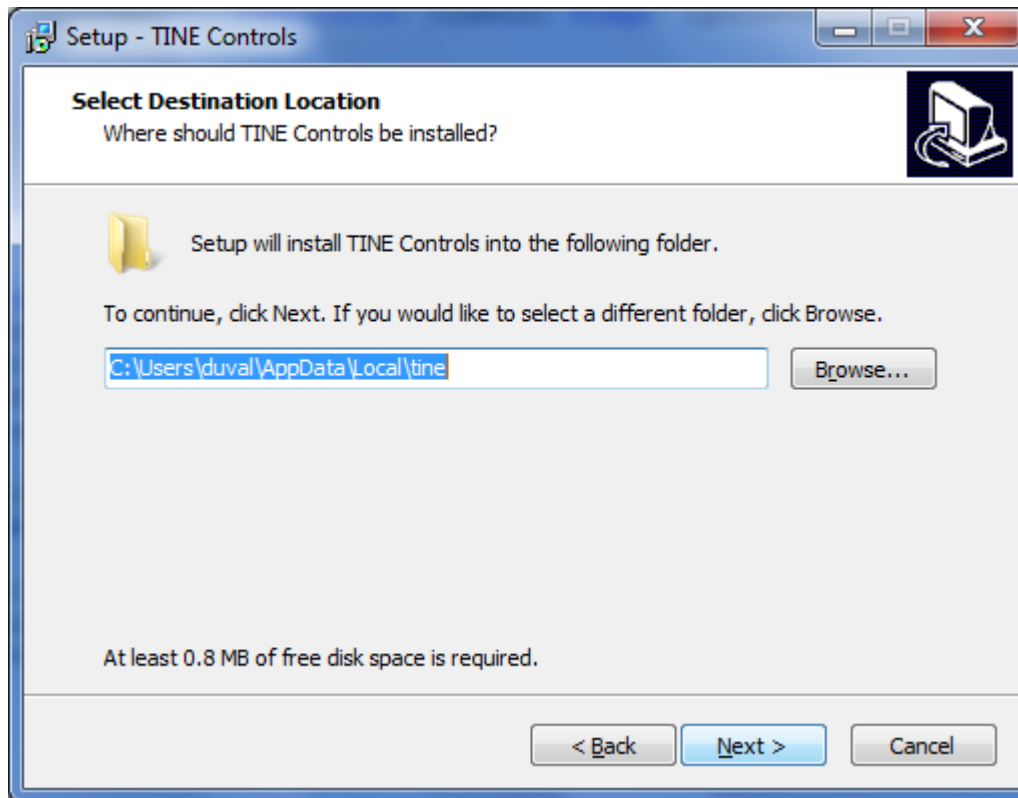
The following downloads for TINE are available at the present moment:

- C Source Modules as Windows ZIP (tineSource.zip) ~.5 Mbytes: Release 4.3.4 or the daily build
- ~~C Source Modules as linux gzip (tineSource.tar.gz) ~.5 Mbytes: Release 4.3.4 or the daily build~~
- Windows 32 bit + applications and resources + LabView VIs (tineWin32.zip) ~27 Mbytes: Release 4.3.4 or the daily build
- Windows Setup installer (Win 7 or XP) (Setup.exe) ~22 Mbytes: Release 4.3.4 or the daily build
- Windows CE TINEwindowsCE.zip: Release 4.3.4  
Win CE specific documentation [here](#)
- Windows, DOS 16 bit + applications (tineWin16.zip) ~3 Mbytes: Release 3.31
- Linux (and FreeBSD) + applications (tineLinux.tar.gz) ~3 Mbytes: Release 4.3.4 or the daily build
- Solaris + applications (tineSolaris.tar.gz) ~1 Mbytes: Release 4.3.4 or the daily build
- HPUX + applications (tineHPUX.tar.gz) ~ 1 Mbyte: Release 4.3.4 or the daily build
- MACOS + applications (tineMac.tar.gz) ~ 1 Mbyte: Release 4.3.4 or the daily build
- VxWorks (tineVxWorks.tar.gz) ~.4 Mbytes: Release 4.3.4 or the daily build
- Epics2Tine sources (e2t.tar.gz) ~.2 Mbytes: Release 4.X.X
- NIOS I (tineNIOS.zip) ~.5 Mbyte: Release 3.31
- VMS (tineVMS.zip) ~150 Kbytes: Release 4.3.4 or the daily build
- JAVA as windows ZIP (tineJAVA.zip) ~1 Mbyte: Release 4.3.4 or the daily build
- JAVA as unix gzip (tineJava.tar.gz) ~ 1 Mbyte: Release 4.3.4 or the daily build
- Object Pascal libraries for DELPHI/Lazarus (TineObjectPascal.zip): daily build
- .NET libraries and examples (mono-.Net.zip): daily build
- Windows 64 bit libraries (tine64.zip): daily build

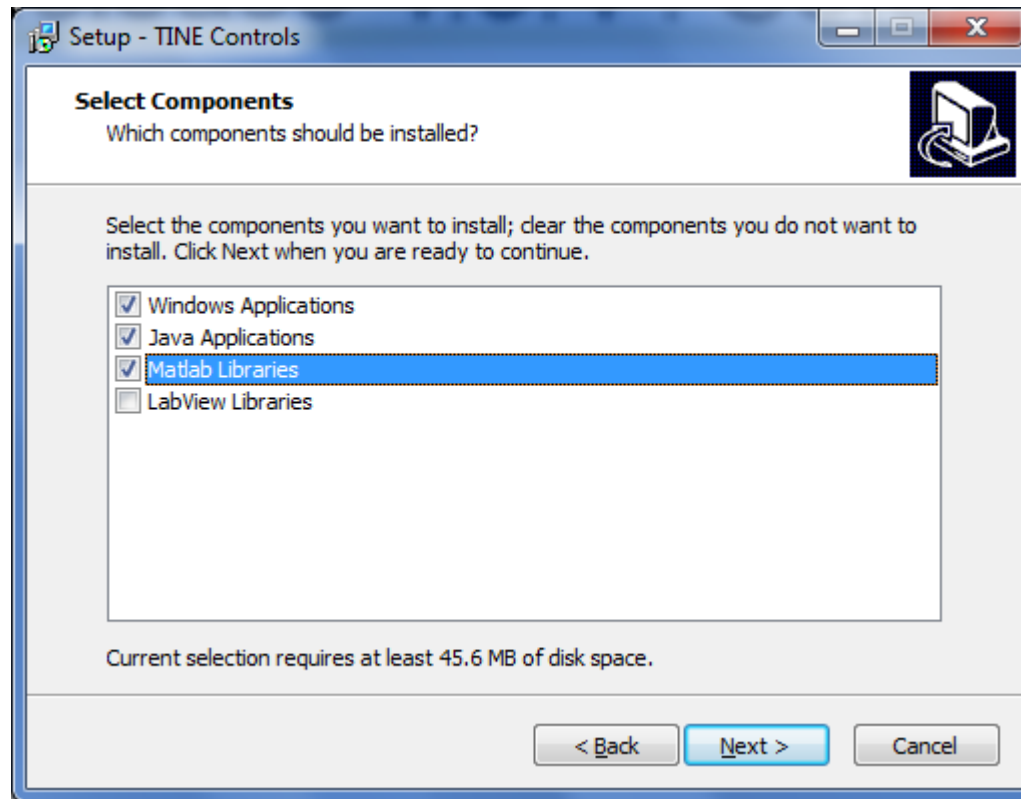
# [ Release 4.3.4 : Setup ]



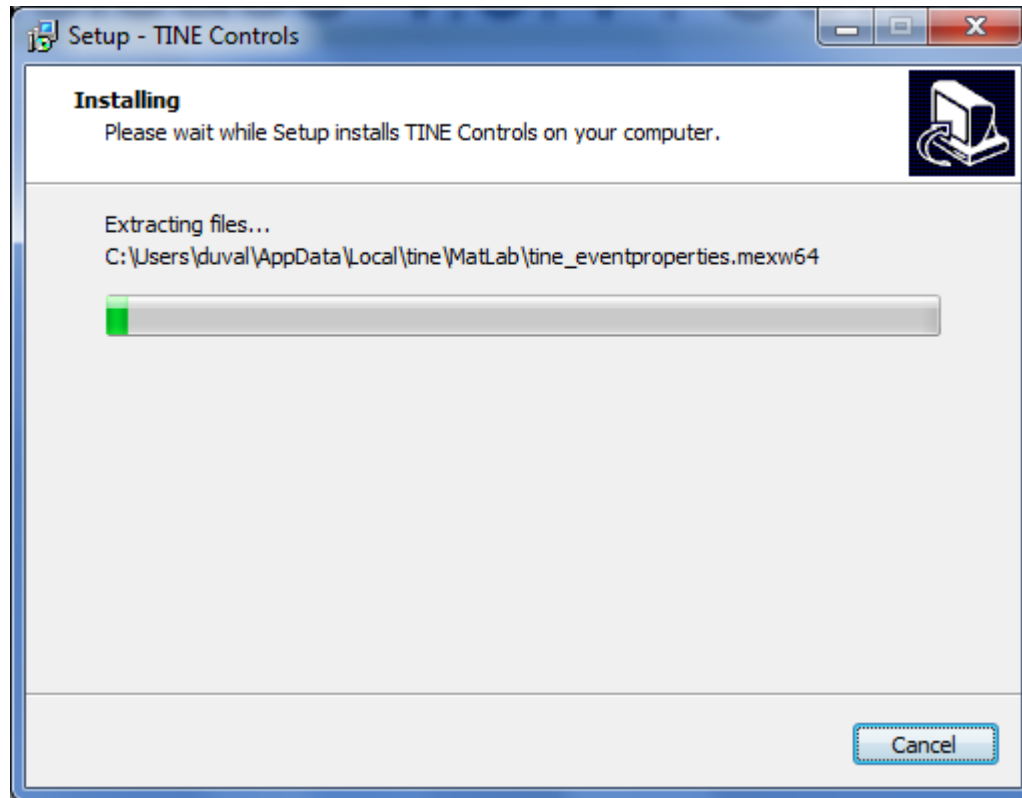
# [ Release 4.3.4 : Setup ]



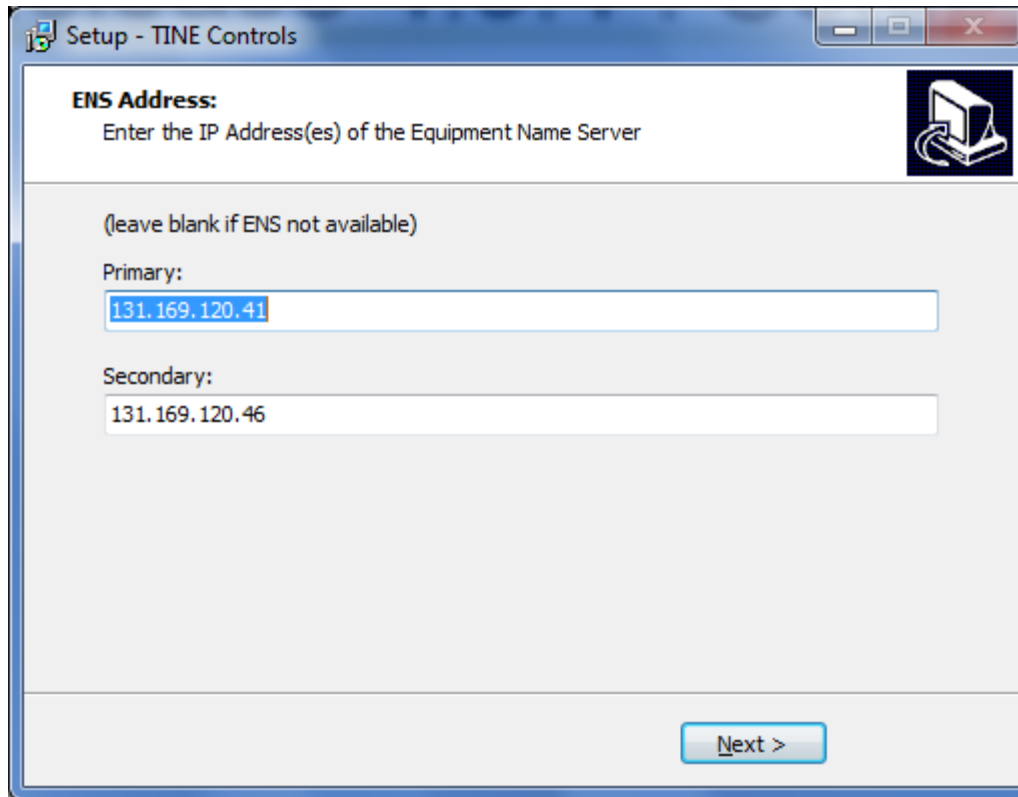
# [ Release 4.3.4 : Setup ]



# [ Release 4.3.4 : Setup ]



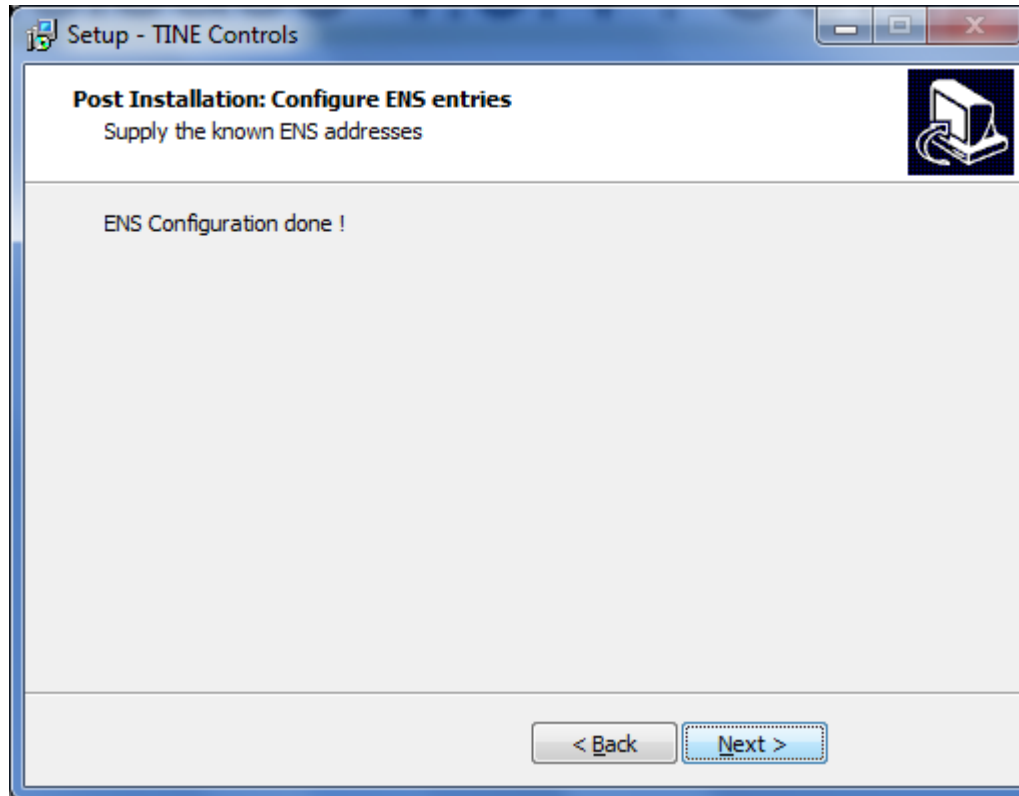
# [ Release 4.3.4 : Setup ]



The screenshot shows a Windows-style window titled "Setup - TINE Controls". The window contains the following elements:

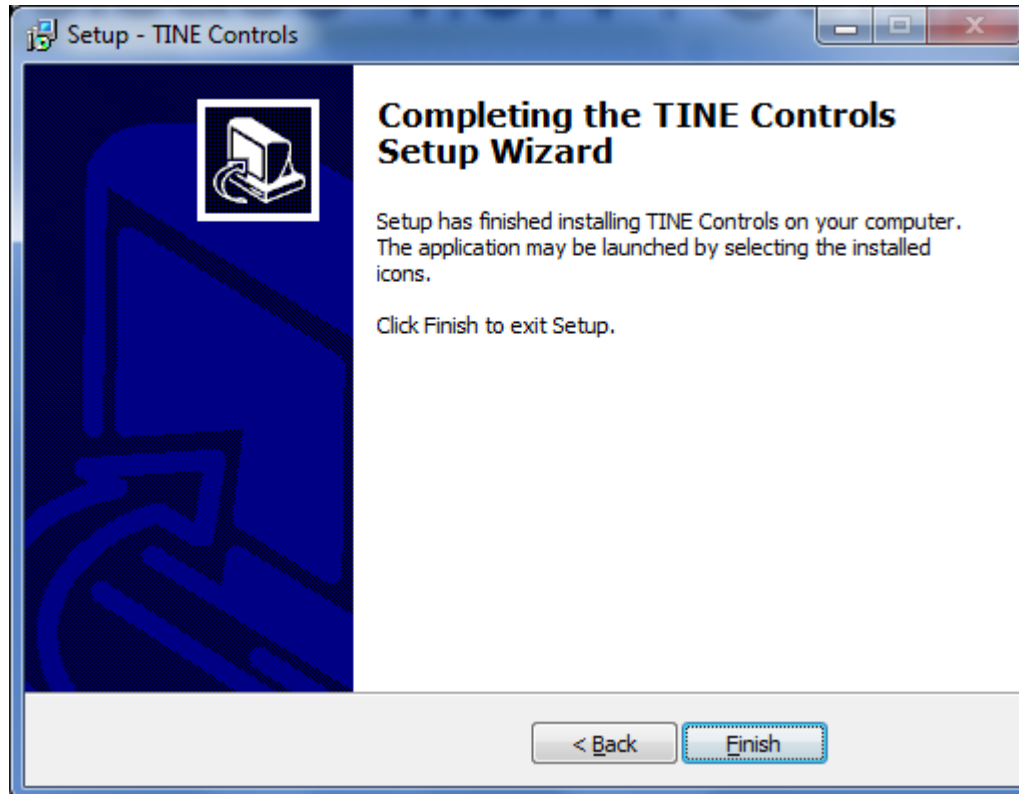
- ENS Address:** A section header with a sub-instruction: "Enter the IP Address(es) of the Equipment Name Server".
- Icon:** A small icon in the top right corner of the section depicting a computer monitor and a mouse.
- Text:** "(leave blank if ENS not available)"
- Primary:** A text input field containing the IP address "131.169.120.41".
- Secondary:** A text input field containing the IP address "131.169.120.46".
- Next >:** A button at the bottom right of the window.

# [ Release 4.3.4 : Setup ]

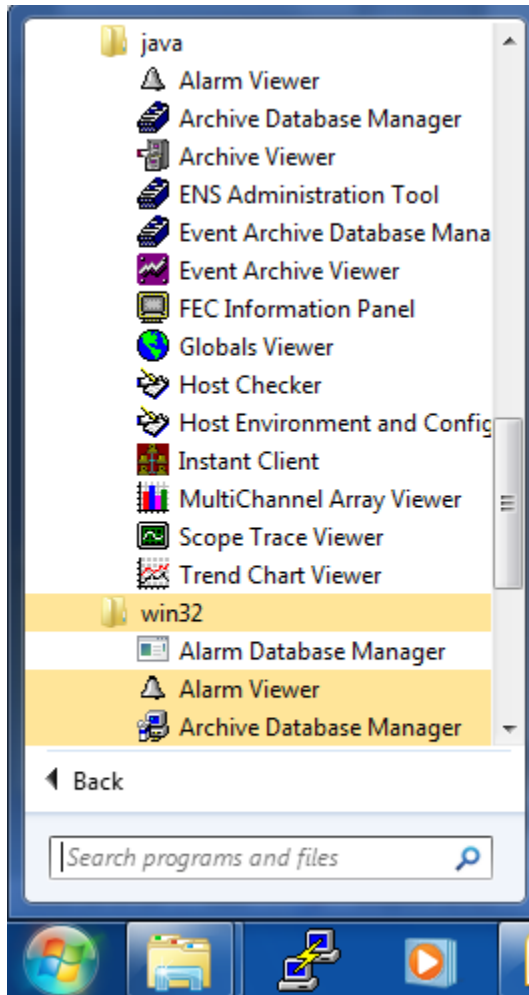




# [ Release 4.3.4 : Setup ]



# Release 4.3.4 : Setup



- Installs standard applications
- Registers relevant activeX controls
- Sets TINE\_HOME, FEC\_HOME, FEC\_LOG
  - If not already set
- Puts {app}\tine\System32 on the path
  - If not there already
- MatLab libs on {app}\tine\MatLab
- LabView vis on {app}\tine\LabView