



# TINE Release 4.x.x News

(Sept. 14, 2016: That was the month that was !)

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

# [ Release 4.5.10 ]

- C-Library: Noteworthy Bugs and Bug-fixes

**From last time ...**

- C-Library 'gotcha' ...
  - Synchronous calls (i.e. ExecLink()) will execute synchronously
    - will not return until the call has completed with data and/or a link status.
    - BUT: callbacks on active asynchronous links can still be fired !

**New API call: SetSuspendCallbacks()**

# [ Release 4.5.10 ]

- new 'access' bit : **CA\_NOCALLBACKS**

```
ExecLink("/XFEL/Mag.Group/XTIN-MAIN-D1", "Strom.Ist", &dout, NULL, CA_READ|CA_NOCALLBACKS);
```

**Nominally equivalent to :**

```
SetSuspendCallbacks(TRUE);  
ExecLink("/XFEL/Mag.Group/XTIN-MAIN-D1", "Strom.Ist", &dout, NULL, CA_READ|CA_NOCALLBACKS);  
SetSuspendCallbacks(FALSE);
```

# [ Release 4.5.10 ]

## ■ Catching ctrl-C ...

```
void SetCatchConsoleBreak ( int value )
```

Determines whether an application will catch an interrupt or break signal (such as control-C) and issue a graceful exit or not.

**Parameters:**

*value* is the desired setting (default = TRUE)

**See also:**

[GetCatchConsoleBreak\(\)](#)

- If 'TRUE' then catch: Ctrl-C, SIGTERM, SIGINT ...

# Release 4.5.10

## ■ Embellishments: C-Lib

### ○ New API calls:

**From last time ...**

**void SetDieOnAddressInUse ( int value )**

Determines whether a server will exit() if an 'address in use' message is delivered by the ENS upon registration.

**Parameters:**

*value* is the desired setting (default = TRUE)

**See also:**

[GetDieOnAddressInUse\(\)](#)

**OR: set FEC\_DIE\_INUSE=TRUE**

**void SetDieOnSocketError ( int value )**

Determines whether a server will exit() if there are continuous socket errors on important server sockets.

**Parameters:**

*value* is the desired setting (default = TRUE)

**See also:**

[GetDieOnSocketError\(\)](#)

**OR: set FEC\_DIE\_SOCKETERROR=TRUE**

# [ Release 4.5.10 ]

- Embellishments: C-Lib
  - New API calls:

```
void SetDieOnFecIsAlias ( int value )
```

Determines whether a server will exit() if a 'FEC has an alias' message is delivered by the ENS upon registration.

**Parameters:**

*value* is the desired setting (default = FALSE)

**See also:**

[GetDieOnFecIsAlias\(\)](#)

# [ Release 4.5.10 ]

- The issue:
  - 'old' pc104 was once '**/PETRA/MagServerA**' on FEC '**FecA**' is reused as '**/PETRA/MagServerB**' on FEC '**FecB**' with same *IP address, port,* and *EQM* Name.
  - **End Result:** '**MagServerB**' is an unintended alias for '**MagServerA**' !

# [ Release 4.5.10 ]

- Litany of 'errors' ...
  - **/PETRA/ServerA** was not operational for many months BUT was flagged as '*important*'
    - => no automatic removal by the **ENS** !
  - **/PETRA/ServerA** was a test stand and should have been registered in **PETRA.TEST** (and not flagged as *important*!).
  - Karol's **client application** tried to access all magnet servers of same class in PETRA and treated **/PETRA/ServerA** as an independent server !
  - Library **bug** (now fixed !) did not recognize the alias (because the **FEC names were different**) and did not realize that it had *2 identical links to same thing* !
  - **Client application** did NOT truncate the returned data as it should have for 1 of the *2 identical links* !

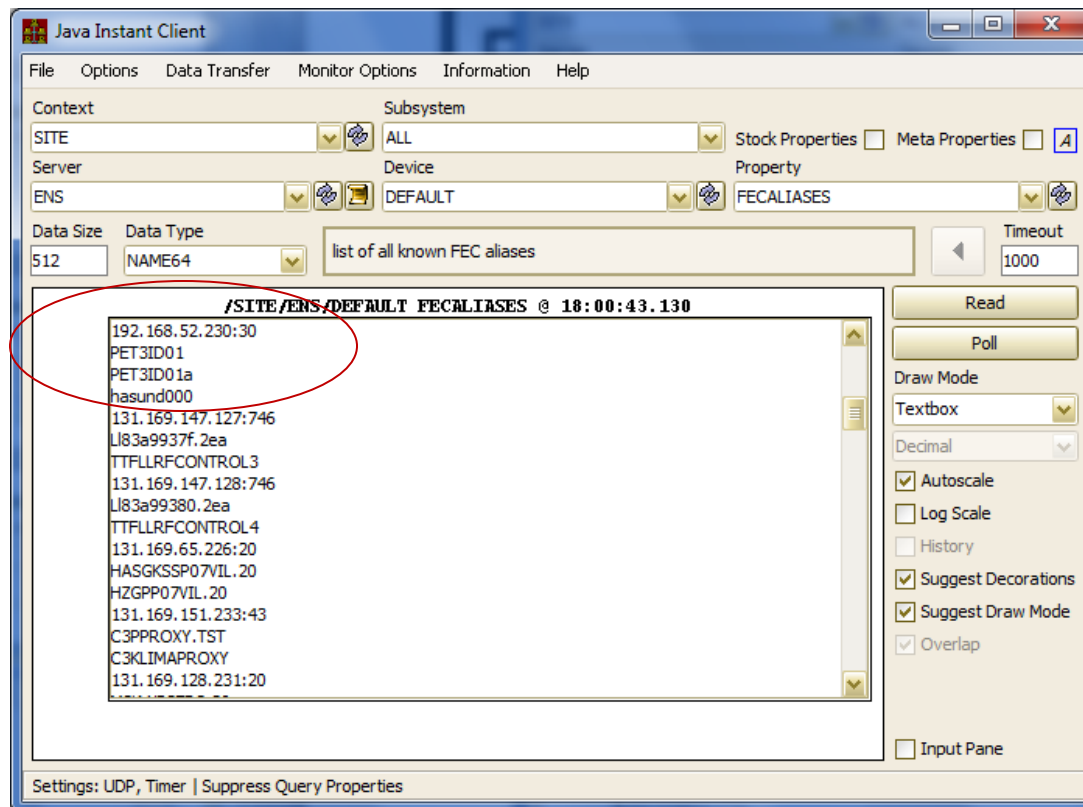


# [ Release 4.5.10 ]

- (re)solution:
  - make use of `SetDieOnFeclsAlias()` at the server (?) ...
  - register *test* servers in a *.TEST* context (without *importance*) !
  - Note: aliases are often a good thing!

# Release 4.5.10

- Add the ENS 'landscape' to the ENS admin (and other) tools ...



# Release 4.5.10

- **Embellishments: C-Lib and Java**
  - **Archive** (local history and central archive)  
**complex data types and structures !**
    - e.g. CF\_FLTINTFLTINT or CF\_STRUCT
    - Viewer needs to offer an extra combo for selecting which 'field' of the complex type or structure to display as a trend vs. time !
  - Trap names with 'bad' characters (C-Lib)

```
#define STRICTLY_ILLEGALCHARS "[^\\\"*&]"  
#define RUDECHARS "[^\\\\\\|\\n\\t ]+"  
int assertNameIsValid(const char *name, const char *badchars, int length);
```

device, property names

FEC, context, server names

# [ Release 4.5.10 ]

- Alarming news ...
  - auto-Correct *registration problem*
    - Alarm *text* provided but no alarm *tag* !?
      - Use the 1<sup>st</sup> 32 characters of the alarm text !
  - auto 'file\_error' alarms IF a local history or log file cannot be written !
  - Watch table alarms:
    - Clear a *partner* alarm if the alarm condition changes from *warn* to *real* or from *real* back to *warn* !
  - alarms and alarm watch *manifests* written to the local EQM subdirectory (*a la local history manifests*).

# [ Release 4.5.10 ]

- Alarming news ...
  - Alarm specific filters !
    - (remember 'tip of the month' from last time)
    - Alarm filters were only applicable to 'watch table' alarms
    - Now: any defined alarm used with the 'Set/Clear' API calls can have a filter !

```
strncpy(ads.alarmTag,"Threshold exceeded",16);
ads.alarmCode = 512;
ads.alarmMask = 0xff;
ads.severity = 7;
ads.alarmDataFormat = BFMT(CF_FLOAT);
ads.alarmDataArraySize = 1;
ads.alarmSystem = 640;
strncpy(ads.alarmText,"Take action immediately!",40);
strncpy(ads.dataText,"Current threshold setting",40);
strncpy(ads.url,"alarm512.html",40);
if ((cc=AppendAlarmInfoTableEx(EQPMODNAME,&ads),"/PETRA/Idc/Buffer-0[I]>0.05") != 0)
{
    feclog("appendAlarmInfoTable : %s",erlst[cc]);
}
```

# [ Release 4.5.10 ]

- (short aside:) What is a ‘watch table alarm’ ?
  - Automatic alarms generated when the current value of a registered property is e.g. ‘too high’ or ‘too low’

## Configuration file to define which alarms to watch for ...

- **almwatch.csv** gives a list of properties and value thresholds for setting value\_too\_high and value\_too\_low alarms. A 'warning' threshold can also be supplied to set warn\_too\_high and warn\_too\_low alarms.

```
LOCALNAME,DEVICENAME,PROPERTY,SIZE,FORMAT,SEVERITY,HIGH,LOW,HIGHWARN,LOWWARN,FILTER  
SINEQM,#0,Amplitude,10,Float,15,500,0,400,10,/DESY2/GLOBALS[ParticleType]=1
```

## Or using the Alarm System API in the server code ...

```
if ((cc=SetDeviceAlarm("EQP1","DEVICE1",512,NULL,almNEW)) != 0)  
{  
    feclog("Couldn't set alarm : %s\n",erlst[cc]);  
}
```

# Release 4.5.10

## ■ Property Handlers in C-Lib (a la java)

```
int RegisterPropertyAndHandler ( char *   eqm,  
                               EQMFCNP hndlr,  
                               char *   prp,  
                               DTYPE *  dout,  
                               DTYPE *  din,  
                               short    acc,  
                               short    atype,  
                               UINT16   rowlen,  
                               char *   dsc,  
                               PrpEgu * egu,  
                               PrpEgu * xegu,  
                               int      pid  
                               )
```

Registers a device property and a property handler with the TINE server engine. If no equipment module name is given, an internal equipment module is provided by the TINE server engine, see API call RegisterServer. If not an internal equipment module but a specifically for this server created equipment module should be used, this can be indicated by the parameter eqmName, see below.

### Parameters:

*eqm* defines the associated equipment module. If NULL then a TINE kernel internal equipment module is assumed, else it should be the registered 6-character local equipment module name (e.g. "BPMEQM") of the server to which the property belongs.  
*hndlr* is a reference to the property handler function, which must have the prototype

```
int (*hndlr)(char *,char *,DTYPE *,DTYPE *,short)
```

Namely, it is an interrupt service routine which will receive the device name, device property, the output data set, the input data set, and the data access flags as parameters, as well as the original reference pointer.

the remaining parameters are exactly the same as in API call RegisterPropertyInformation

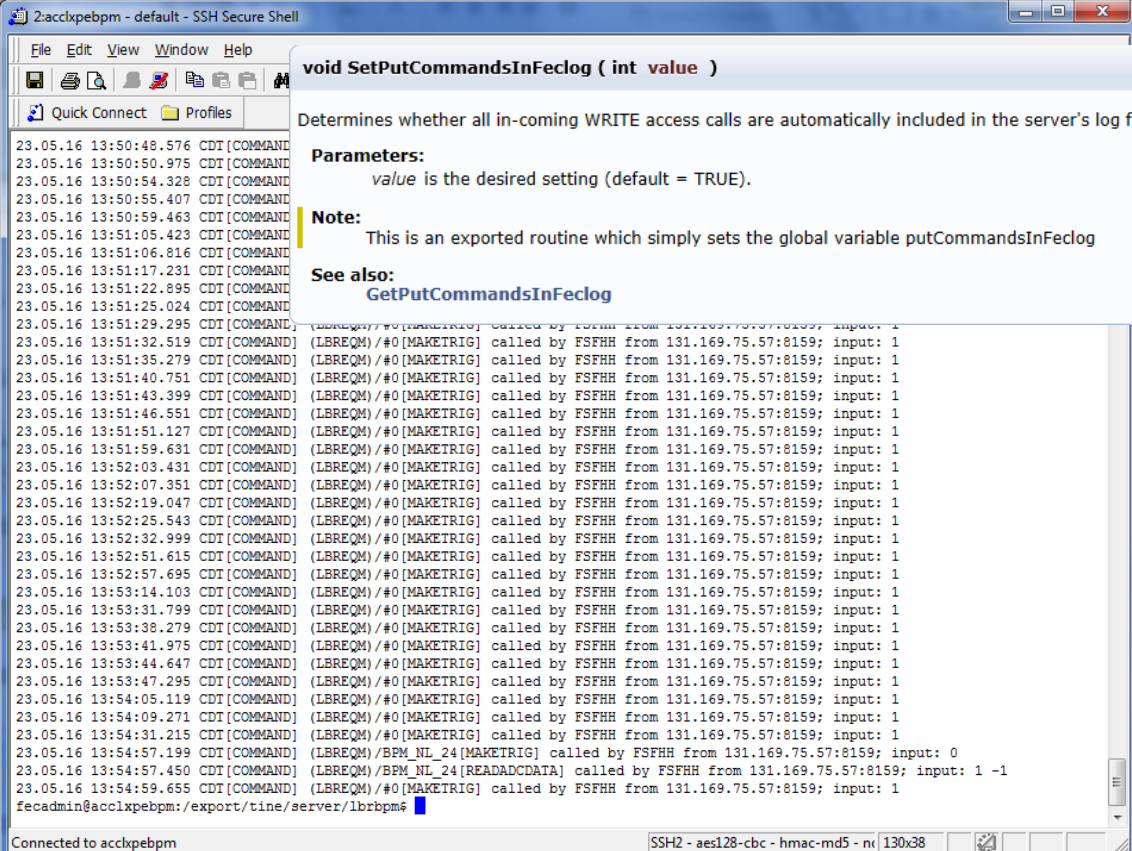
### Parameters:

*prp* is property name in question (up to 64 characters).  
*dout* is a template data object (minus a data pointer) giving the default format size, and structure tag (if any) of the output data set to be returned by the server to the caller.  
*din* is a template data object (minus a data pointer) giving the default format size, and structure tag (if any) of the input data set to be supplied by the caller.  
*acc* is the data 'access' (e.g. CA\_READ or CA\_WRITE) accepted by the server. This parameter can be used to coerce client-side links into using preferred link attributes. For example, by applying the CA\_NETWORK flag (CA\_READ|CA\_NETWORK) to the access, asynchronous NETWORK (i.g. multicast acquisition) will be enforced at the client side. Applying the CA\_XREAD access flag will likewise allow exclusive READ access regarding the registered property (i.e. the same security rules applied

# Release 4.5.9

## ■ Embellish **From last time ...**

- Servers now keep an extra 'commands.log' in addition to fec.log!



```
23.05.16 13:50:48.576 CDT [COMMAND]
23.05.16 13:50:50.975 CDT [COMMAND]
23.05.16 13:50:54.328 CDT [COMMAND]
23.05.16 13:50:55.407 CDT [COMMAND]
23.05.16 13:50:59.463 CDT [COMMAND]
23.05.16 13:51:05.423 CDT [COMMAND]
23.05.16 13:51:06.816 CDT [COMMAND]
23.05.16 13:51:17.231 CDT [COMMAND]
23.05.16 13:51:22.895 CDT [COMMAND]
23.05.16 13:51:25.024 CDT [COMMAND]
23.05.16 13:51:29.295 CDT [COMMAND]
23.05.16 13:51:32.519 CDT [COMMAND]
23.05.16 13:51:35.279 CDT [COMMAND]
23.05.16 13:51:40.751 CDT [COMMAND]
23.05.16 13:51:43.399 CDT [COMMAND]
23.05.16 13:51:46.551 CDT [COMMAND]
23.05.16 13:51:51.127 CDT [COMMAND]
23.05.16 13:51:59.631 CDT [COMMAND]
23.05.16 13:52:03.431 CDT [COMMAND]
23.05.16 13:52:07.351 CDT [COMMAND]
23.05.16 13:52:19.047 CDT [COMMAND]
23.05.16 13:52:25.543 CDT [COMMAND]
23.05.16 13:52:32.999 CDT [COMMAND]
23.05.16 13:52:51.615 CDT [COMMAND]
23.05.16 13:52:57.695 CDT [COMMAND]
23.05.16 13:53:14.103 CDT [COMMAND]
23.05.16 13:53:31.799 CDT [COMMAND]
23.05.16 13:53:38.279 CDT [COMMAND]
23.05.16 13:53:41.975 CDT [COMMAND]
23.05.16 13:53:44.647 CDT [COMMAND]
23.05.16 13:53:47.295 CDT [COMMAND]
23.05.16 13:54:05.119 CDT [COMMAND]
23.05.16 13:54:09.271 CDT [COMMAND]
23.05.16 13:54:31.215 CDT [COMMAND]
23.05.16 13:54:57.199 CDT [COMMAND]
23.05.16 13:54:57.450 CDT [COMMAND]
23.05.16 13:54:59.655 CDT [COMMAND]
fecadmin@acclxpebpm: /export/t/ine/server/lbrbpm#
```

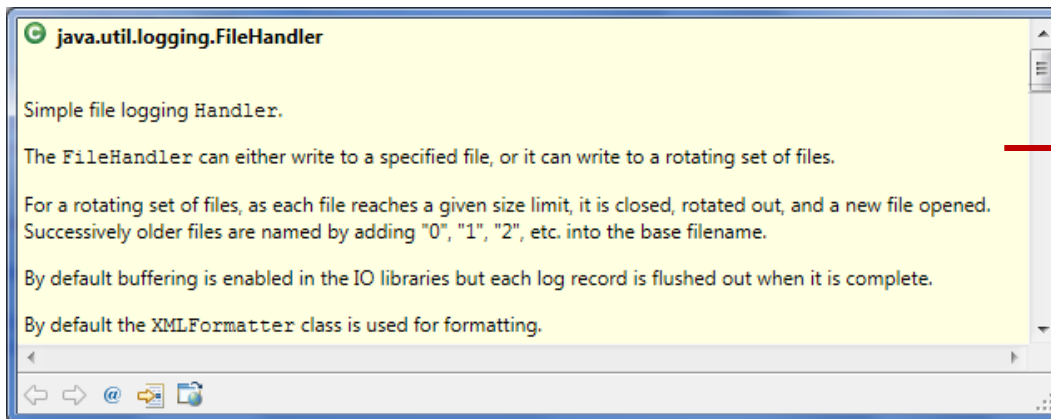
```
void SetPutCommandsInFeclog ( int value )
Determines whether all in-coming WRITE access calls are automatically included in the server's log file.
Parameters:
    value is the desired setting (default = TRUE).
Note:
    This is an exported routine which simply sets the global variable putCommandsInFeclog
See also:
    GetPutCommandsInFeclog
```



# [ Release 4.5.10 ]

- New Log Files ...
  - 'commands.log' now in java:

```
1 12.09.16 14:09:57.331 CEST[SINEGEN.9] : COMMAND (SJNEQM)/SineGen0 Amplitude called by DUVAL from addr 131.169.9.205:8054 : 1 FLOAT element
2 input data value(s) :
3 10.0
4
5 12.09.16 14:11:58.056 CEST[SINEGEN.9] : ATTACH_FEC remote access from: /131.169.9.205
6 12.09.16 14:12:07.614 CEST[SINEGEN.9] : COMMAND (SJNEQM)/SineGen0 Amplitude called by DUVAL from addr 131.169.9.205:8054 : 1 FLOAT element
7 input data value(s) :
8 12.0
9
10 12.09.16 14:13:32.587 CEST[SINEGEN.9] : ATTACH_FEC remote access closed from: /131.169.9.205
```



**commands.log.0**  
**commands.log.1**  
**commands.log.2**  
...

# [ Release 4.5.10 ]

- New Log Files ...
  - 'messages.log' (C-Lib)
    - current 'message table' (500 entries) dumped to file when
      - Server is (gracefully) closed.
      - console command 'dump messages'.

# Release 4.5.10

## e.g. DESY2 CAS:

```
1 System Messages: last 500 message table entries (recent at top)
2 13.09.16 14:19:23.092 CDT [normal] Remote Session granted to uid 501
3 13.09.16 14:08:32.827 CDT [normal] AttachLink [4] /DESY2/Mag.Corr-LW/* ALARMSEXT (224 bytes out 16 bytes in) READ SINGLE 1000 ms (cbId: 24) -# 4 times since 13:0
4 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Interlock(NUMALARMS.RAW) by DUVAL
5 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Interlock(NUMALARMS.RAW) from DUVAL (+52)
6 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Strahlung(NUMALARMS.RAW) by DUVAL
7 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Strahlung(NUMALARMS.RAW) from DUVAL (+52)
8 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Strahldiag.(NUMALARMS.RAW) by DUVAL
9 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Strahldiag.(NUMALARMS.RAW) from DUVAL (+52)
10 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Front-End(NUMALARMS.RAW) by DUVAL
11 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Front-End(NUMALARMS.RAW) from DUVAL (+52)
12 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Kontrollen(NUMALARMS.RAW) by DUVAL
13 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Kontrollen(NUMALARMS.RAW) from DUVAL (+52)
14 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Timing(NUMALARMS.RAW) by DUVAL
15 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Timing(NUMALARMS.RAW) from DUVAL (+52)
16 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Vakuum(NUMALARMS.RAW) by DUVAL
17 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Vakuum(NUMALARMS.RAW) from DUVAL (+52)
18 13.09.16 12:52:47.523 CDT [normal] retrying (CASEQM)/SYS:Instrument.(NUMALARMS.RAW) by DUVAL
19 13.09.16 12:52:47.523 CDT [normal] reconnecting to (CASEQM)/SYS:Instrument.(NUMALARMS.RAW) from DUVAL (+52)
20 13.09.16 12:52:47.522 CDT [normal] retrying (CASEQM)/SYS:Kicker-Septa(NUMALARMS.RAW) by DUVAL
21 13.09.16 12:52:47.522 CDT [normal] reconnecting to (CASEQM)/SYS:Kicker-Septa(NUMALARMS.RAW) from DUVAL (+52)
22 13.09.16 12:52:47.522 CDT [normal] retrying (CASEQM)/SYS:Chopper(NUMALARMS.RAW) by DUVAL
23 13.09.16 12:52:47.522 CDT [normal] reconnecting to (CASEQM)/SYS:Chopper(NUMALARMS.RAW) from DUVAL (+52)
24 13.09.16 12:52:47.522 CDT [normal] retrying (CASEQM)/SYS:HF(NUMALARMS.RAW) by DUVAL
25 13.09.16 12:52:47.522 CDT [normal] reconnecting to (CASEQM)/SYS:HF(NUMALARMS.RAW) from DUVAL (+52)
26 13.09.16 12:52:47.522 CDT [normal] retrying (CASEQM)/SYS:LWeg.Korr.Mag.(NUMALARMS.RAW) by DUVAL
```

## e.g. TEST ELWIS:

```
1 System Messages: last 500 message table entries (recent at top)
2 07.09.16 08:05:09.977 CDT [normal] [1] missed last schedule (757 vs 200)
3 06.09.16 16:21:09.444 CDT [normal] AttachLink [1] /PETRA.TEST/CYCLER PROPERTIES (64 bytes out 64 bytes in) READ SINGLE 200 ms (cbId: 1)
4 06.09.16 16:21:09.444 CDT [normal] ENS: CYCLER [FEC CYCFEC.TST, EQM PCYC] added
5 06.09.16 16:21:09.052 CDT [normal] ENS: GLOBALS [FEC GLOBALSFEC, EQM GLBEQM] added
6 06.09.16 16:21:09.051 CDT [address unknown] AttachLink [-55] /PETRA.TEST/CAS/Test_Zwerg NREGIONRULES (4 bytes out 0 bytes in) READ SINGLE 200 ms (cbId: -286331154)
7 06.09.16 16:21:09.051 CDT [address unknown] Unable to subscribe to /PETRA.TEST/CAS/Test_Zwerg NREGIONRULES: address unknown
8 06.09.16 16:21:09.051 CDT [normal] append /PETRA.TEST/CAS/Test_Zwerg[NREGIONRULES] to the link black list
9 06.09.16 16:21:09.023 CDT [link is blacklisted] AttachLink [-113] /PETRA.TEST/CAS/Test_Zwerg REMOVEALARMS (0 bytes out 0 bytes in) WRITE SINGLE 200 ms (cbId: -286331154)
10 06.09.16 16:21:09.023 CDT [link is blacklisted] Unable to subscribe to /PETRA.TEST/CAS/Test_Zwerg REMOVEALARMS: link is blacklisted
11 06.09.16 16:21:09.023 CDT [address unknown] link /PETRA.TEST/CAS/Test_Zwerg[REMOVEALARMS] has been blacklisted due to return code 55
12 06.09.16 16:21:09.006 CDT [address unknown] AttachLink [-55] /PETRA.TEST/CAS/Test_Zwerg REMOVEALARMS (0 bytes out 0 bytes in) WRITE SINGLE 200 ms (cbId: -286331154)
13 06.09.16 16:21:09.006 CDT [address unknown] Unable to subscribe to /PETRA.TEST/CAS/Test_Zwerg REMOVEALARMS: address unknown
14 06.09.16 16:21:09.006 CDT [normal] append /PETRA.TEST/CAS/Test_Zwerg[REMOVEALARMS] to the link black list
15 06.09.16 16:21:09.003 CDT [normal] ENS: toggle name server to primary
16 06.09.16 16:21:09.002 CDT [normal] ENS: toggle name server to secondary no. 1
17 06.09.16 16:21:08.989 CDT [normal] DOOCS username set to ZWERG
```

# [ Release 4.5.10 ]

- Python: work around

#define timezone in python 3.5 !

```
#if !defined(UNIX) && !defined(HAVE_GETTIMEOFDAY)
    TIME_EXPORT struct timeval *gettimeofday(struct timeval *t, struct timezone *tz);
#endif
```

prolog.h

```
#define HAVE_TIMEZONE
#define HAVE_GETTIMEOFDAY
#include "tine.h"
#include "tbufsrv.h"
#include "threader.h"
```

pytine.cpp

# [ Release 4.5.10 ]

---

- doocs2tine issues
  - **Security**: doocs servers make use of (legacy) routine `GetCallerInfo()` to get the user issuing a WRITE call.

# Release 4.5.10

```
int GetCallerInfo ( char *   eqmName,
                   NAME16 * un,
                   BYTE *   ipx,
                   UINT32 * ip,
                   short *  prot,
                   int *    num
                 )
```

Returns the user name(s) and network address(es) of all callers interested in the current contract.

#### Parameters:

*eqmName* (in) is the equipment function name (local name) for which the exported name is desired.  
*un* (out) if non-NULL is a reference to an array of **NAME16** objects to be filled with the caller list  
*ipx* (out) if non-NULL is a reference to a byte array to be filled with the IPX addresses of the caller(s).  
*ip* (out) if non-NULL is a reference to an unsigned long array to be filled with the IP addresses of the caller(s).  
*prot* (out) if non-NULL is a reference to a short array to be filled with the requested protocol level of the caller(s).  
*num* (in/out) is a reference to an int value which initially contains the buffer size of the array references used in the parameter list. Upon return of the call, it contains the actual number of callers.

#### Note:

The non-NULL arguments supplied must point to buffer with enough room to hold at least the input 'num' entries, otherwise a system crash is likely.

This call has been deprecated in favor of `GetCallerInformation`

#### Returns:

0 if successful, or a TINE completion code

#### See also:

[GetCallerInformation\(\)](#)

#### Example:

```
NAME16 userlist[10];
UINT32 ipaddrlist[10];
char ip[17];
int n = 10;

GetCallerInfo("SINEQM",userlist,NULL,ipaddrlist,NULL,&n);

printf("there are %d callers\n",n);

if (n > 10) n = 10;

for (i=0; i<n; i++)
{
    inet_ntoa_b(*(struct in_addr *)&ipaddrlist[i],ip);
    printf("%s : %s\n",userlist[i].name,ip);
}
```

# [ Release 4.5.10 ]

## ■ doocs2tine.cc

```
cc = GetCallerInfo (location, &user, NULL, &ipaddr, NULL, &num);
```

should have been:

```
cc = GetCallerInfo ("DCSEQM", &user, NULL, &ipaddr, NULL, &num);
```

Worked in versions earlier than 4.5.8 (Jan. this year) !

**Invalid EQM name resulted in a 'best guess'. But new multi-threaded EQM calls => this has to be correct!**

**Any WRITE call via TINE to a doocs server built since early this year (up to the current 'nightly build') will likely receive the famous 'unauthorized action' return code !!!**

# Release 4.5.10

- doocs configurator panel:

	Proposed Settings	Current Settings
SVR.TINEVERS	<input type="text"/>	Set 4.05.0010
SVR.LIBINFO	<input type="text"/>	Set 18.10.9-xenial1
SVR.HOST_NAME	<input type="text"/>	Set xfelcpudi30i1
SVR.TINERUN	1	Set 0
SVR.TINE_LOG	1	Set 0
SVR.TINE_FEC	XFBPM1FEC	Set
SVR.TINE_PREF	<input type="text"/>	Set
SVR.TINESUFF	<input type="text"/>	Set
SVR.TINE_SUBSYSTEM	Not Available	Set Not Available
SVR.TINE_GROUP	1	Set 0
SVR.TINE_PSCHED	<input type="text"/> ...	Set
SVR.TINE_MCA	<input type="text"/> ...	Set

**Works! But is nominally 'useless' because no one uses it. And those who do don't have the 'rights' to change settings.**

**What people do is:  
Go to 'rpc\_test' and 'turn the thread on' (set SVR.TINERUN = 1).  
=> Causes problems on multi-host servers !!!!**



# [ Release 4.5.10 ]

- doocs issues: enabling TINE

- Just use a single command line tool (and run it as 'doocsadm' on a linux or mac).

```
java -jar enabletine.jar
```

```
enableTine <doocs facility> <doocs device> --<options>
```

```
options can contain 'r' (report only) and/or 'v' (verbose)
```

- Works on trivial case: single host server.
- Does what it needs to do for multi-host server.

# Release 4.5.10

## Example #1

```
java -jar enabletine.jar TTF2.RF LLRF.CONTROLLER -x
enable /TTF2.RF/LLRF.CONTROLLER
ENS host set to default value : enshost
ens_host_ == enshost
MCSW7DUVAL02/131.169.9.205,desy.de.doocs.enableTine.DoocsEntry.main(DoocsEntry.java:582),-1,Windows 7
ENS_DB.readfromENS(duval) localhost = *winauth/duval/MCSW7DUVAL02/version2
readFromRegistry(duval) *****
ENS: user=duval --> UID=1402, GID=1433;
Groups: 3234 3236 3237 56 3894 5254 3536 3895 1501 1433 216 1450 1437 3235 3347 403
REMOVE /TTF2.RF/LLRF.CONTROLLER from the TINE ENS
REMOVE /TTF2.RF/LLRF.CONTROLLER.1 from the TINE ENS
/TTF2.RF/LLRF.CONTROLLER/VMEGUN1._SVR: set TINE_LOG on
/TTF2.RF/LLRF.CONTROLLER/VMEGUN1._SVR: set TINE_GROUP to 1
/TTF2.RF/LLRF.CONTROLLER/VMEGUN1._SVR: remove SVR.TINESUFF .GUN
/TTF2.RF/LLRF.CONTROLLER/VMEGUN1._SVR: set TINERUN on
REMOVE /TTF2.RF/LLRF.CONTROLLER from the TINE ENS
REMOVE /TTF2.RF/LLRF.CONTROLLER.2 from the TINE ENS
/TTF2.RF/LLRF.CONTROLLER/VMEDSP1._SVR: set TINE_LOG on
/TTF2.RF/LLRF.CONTROLLER/VMEDSP1._SVR: set TINE_GROUP to 2
/TTF2.RF/LLRF.CONTROLLER/VMEDSP1._SVR: remove SVR.TINESUFF .1
/TTF2.RF/LLRF.CONTROLLER/VMEDSP1._SVR: set TINERUN on
ADD FEC TFFLLRFCONTROL2 and SERVER /TTF2.RF/LLRF.CONTROLLER.2 to the TINE ENS
ADD SERVER /TTF2.RF/LLRF.CONTROLLER.2 to group LLRF.CONTROLLER with index 2
REMOVE /TTF2.RF/LLRF.CONTROLLER from the TINE ENS
REMOVE /TTF2.RF/LLRF.CONTROLLER.3 from the TINE ENS
/TTF2.RF/LLRF.CONTROLLER/VMEDSP23._SVR: set TINE_LOG on
/TTF2.RF/LLRF.CONTROLLER/VMEDSP23._SVR: set TINE_GROUP to 3
/TTF2.RF/LLRF.CONTROLLER/VMEDSP23._SVR: remove SVR.TINESUFF .23
/TTF2.RF/LLRF.CONTROLLER/VMEDSP23._SVR: set TINERUN on
ADD FEC TFFLLRFCONTROL3 and SERVER /TTF2.RF/LLRF.CONTROLLER.3 to the TINE ENS
ADD SERVER /TTF2.RF/LLRF.CONTROLLER.3 to group LLRF.CONTROLLER with index 3
REMOVE /TTF2.RF/LLRF.CONTROLLER from the TINE ENS
REMOVE /TTF2.RF/LLRF.CONTROLLER.4 from the TINE ENS
/TTF2.RF/LLRF.CONTROLLER/VMEDSP45._SVR: set TINE_LOG on
/TTF2.RF/LLRF.CONTROLLER/VMEDSP45._SVR: set TINE_GROUP to 4
/TTF2.RF/LLRF.CONTROLLER/VMEDSP45._SVR: remove SVR.TINESUFF .45
/TTF2.RF/LLRF.CONTROLLER/VMEDSP45._SVR: set TINERUN on
ADD FEC TFFLLRFCONTROL4 and SERVER /TTF2.RF/LLRF.CONTROLLER.4 to the TINE ENS
ADD SERVER /TTF2.RF/LLRF.CONTROLLER.4 to group LLRF.CONTROLLER with index 4
/TTF2.RF/LLRF.CONTROLLER/VMEDSP67._SVR: set TINE_FEC to TFFLLRFCONTROL5
/TTF2.RF/LLRF.CONTROLLER/VMEDSP67._SVR: set TINE_LOG on
/TTF2.RF/LLRF.CONTROLLER/VMEDSP67._SVR: set TINE_GROUP to 5
/TTF2.RF/LLRF.CONTROLLER/VMEDSP67._SVR: set TINERUN on
```

Suppress  
jdoocs output  
-> next release.

# Release 4.5.10

## Example #2

```
java -jar enabletine.jar XFEL.DIAG BPM
enable /XFEL.DIAG/BPM
/XFEL.DIAG/BPM/XFELCPUDI30I1._SVR: set TINE_FEC to XFBPM1FEC
/XFEL.DIAG/BPM/XFELCPUDI30I1._SVR: set TINE_LOG on
/XFEL.DIAG/BPM/XFELCPUDI30I1._SVR: set TINE_GROUP to 1
/XFEL.DIAG/BPM/XFELCPUDI30I1._SVR: set TINERUN on
/XFEL.DIAG/BPM/XFELCPUDI55I1._SVR: set TINE_FEC to XFBPM2FEC
/XFEL.DIAG/BPM/XFELCPUDI55I1._SVR: set TINE_LOG on
/XFEL.DIAG/BPM/XFELCPUDI55I1._SVR: set TINE_GROUP to 2
/XFEL.DIAG/BPM/XFELCPUDI55I1._SVR: set TINERUN on
```

## Example #3

```
java -jar enabletine.jar TTF2.DIAG BLM
enable /TTF2.DIAG/BLM
server /TTF2.DIAG/BLM.1 is a valid entry (no action necessary)
server /TTF2.DIAG/BLM.2 is a valid entry (no action necessary)
server /TTF2.DIAG/BLM.3 is a valid entry (no action necessary)
REMOVE /TTF2.DIAG/BLM from the TINE ENS
REMOVE /TTF2.DIAG/BLM.4 from the TINE ENS
/TTF2.DIAG/BLM/VMEDIAG8._SVR: set TINE_FEC to TTFBLM4FEC
/TTF2.DIAG/BLM/VMEDIAG8._SVR: set TINE_LOG on
/TTF2.DIAG/BLM/VMEDIAG8._SVR: set TINE_GROUP to 4
/TTF2.DIAG/BLM/VMEDIAG8._SVR: set TINERUN on
ADD FEC TTFBLM4FEC and SERVER /TTF2.DIAG/BLM.4 to the TINE ENS
ADD SERVER /TTF2.DIAG/BLM.4 to group BLM with index 4
RE-EXPORT server group /TTF2.DIAG/BLM
```