

Logbook printing with TINE API calls

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Motivation

Would be nice to ...

- have a TINE API call to “print” to the logbook

- should use all of the features that a logbook can offer

- Author
- Header
- Severity
- Keyword
- Message
- Possible an image

The screenshot shows two browser windows. The top window displays a list of electronic logbooks hosted by the central electronic logbook server for the FLASH facility. The bottom window shows a 'Logbook Help' page with instructions for navigating and inserting text into the logbook.

DOOCS Logbook Help

This machine is hosting the following electronic logbooks:

Internal	External
ALPSII_optic_elog	ALPSIIelog.sec
ALPSIIelog	ALPSIIelog.sec
AMTTeleg	
BKRelog	
CALICElog	CALICElog.sec
CATHODElog	
CTAlog	
CompactSpectrometerlog	
DOOCSealog	DOOCSealog.sec
ExpHallelog	ExpHallelog.sec
FELPGMelog	FELPGMelog.sec
FLASH_LHeleg	
FLASH_SLog	
FLASHlog	FLASHlog.sec
FLC_TPClog	
FSChemietelog	
Eilog	Eilog.sec
Flash1_BL3elog	Flash1_BL3elog.sec
Flash1_BL3elog	Flash1_BL3elog.sec
Flash1_CAMPlog	Flash1_CAMPlog.sec

How to navigate:

- select a folder with the year from the tree view on the left side
- then select a folder with the week
- finally select one shift from the tree view

the three shifts per day are named with the date (MM.DD.) and

- M: Morning
- A: Afternoon
- N: Night

if the actual shift does not appear in the list: press SHIFT + Reload button (force a reload of the cache)

How to insert and change an item:

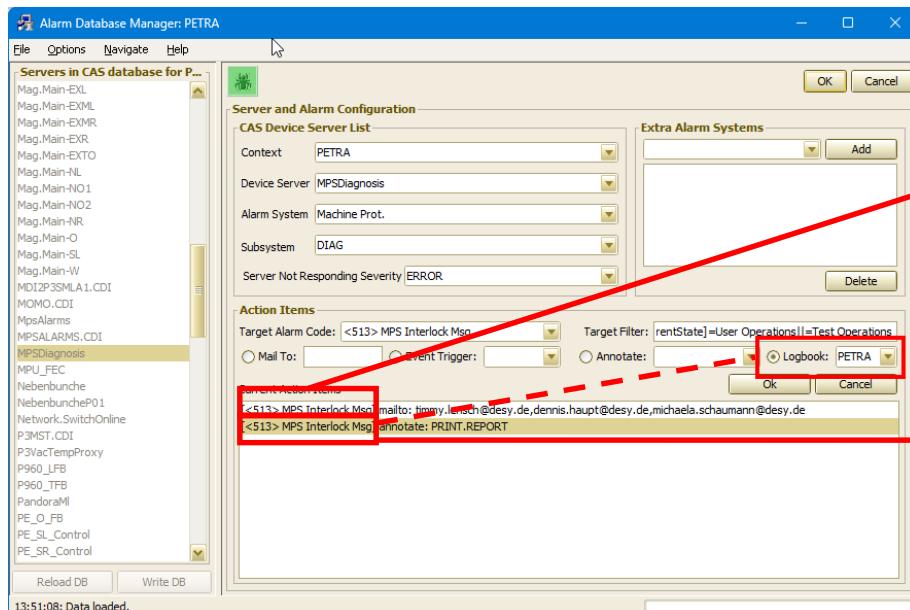
- select the icon to insert a new text
- or select the icon to change a text or meta info of a picture
- fill the form: add your name, set the severity, keywords and type the text in the text field
- set the date and time field: the logbook entries are sorted by this date and time
- the time should be specified like: 08:12 (the leading zero is important for the search!)
- do not specify a clock if needed
- click the "SAVE" or the "file" button
- click on the shift icon in the tree view to refresh the page
- rules for the SEVERITY selection in the form:

Severity	Description
NONE	for normal logbook entries
FATAL	for failures that prevent from operation of the machine for more than one hour
ERROR	for errors in a device subsystem program etc.
FIXED	error that has been fixed
WARN	for warnings to other users or operators (don't forget, check this...)

Proof of Concept

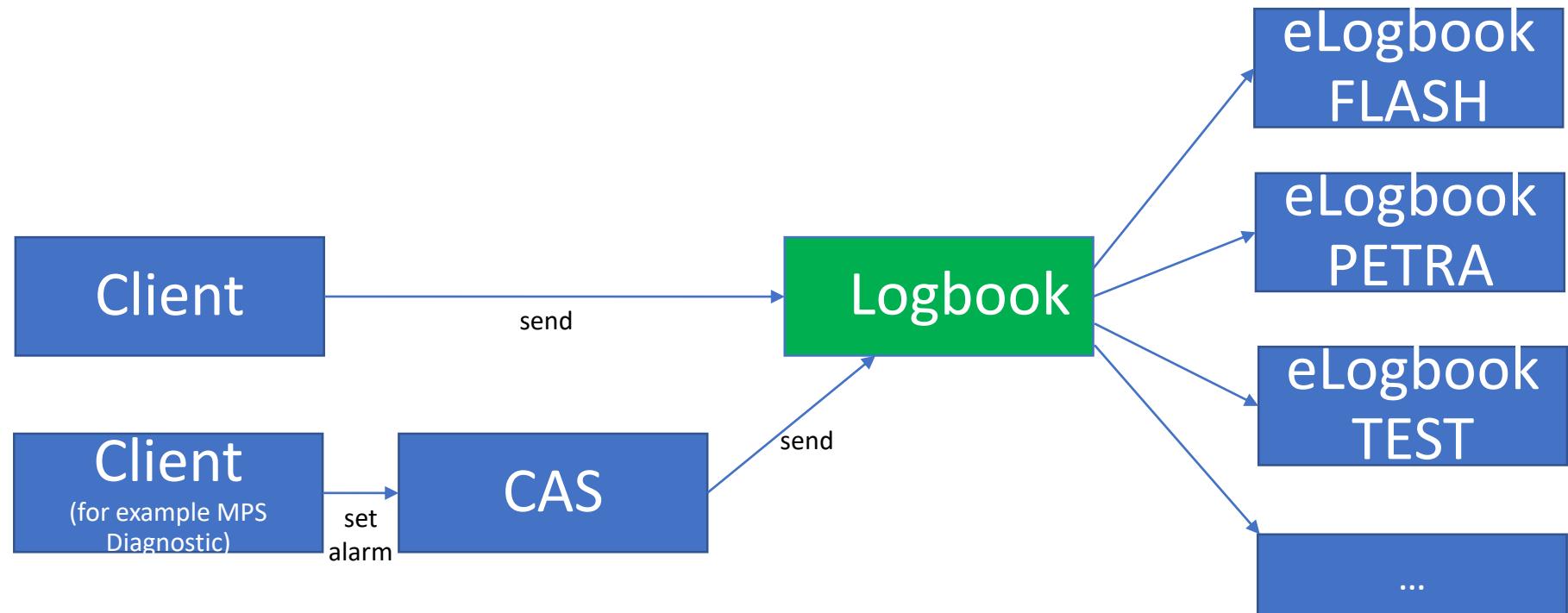
MPS Diagnostic server for PETRA

- When a beam loss event is triggered, it analysis the cause and sets an alarm to the CAS
- Central alarm system (CAS) is configured to inform a “magical something” to perform a logbook entry



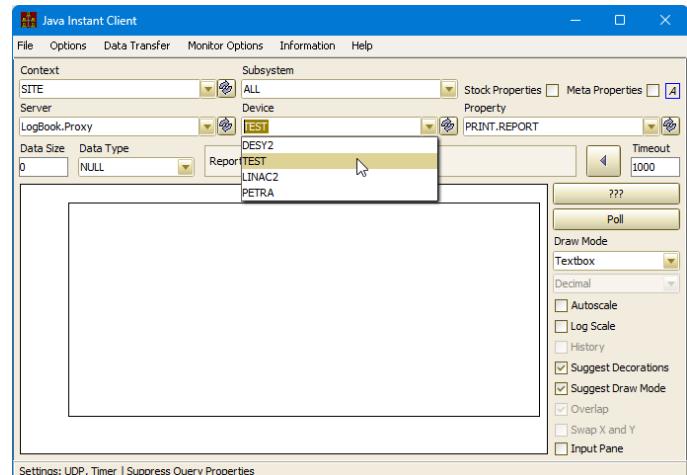
The screenshot shows the 'PETRA - Logbuch' window. It displays a log entry for a 'Strahlverlust' (beam loss) event. The entry details a beam loss event starting at 17:49 on Nov 23, 2024, with a duration of 0 seconds. The cause is listed as 'Dump durch BPM_NR_099 bei geschlossenem Undulator'. Below the entry, there is a detailed description of the event, mentioning frequency offsets and orbit correction programs. A red arrow points from the 'Strahlverlust' entry in the logbook back to the 'Logbook: PETRA' dropdown in the configuration dialog.

What is behind this ‘magical something’?



TINE Addresses

- Base part is an address from the TINE name space
 - /SITE/LogBook.Proxy/<queue>/PRINT.REPORT
Data type = {TEXT, TLogBookMsg (TINE structure)}
 - /SITE/LogBook.Proxy/<queue>/PRINT
Data type = {TEXT, TLogBookMsg, TAlarmLogBook (TINE structures)}
- <queue> = {LINAC2, DESY2, PETRA, TEST, ...}
 - Depends on the installed printer queues (ask admins or install it by yourself)
=> server will automatically configure the correct devices as an abstract end-point of the logbook
 - Windows: regex matches:
[\\\\adprint\[1-9\]\\d?\(\\.desy\\.de\)?\\\\w{3,10}\\d?log](\\\\adprint[1-9]\\d?(\\.desy\\.de)?\\\\w{3,10}\\d?log)
 - *nix: similar, but not implemented
- MPS Diagnostic: special parsing of the data type TEXT -> ../PRINT.REPORT



Example with image

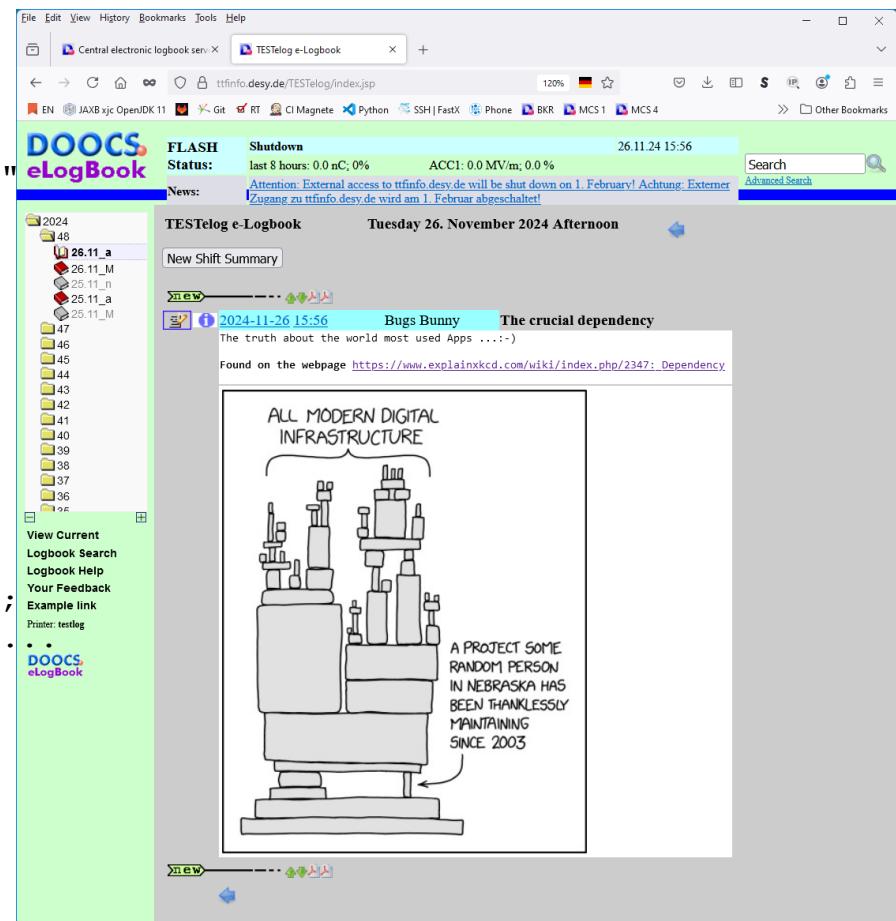
```
IMAGE img = new IMAGE();
byte[] image = encode(new File("H:/Projects/LogBookProxyServer/resources/images/
                                dependency.png"));
img.fillFrameBuffer(image, 0, 0, image.length);
IMAGE.FrameHeader header = img.new FrameHeader();
header.appendedFrameSize = image.length;
header.sourceFormat = IMAGE.IF_BASE64;
img setFrameHeader(header);

TDataType din =
    new TDataType(new TLogBookMsg(..., img));
TLink lnk = new Tlink("/SITE/LogBook.Proxy/TEST"
                      , "PRINT.REPORT"
                      , TDataType.nulltype
                      , din
                      , TAccess.CA_WRITE);
lnk.executeAndClose();

static byte[] encode(File file) throws ...
{
    if (!file.exists())
        throw new FileNotFoundException(...);
    byte[] bytes = new byte[(int) file.length()];
    try(FileInputStream fileInputStreamReader = .
    {
        fileInputStreamReader.read(bytes);
    }
    return Base64.getEncoder().encode(bytes);
}
```

Tested: PNG, TIFF, BMP, GIF (not animated!)

Will be added soon to the TINE lib!
(C and Java)



But be warned:

**it is preliminary and still needs some
improvements!**

