

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

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

The screenshot displays two browser windows from the DOOCS logbook server. The top window shows the main interface with the text: "This is the central electronic logbook server for the FLASH facility" and "This machine is hosting the following electronic logbooks:". Below this is a table listing logbooks categorized into Internal and External.

Internal	External
ALPSL_mptic_elog	ALPSHallelog-sec
ALPSHallelog	
AMTElog	
BKRelog	
CALICElog	CALICElog-sec
CATHODElog	
CTAlog	
CompactSpectrometerlog	
DOOCSlog	DOOCSlog-sec
ExpHallelog	ExpHallelog-sec
FELPGMelog	FELPGMelog-sec
FLASH_LHlog	
FLASH_SLlog	
FLASHlog	FLASHlog-sec
FLC-TPClog	
ESChemiselog	
ESlog	ESlog-sec
Flash1_BL2log	Flash1_BL2log-sec
Flash1_BL3log	Flash1_BL3log-sec
Flash1_CAMPlog	Flash1_CAMPlog-sec

The bottom window shows a "Logbook help" page with instructions on how to navigate and insert items. It includes a list of severity levels and their descriptions:

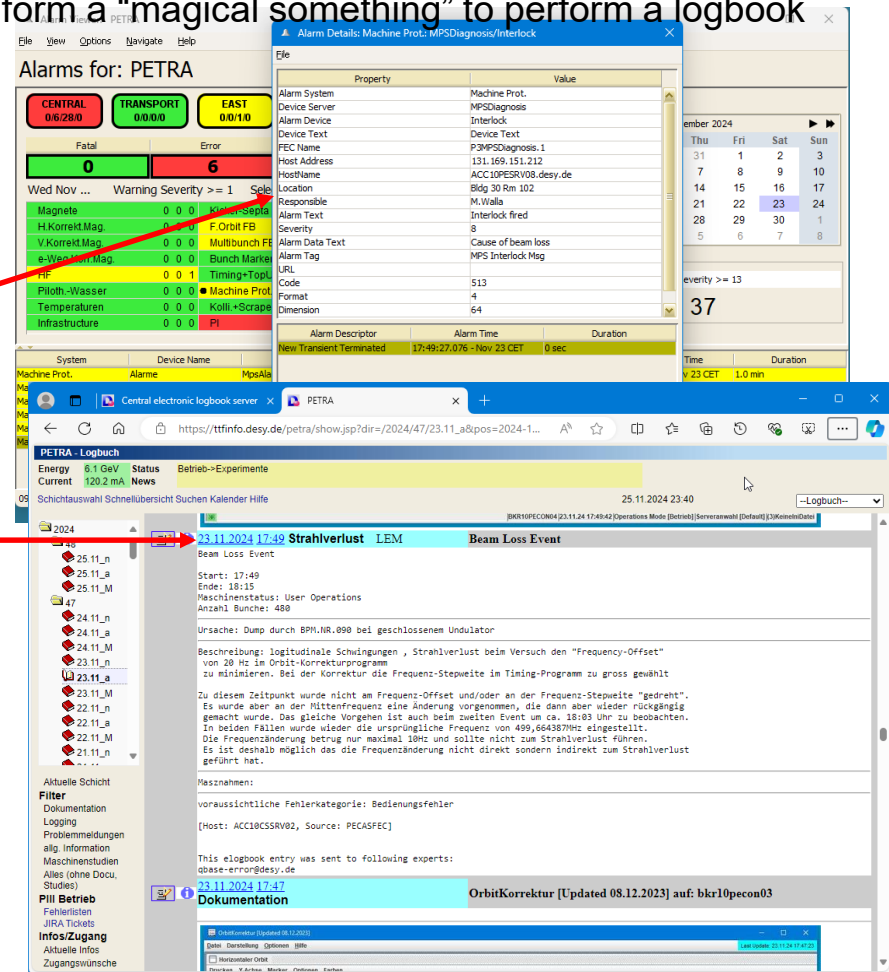
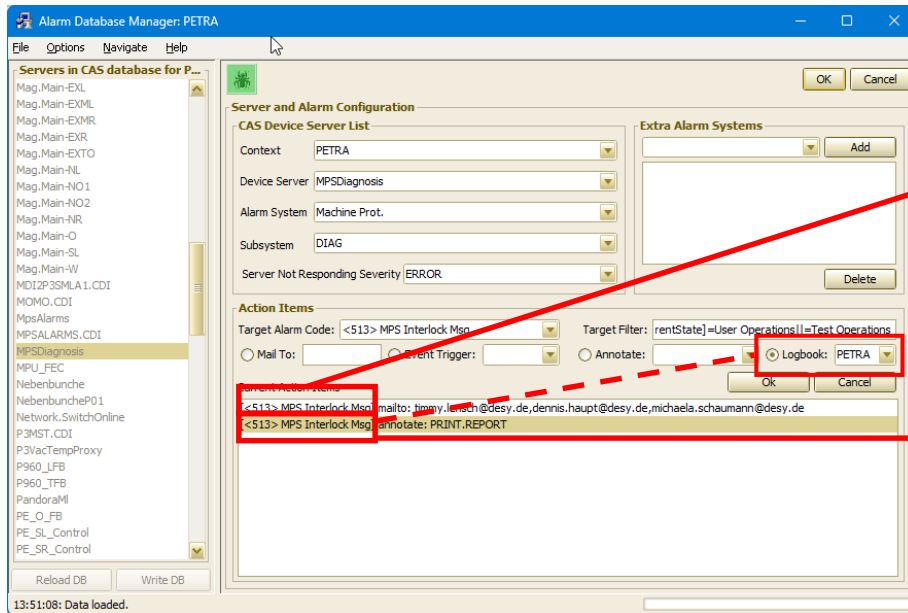
NONE	for normal logbook entries
FATAL	for failures that prevent from operation of the machine for more than one hour
ERROR	for errors in a device/subsystem program etc.
FIXED	error that has been fixed
WARN	for warnings to other users or operators (don't forget, check this...)

Proof of Concept

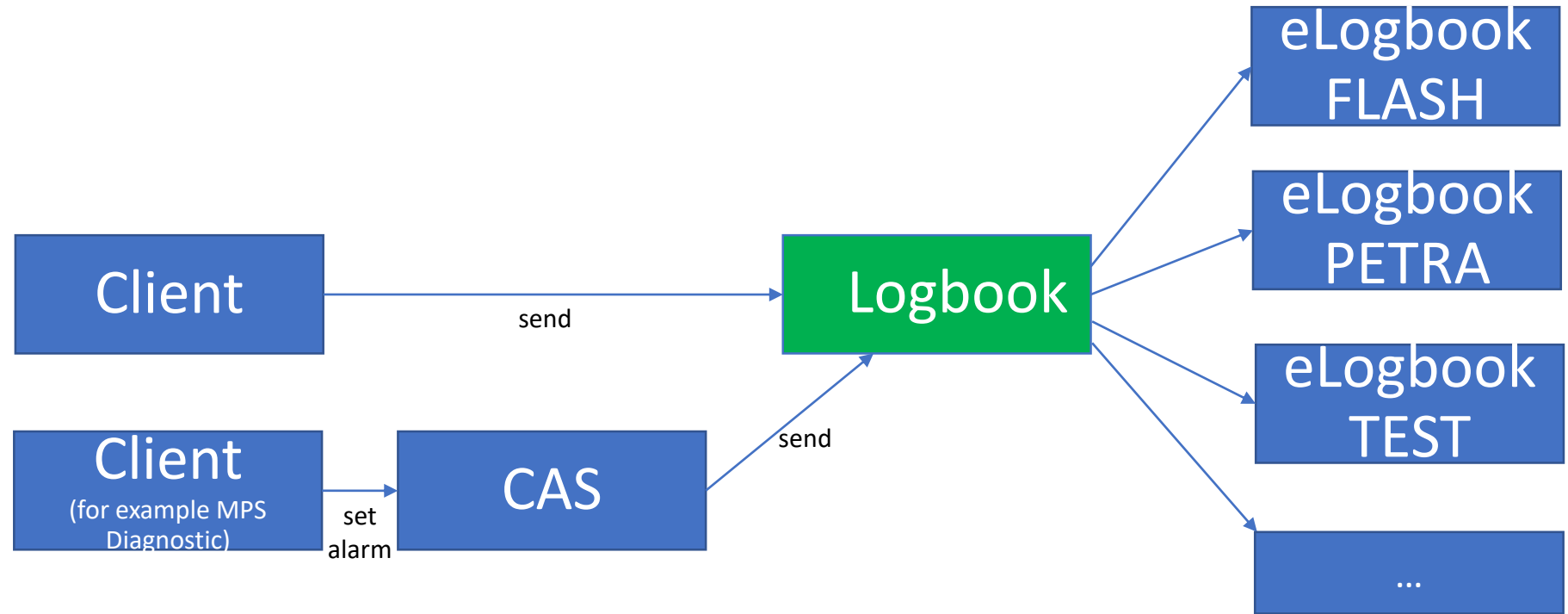
- MPS Diagnostic server for PETRA

- 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

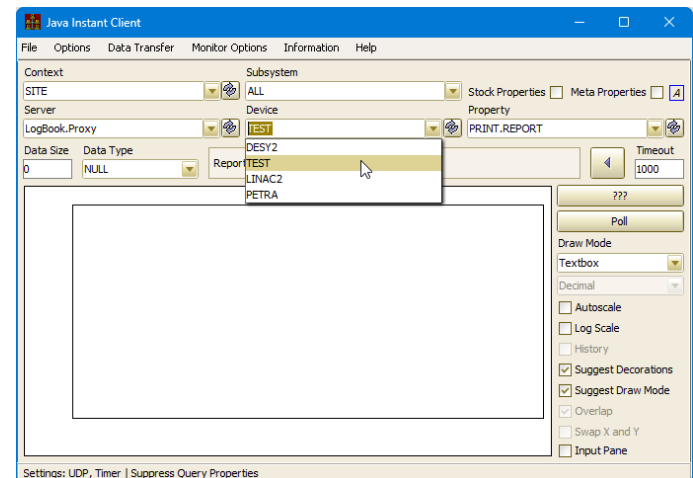


What is behind this 'magical something'?



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](#)
 - *nix: similar, but not implemented
- MPS Diagnostic: special parsing of the data type TEXT -> ../PRINT.REPORT



Example with image

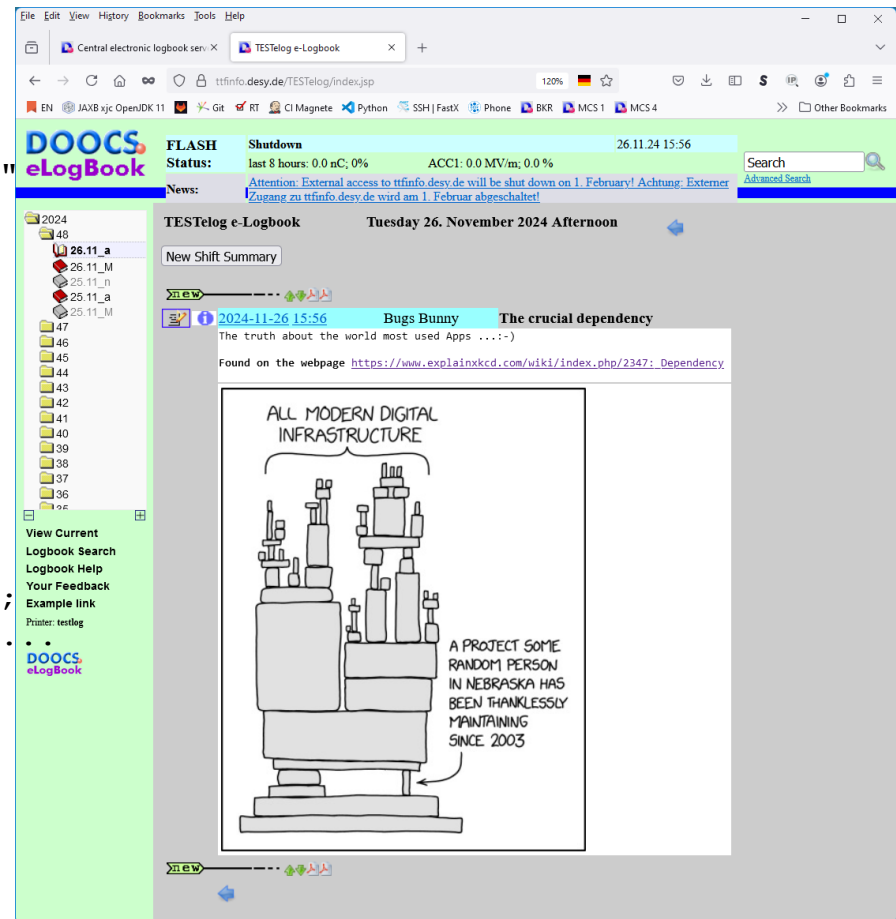
```
IMAGE img = new IMAGE();
byte[] image = encode(new File("H:/Projects/LogBookProxyServer/resources/images/
                                dependency.png"));
img.fillFrameBuffer(image, 0, 0, image.length);
IMAGE.FrameHeader header = img.new FrameHeader();
header.appendedFrameSize = image.length;
header.sourceFormat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

