



I-SYST Debugging and Flashing Firmware with Eclipse IDE User Manual

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MANUAL GUIDE Firmware debugging with Eclipse Version 1.0

Revision history

Version	Date	Note	Contributor(s)	Approver
1	12 May 2021	Initial version	Nguyen Hoang Hoan	Nguyen Hoang Hoan

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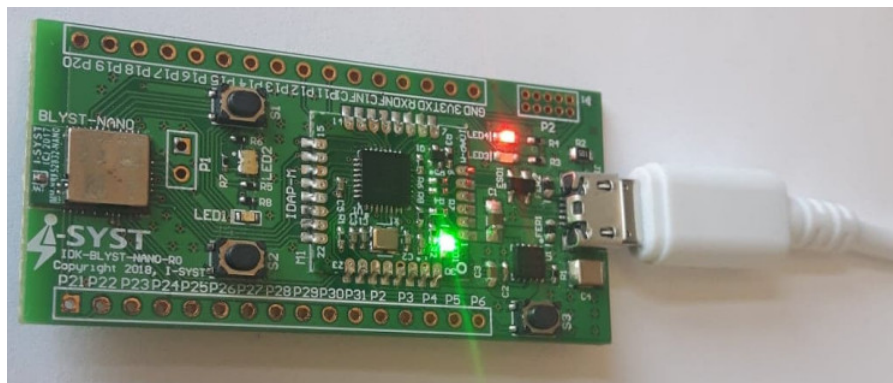
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Introduction

This document shows step-by-step how to debug and flash the firmware with Eclipse IDE and Iosonata which was installed in the Installation guide “Eclipse IDE in firmware development with IOsonata”.

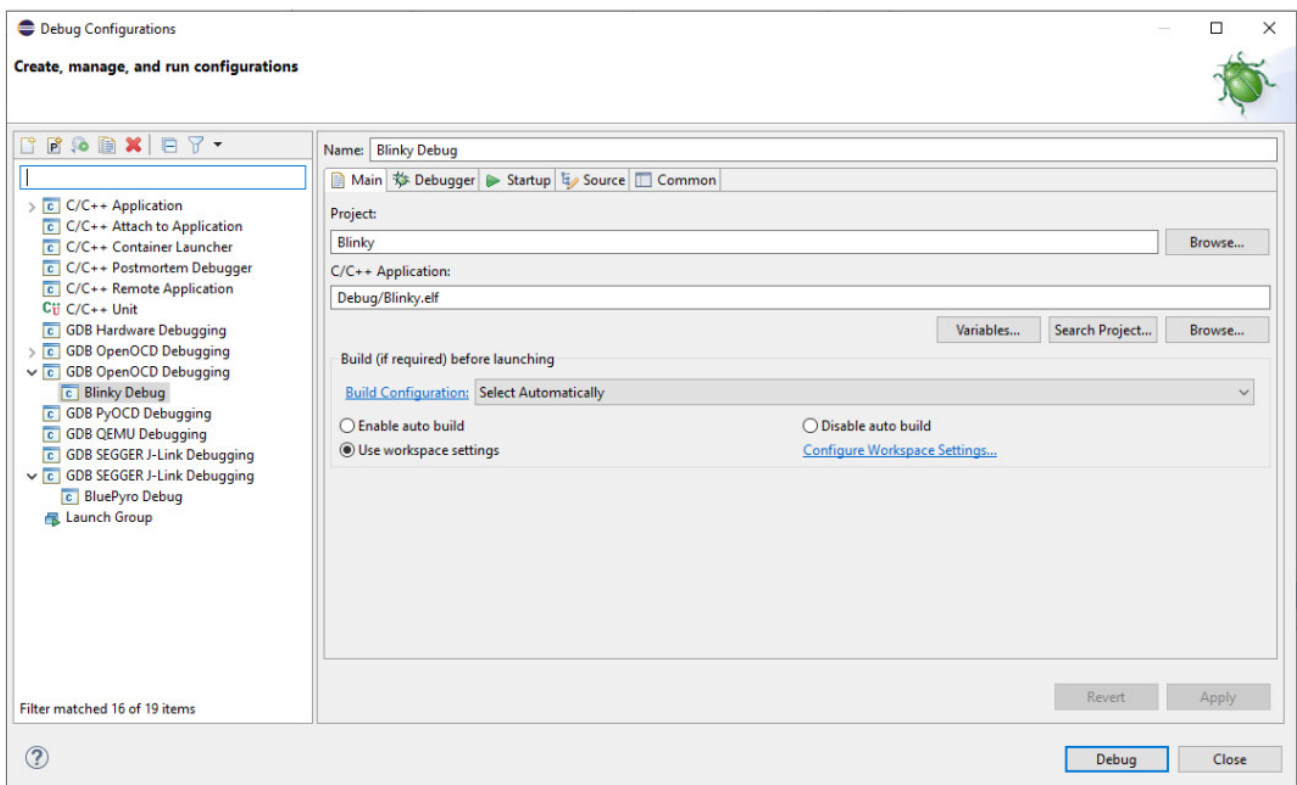
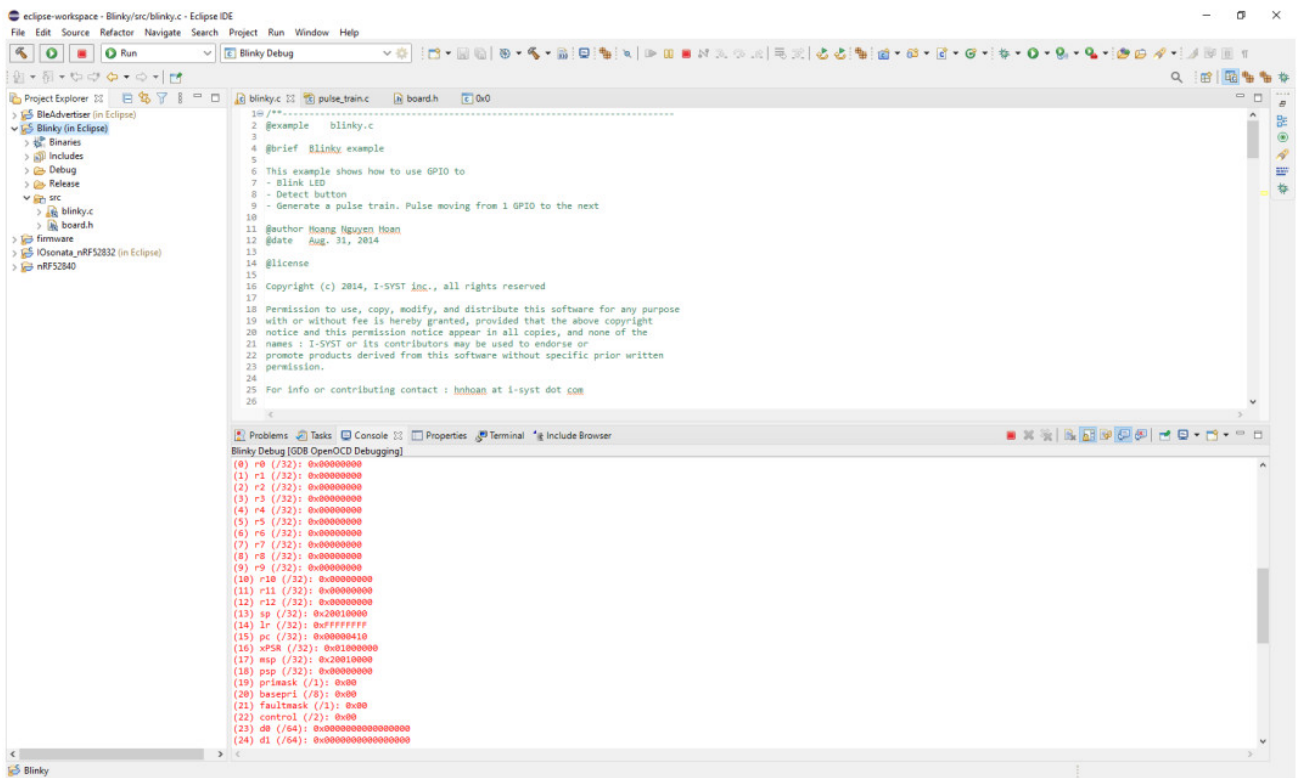
Debugging and Flashing Firmware with Eclipse IDE



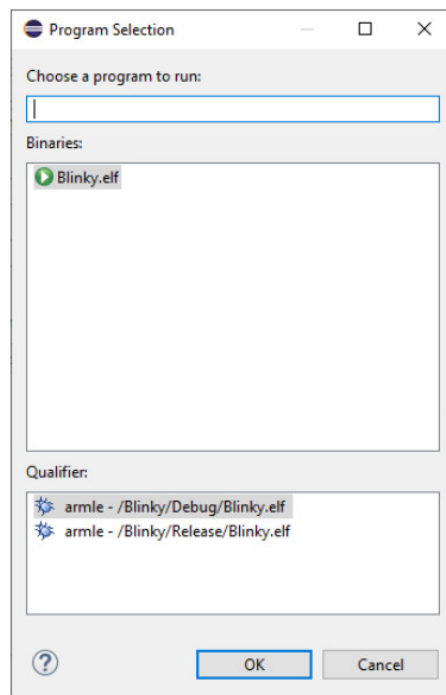
Connect IDK-BLYST-NANO to your computer.

Debugging Firmware with OpenODC

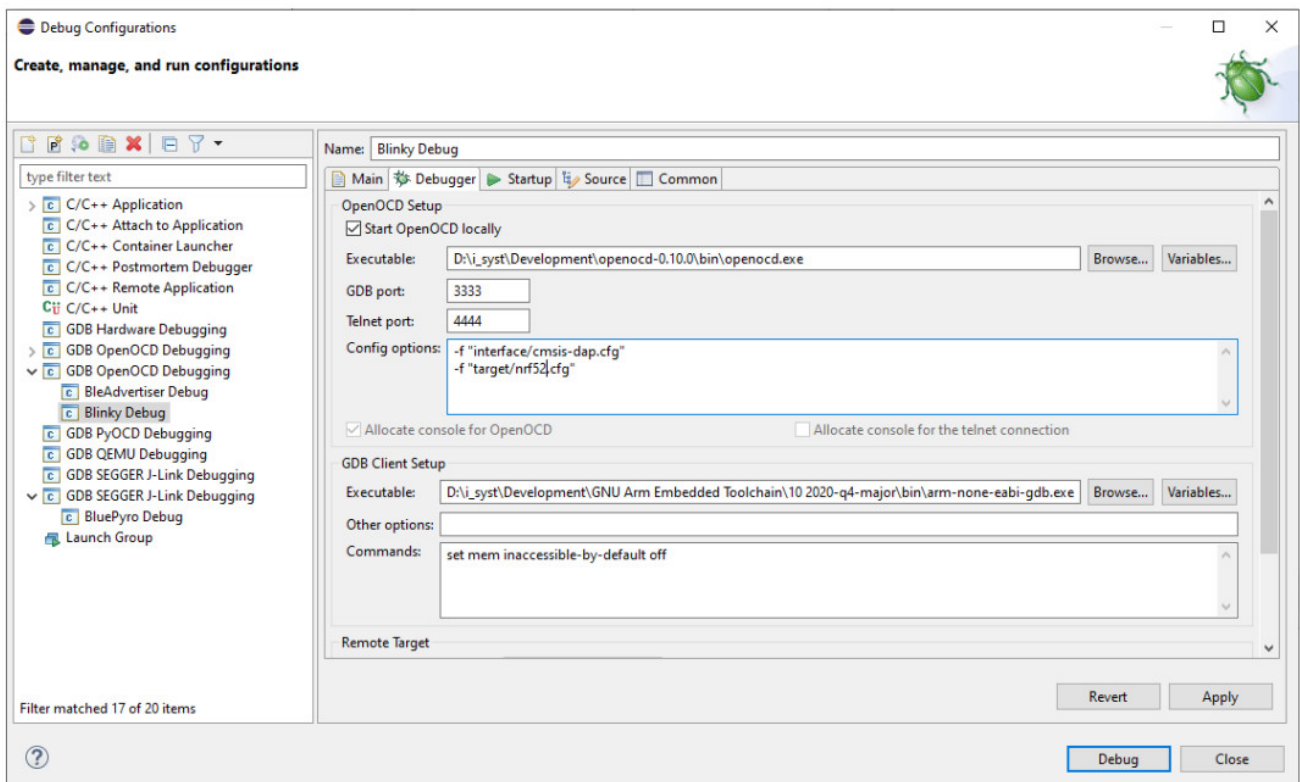
We will start with Blinky Project as an example.
Select Blinky Project, Right-click select Debug Configuration



Double click on GDB OpenOCD Debugging
In the Main tab, at C/C++ Application click Search Project



Select Blinky. elf



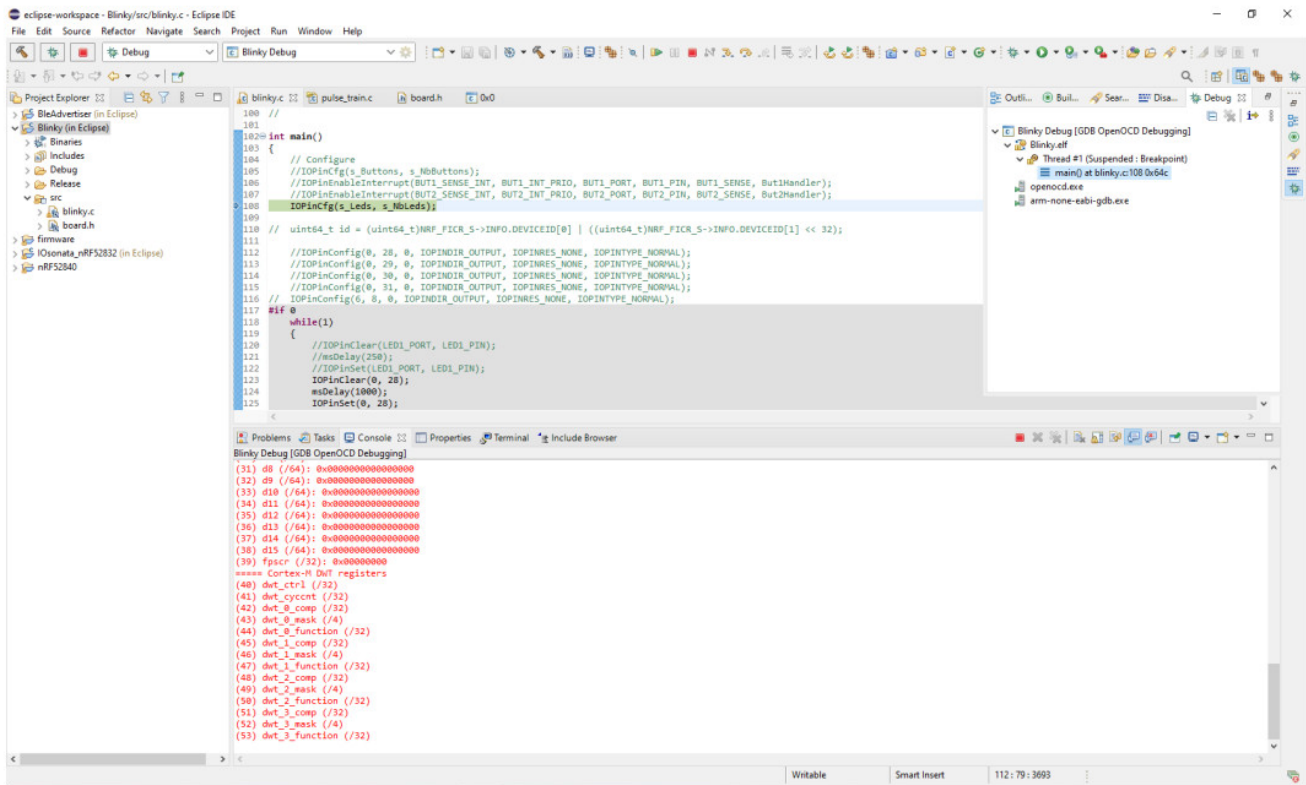
In the Debugger tab, set Config options

-f "interface/cmsis-dap.cfg"

-f "target/nrf52.cfg"

Browse the OpenOCD executable file and ARM GDB executable file.

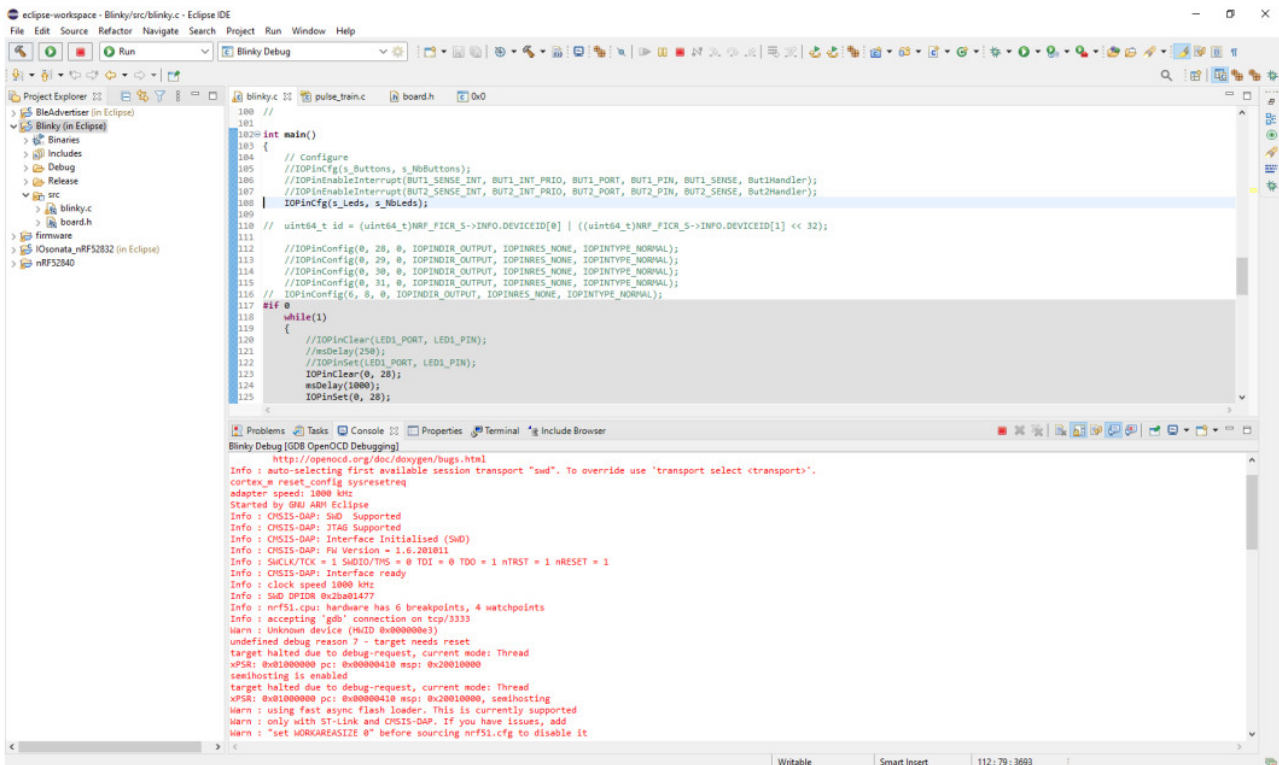
Click Debug



After you start the debugger, it will stop at main(). Now you can debug the firmware by clicking the step button (F5, F6) to trace your source code line by line.

Flashing Firmware

Click the Run button to run the firmware on your device





Debugging and Flashing BleAdvertiser Firmware

BleAdvertiser requires NRF SDK softdevice components so we have to flash softdevice first. Use IDAPnRFProg to flash NRF softdevice using IDAP-Link. Download here: [IDAP-Link/M – Browse/Windows at SourceForge.net](#)

Run IDAPnRFProg by following command line:

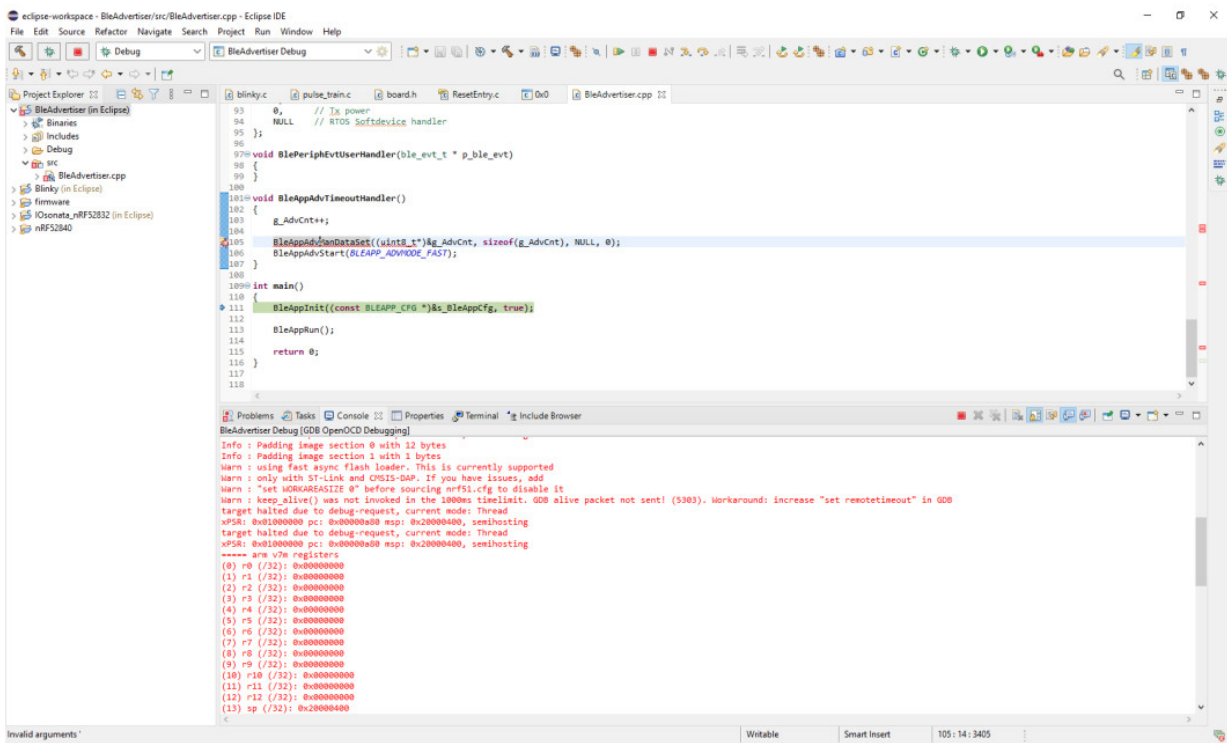
```
$.\\IDAPnRFProg.exe
```

```
D:\\i_syst\\external\\nRF5_SDK\\components\\softdevice\\s132\\hex\\s132_nrf52_7.2.0_softdevice.hex
```


```
IDAPnRFProg Ver. 1.8.201221
Copyright 2014-2020, I-SYST inc. All rights reserved
Found IDAP-Link/M - S/N : 4030318000216, Firmware : 1.6.201011
Target device found : 1
IDAP-Link/M-4030318000216 : nRF52832-CIAAB0, Rev.-1, HWID = 0x52832, DEVID =
0x5A6E40192D427DB2
IDAP-Link/M-4030318000216 : Flash size = 524288, Ram size = 65536
IDAP-Link/M-4030318000216 : Device address = 0x237DE024308F
IDAP-Link/M-4030318000216 : Erase all
```

```
IDAP-Link/M-4030318000216 : Blank checking...
IDAP-Link/M-4030318000216 : Chip erased
IDAP-Link/M-4030318000216 : Programming 153964 bytes...
IDAP-Link/M-4030318000216 : Programmed 150 KB in 8.696 sec at rate 17.290 KB/s
IDAP-Link/M-4030318000216 : Verifying...
IDAP-Link/M-4030318000216 : Programming succeeded.
Total programmed 1 nRF5x devices in 11.177 sec, 300 KB R/W transfered, rate =
26.840 KB/s
```

After flashing Bluetooth Low Energy Module in IDK-BLYST-NANO with IDAPnRFProg, we can now debug and flash firmware BleAdvertiser on IDK-BLYST-NANO



Documents / Resources

 <p>MANUAL GUIDE Firmware debugging with Eclipse Version 1.0</p>	<p>I-SYST Debugging and Flashing Firmware with Eclipse IDE [pdf] User Manual</p> <p>Debugging and Flashing Firmware with Eclipse IDE</p>
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References

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