EPICS Collaboration Meeting June 2019 EPICS IOC EMBEDDED IN ANDROID APPLICATION

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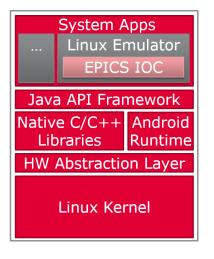
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IOC target platforms:

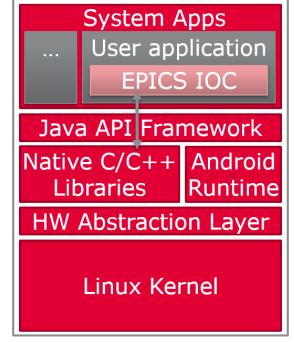
- GNU/Linux
- MacOS
- MS Windows
- RTEMS
- VxWorks
- Android?

How to run an IOC in Android:

- Third-party applications emulating a Linux environment
- Running on parallel both Linux and Android
- IOC embedded in Android Application









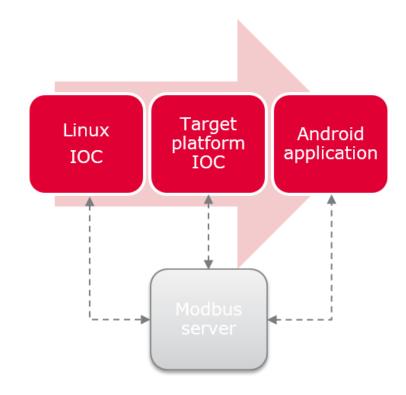
MODB

Environment

- Octa-Core board with ARM Cortex A-53 processor
- Android 5.1

Development steps:

- Set-up the IOC in Linux environment
- Test as it works as expected
- Compile it for target
- Develop the Android application
- Include the compiled IOC in the Android application
- Provide the Android application with IOC features:
 - Start/Stop
 - IOC Shell
 - IOC commands





PROTOTYPE IOC MODBUS



Initial state



IOC running successfully



IOC MODBUS



help command



dbl command



PROTOTYPE IOC MODBUS

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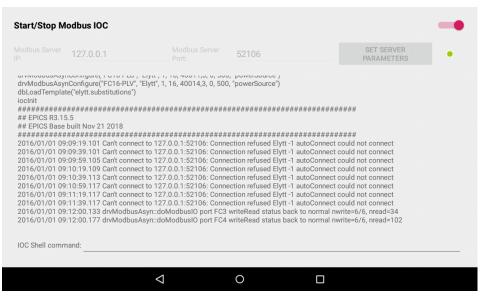
No server



Connection refused



PROTOTYPE **IOC MODBUS**



Connection back to normal status



IOC Stopped



- Upgraded version supported by Elytt Energy
 Neureus Technologies
- EPOWERSYS: high stability power converters
- 11 units of standard 300A, 20V for quadrupole magnets in the MEBT section of the Linac at European Spallation Source











