EPICS Collaboration Meeting June 2019

EPICS IOC EMBEDDED IN ANDROID APPLICATION

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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
MODBUS IOC IN ANDROID

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
Start/Stop Modbus IOC

**Initial state**

Modbus Server IP: 127.0.0.1
Modbus Server Port: 52106

**IOC running successfully**

Modbus Server IP: 102.168.1.2
Modbus Server Port: 52106

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# IOC MODBUS

PROTOTYPE

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Start/Stop Modbus IOC

Start/Stop Modbus IOC

IOC Shell command

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Initial state

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IOC running successfully

IOC Shell command

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PROTOTYPE

IOC MODBUS

Start/Stop Modbus IOC

Modbus Server IP: 192.168.1.2
Modbus Server Port: 52106

SET SERVER PARAMETERS

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help command

dbl command
PROTOTYPE

IOC MODBUS

Start/Stop Modbus IOC

Start/Stop Modbus IOC

Start/Stop Modbus IOC

No server

Connection refused
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- 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
THANK YOU