DevOpsSchool

Lets Learn, Share & Practice DevOps

Linux Device Driver Training

Curriculum 3 Days

Day - 1

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    - I2C Protocol overview
    - Understanding the AM335x specific I2C registers
    - Understanding the flow for transferring the single byte
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    - Writing a framework independent I2C controller driver
    - Develop the logic for transferring a single bytes on the I2C bus
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    - Sending the multiple bytes over the I2C bus
    - Interfacing with EEPROM
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    - Enhance the driver to Transfer the multiple bytes
    - Enhance the driver to perform read & write operations on EEPROM

Day - 2

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    - Linux Device Model & its goals
    - Support for non-enumerable devices
    - Need for Platform Drivers & Devices
    - Transitioning from Platform device to the DTB
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    - Write a platform Driver & Device
    - Enhance the driver to add the support for platform driver
    - Enhance the driver to use DTB
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    - Understanding the Linux I2C Framework – I2C Adapter, Client and Algorithm
    - Understanding the Interconnection between the different Framework components
    - Understanding the Adapter and Client registration and probe flow
    - Writing a dummy I2C Adapter and Client driver
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    - Writing a dummy Adapter and Client driver
    - Add the node for dummy Adapter & Client in DTB

Day - 3

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  - Integrating platform specific controller driver
  - Integrating the EEPROM client driver
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  - Making suitable entries in DTB for adapter & client driver
  - Integrating the low level driver with I2C framework
  - Integrating the Client and Adapter with Device tree framework
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  - Understanding the need for interrupts
  - Understanding the need for hardware FIFO
  - Registering & Handling the Hardware interrupts
  - Handling the data in bottom halves
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  - Integrate ISR & the bottom halaves