

#### **Final Examen**



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#### Optimize boot time & size for a Yocto Project Linux distribution

- Reduce busybox functionalities support.
- Minimize u-boot support and boot time.
- Use system and system-services support not other init options
- Minimize Linux kernel configuration. Load modules in rootfs.
- Configure kernel to not reinitialize time counting.
- > Enable wayland and disable X11 support.
- Resulting output should be able to run a graphical application similar to glxgears.
- Boot time required under 10 sec. Target machine: qemuarm
- Use case: boot the target and check the time at which glxgears appears.
- Bonus: Create init-graphics app which is executed at system initialization, launches the graphical application and prints the exact time at which the graphics started.

### **MPSIT**

### Exam first part: questions

- 1. Angstrom is:
  - a. A build engine
  - b. A build system
  - c. A proprietary provided toolchain
- 2. EGCS is responsible for:
  - a. Merging early GCC forks with great success
  - b. The existence of FSF
  - c. Developing the first libc implementation on Linux
- 3. LAVA means:
  - a. Linux Automation and Virtualization Architecture
  - b. Linaro Architecture for Validation and Automation
  - c. Linaro Automation and Validation Architecture
- 4. ADT represents:
  - a. The Eclipse IDE support
  - b. The application development toolchain
  - c. The application development toolkit
- 5. Autobuilder represents:
  - a. Public QA and testing build interface
  - b. Web based Yocto Project interface
  - c. Graphical interface for the Yocto Project

- 6. Pykickstarter is part of:
  - a. Swabber
  - b. Wic
  - c. Matchbox
- 7. Hackbench is:
  - a. A testing framework for NFV support
  - b. A security toolkit used for binary analysis
  - c. A program part of Linux Real-Time Benchmark Framework
  - 8. Which element is a LSM:
    - a. DAC
    - b. RealFeel
    - c. TOMOYO
- 9. OpenFlow is a mechanism used for:
  - a. Information security
  - b. Communication between the SDN defined planes
  - c. NFS standard compliance
- > 10. CGL reference layer in Yocto Project is:
  - a. meta-cgl
  - b. meta-cgl-demo
  - c. meta-cgl-common



- 1. Describe what is poky
- 2. Describe autotools and its components
- 3. Describe Qemu and its role in the Yocto Project
- 4. Describe Yocto Project profiling and tracing tools
- 5. Describe the devtool add workflow
- 6. Describe LAVA architecture
- 7. Describe what the PREEMPT\_RT transformation process add to the Linux kernel
- 8. Describe pax-utils package
- 9. Describe why SDN and NFV represent a good idea
- **10**. Describe Yocto Project AGL features

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