

# Training evaluation report

**Training session:** Embedded Linux Training  
**Training dates:** May 11-15, 2009 (5 days)  
**Country:** Slovenia

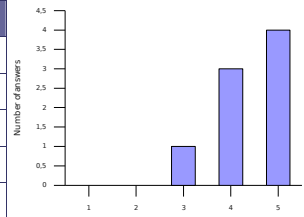
**Number of participants:** 8  
**Returned evaluation forms:** 8

Thank you for having organized a Free Electrons training session!  
 Here is a wrap-up of evaluations from participants.

## Learning objectives

1. How well did the course meet your learning objectives?

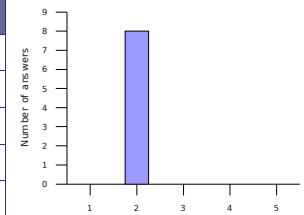
Rating	Answers	Description
1	0	Not met
2	0	
3	1	
4	3	
5	4	Fully met



4 - Maybe a little too much time taken to download tools. A USB key with them would help.

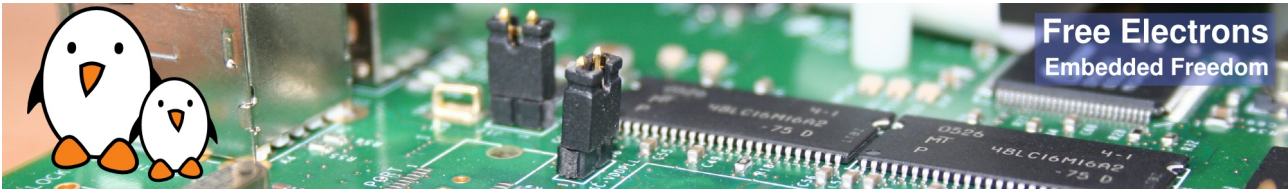
2. How was the duration of the course?

Rating	Answers	Description
1	0	Too short. Couldn't learn enough in such a short time.
2	8	A little too short
3	0	Just fine
4	0	A little too long
5	0	Definitely too long. The concepts could be learned in much less time.



2 - Two weeks would be more suitable for all the parts.

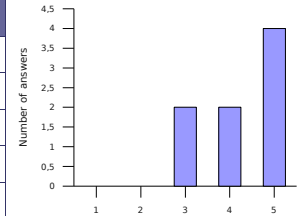
2 - 2 days more!



## Lecture materials

### 3. How helpful were the lecture materials?

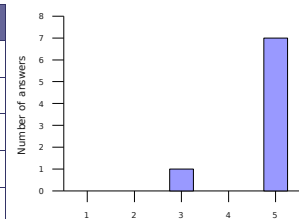
Rating	Answers	Description
1	0	Not helpful. Made things more difficult to learn and understand.
2	0	
3	2	
4	2	
5	4	Really made things easier to understand and learn.



5 - Good starting point and reference

### 4. Will you recommend these materials to others?

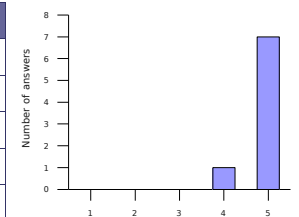
Rating	Answers	Description
1	0	No. Not helpful without following the sessions.
2	0	
3	1	
4	0	
5	7	Definitely



5 - Add command syntax before exact example for use (explain arguments)

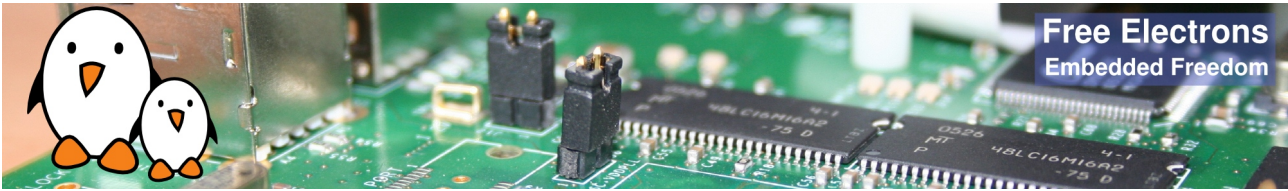
### 5. If you have Linux project opportunities, will you use these materials again?

Rating	Answers	Description
1	0	No. I will look for other sources of information.
2	0	
3	0	
4	1	
5	7	Definitely



5 - Really useful materials, lots of hints and links to docs and web pages.

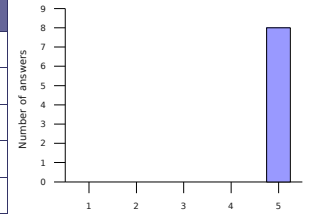
5 - And I will look for other sources.



## Instructor added value

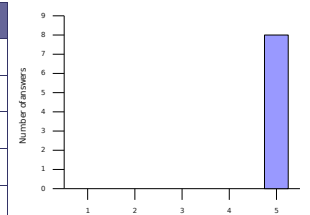
6. How knowledgeable was the instructor?

Rating	Answers	Description
1	0	Not enough for my own technical experience.
2	0	
3	0	
4	0	
5	8	More than enough for my own experience.



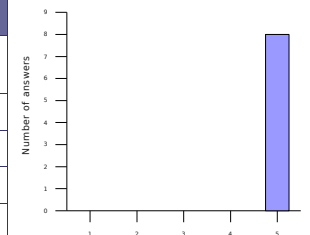
7. Did instructor oral explanations add value to the lecture materials?

Rating	Answers	Description
1	0	No added value to reading the materials.
2	0	
3	0	
4	0	
5	8	Yes. The instructor really made very useful oral explanations.



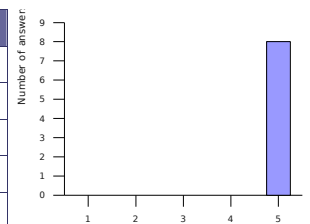
8. How well did the instructor answer questions from the audience?

Rating	Answers	Description
1	0	Poorly. Didn't try to understand the questions well or rarely managed to find useful answers.
2	0	
3	0	
4	0	
5	8	Answered very well to questions from the audience

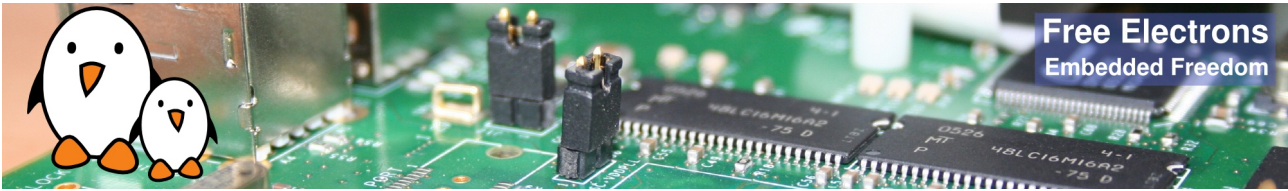


9. Was the instructor helpful with practical labs?

Rating	Answers	Description
1	0	No, not enough available and helpful during the labs.
2	0	
3	0	
4	0	
5	8	Yes. The instructor definitely helped to make labs a learning opportunity.



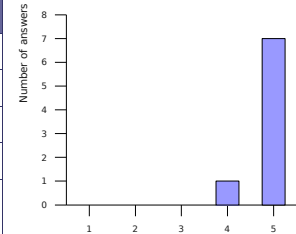
5 - Maybe a little more caution with system commands than can harm computer software and hardware.



## Training labs

### 10. How useful were the training labs?

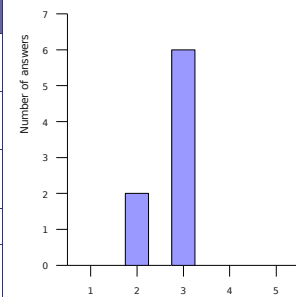
Rating	Answers	Description
1	0	Not useful. Didn't add significant value to the lectures.
2	0	
3	0	
4	1	
5	7	Very useful. Helped to highlight things not understood and build useful experience.



- 5 - The labs could be written more precisely
- 5 - Gave me good insight into Linux.
- 5 - They should be more detailed with some steps explained more in depth before taking them.

### 11. How difficult were the training labs?

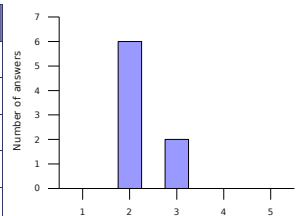
Rating	Answers	Description
1	0	Too difficult. Didn't help or even discouraged a beginner to get more familiar with the tools and concepts.
2	2	A bit too difficult. Would be better if the lab instructions gave a bit more details about explanations.
3	6	Just fine. Prompted me to look for answers, get my own experience and find my own solutions.
4	0	Too easy for my own technical level.
5	0	Too easy for everyone. Should challenge participants more and help everyone to practice on real issues.



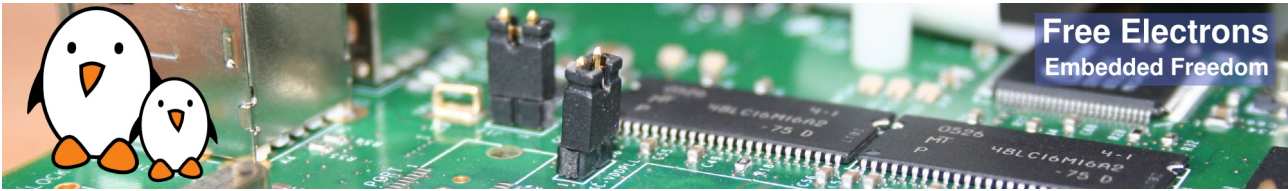
- 3 - Maybe by adding a cheat sheet with all exact commands for certain labs would be helpful, if someone gets stuck or is behind others.
- 3 - The tempo was too fast. The instructions could have been better on how to proceed during the lab.

### 12. Was enough time dedicated to the practical labs?

Rating	Answers	Description
1	0	No. More practice is needed
2	6	A little bit more time would help.
3	2	Just fine
4	0	A little bit less time would be enough.
5	0	Don't need to spend so much time on labs. On-the-job practice is best



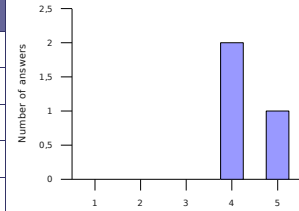
- 3 - A fixed amount of time should be given for a lab. If the lab is not finished by all the attendees the instructor should take over.



## Training conditions

13. How do you rate training conditions (room size, equipment, environment...)?

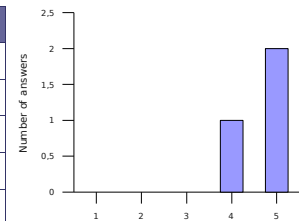
Rating	Answers	Description
1	0	Poor.
2	0	
3	0	
4	2	
5	1	Very good.



4 - Maybe better air conditioning, because of bad air due to lots of computers running

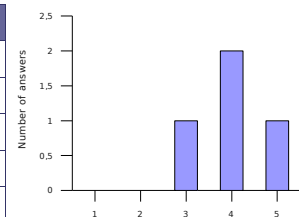
14. How do you rate the training equipment (mainly computers)?

Rating	Answers	Description
1	0	Poor. Not powerful enough to execute practical labs.
2	0	
3	0	
4	1	
5	2	Very good. Very little time waiting, more time learning.

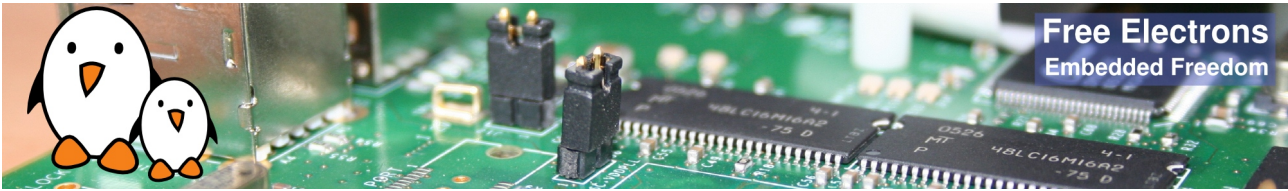


15. How well was the course organized (program, registration, meeting the schedule...)?

Rating	Answers	Description
1	0	Not well
2	0	
3	1	
4	2	
5	1	Very well



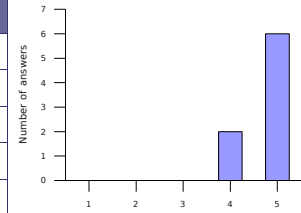
3 - The schedule was too optimistic and we had to skip some of the labs.



## Overall rating

16. How much did you learn?

Rating	Answers	Description
1	0	Definitely not much
2	0	
3	0	
4	2	
5	6	Definitely more than I expected.

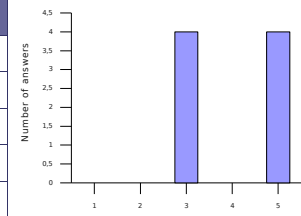


5 - I've already attended a few "eLinux" seminars. This one is for most better than others. (CALO)

5 - Had only basic experience with Linux only as a user.

17. How useful will this course be in your daily job?

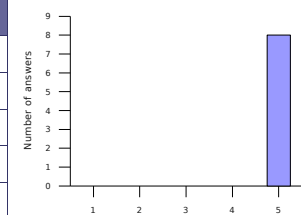
Rating	Answers	Description
1	0	Not useful.
2	0	
3	4	
4	0	
5	4	Very useful. Will make my job easier and more productive.

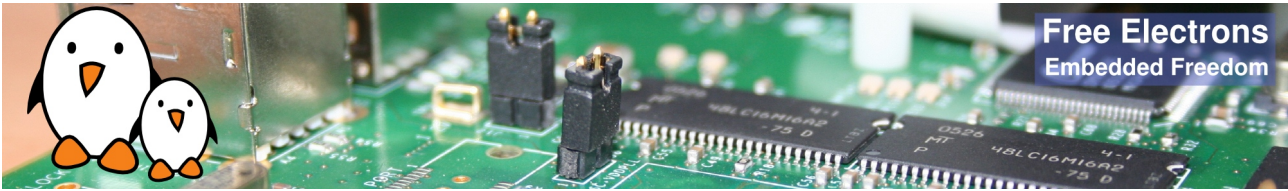


3 - Depends if any future project will use Linux

18. Would you recommend this course to others?

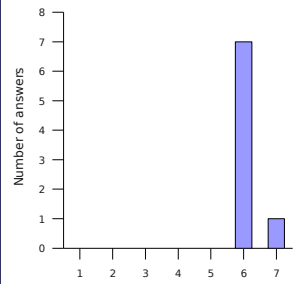
Rating	Answers	Description
1	0	No.
2	0	
3	0	
4	0	
5	8	Yes, definitely





### 19. Overall rating

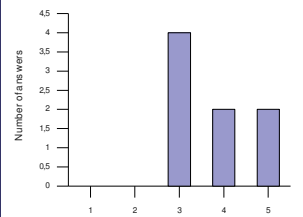
Rating	Answers	Description
1	0	Very disappointing
2	0	Disappointing
3	0	A little bit disappointing
4	0	OK
5	0	Pretty good
6	7	Very good
7	1	Excellent



7 - Only thing that is needed, is a little bit more time for labs.

### 20. An extra session?

Rating	Answers	Description
1	0	No
2	0	
3	4	Why not?
4	2	
5	2	Yes, definitely



4 - If if needed prior to working on a real project.  
 5 - Kernel driver programming.

### Number of votes for topics in an extra session

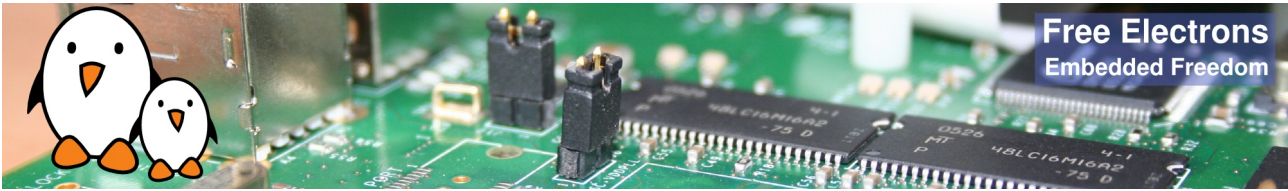
Understanding the Linux kernel	Linux device driver development	Linux board support packages	Embedded system development	Miscellaneous needs
Process management	USB device drivers	3 Processor specific code	2 Lightweight tools	2 Java
Filesystem implementation	USB host drivers	3 Board specific code	3 Embedded system development tools	1 Real-time
Memory management	PCI drivers	3 Board specific interrupt support code	2 Cross-compiling toolchains	1 Audio
Scheduling implementation	Network drivers	3 DMA support	2 Debugging solutions	1 Video
Bootstrap code	Block drivers	3 Bootloader development	2 Software development tools	1 uClinux
	Flash drivers	3	Programming with graphical libraries	2 Voice over IP
	I2S drivers	3	POSIX API	1
	Input drivers	4	System optimization	1
	Sound drivers	3	Root filesystem creation	1
	Video drivers	3		

### Free Electrons comments

Thanks to the (sometimes oral) suggestions from the audience, we will improve future training sessions...

- By warning people about mistakes which could destroy valuable data on their computers, as it happened in this session. We immediately added big warnings in the corresponding slides and lab instructions. We also added a prerequisite in our course descriptions to backup computers when they contain valuable data.
- By accelerating tool and source downloads. Our idea is to use the trainer's laptop as a caching web proxy. This would be better than bringing a USB disk with all downloads, because people would still download things in the same way as they would in real life.
- By detailing the options of commands whenever this can be useful.
- By offering a cheat sheet summarizing the most useful commands to remember in embedded Linux system development, a bit like the one we offer about Unix commands.
- By making sure that lab instructions are explicit enough. We still want to avoid step by step instructions though. When details are given in the slides, we want participants to get back to the right slides and find solutions by themselves. So, we will make sure that what to do is very well explained, but not how to do it (again, only when all the details are given in the lectures).
- By leaving more time for labs, by skipping minor details in lectures.
- By keeping everyone busy during labs. People who progress faster should still have challenging things to achieve. It would be up to the trainer to stop each lab, when everyone has completed the mandatory steps.





## Life after training

After this training session, do not hesitate to get back to us! Here are things we could do to support you in your embedded Linux projects:

- More training: you could be interested in our 5 day course of the Linux kernel and device driver development. See <http://free-electrons.com/training/kernel> for details.
- If some people in your organization missed the session, and you don't have enough requests to organize another session, they can choose to go to our public training sessions. See <http://free-electrons.com/training/sessions> for details.
- Linux kernel porting. Adding Linux support to your boards, or supporting you in doing this.
- Having your board support code merged in mainstream sources (Linux, U-boot), so that your sources are maintained by the community. This also means for customers that your boards will be supported for a long time.
- System development and integration. Creating demos and prototypes.
- System optimization: improving system performance and features (power consumption, speed, size...)
- Investigating and fixing nasty bugs that you don't have time to cope with by yourselves.

See <http://free-electrons.com/services> for details.