Open Source Automation Development Lab (OSADL) eG

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Collaborative Project

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Real-time capabilities of the mainline Linux kernel – also known as PREEMPT_RT patches – have a long and predominantly successful history. It is estimated that several thousand projects worldwide are based on this technology. Important components such as kernel tracing, high-resolution timers and threaded interrupts have been integrated into the mainline kernel and helped to improve it – this probably would not have happened, if they were not needed for real-time. However, there is a remaining part of the patches that still awaits its inclusion into the mainline kernel which would considerably reduce the work to maintain the patches.

The Open Source Automation Development Lab (OSADL) was founded almost ten years ago by the automation industry to take care, among others, of real-time Linux. As such, the membership fees of OSADL members have been used to promote real-time Linux, to fund its development and to run a test center to assess and assure its industrial production quality. However, it would not be entirely fair to let the automation industry fund the complete remaining work on its own, since other industries such as telecommunication also rely on the availability of a deterministic Linux kernel. Fortunately, the Linux Foundation, employer of Linux creator Linus Torvalds, was aware of the situation and has initiated the Real-Time Linux (RTL) Collaborative Project. The aim of this project was to collect sufficient funding for establishing the RTL Working Group to finally merge the PREEMPT_RT patches into mainline.

Today, as of October 5, 2015 the Linux Foundation has announced that it successfully launched the RTL Working Group. When OSADL was informed some weeks ago, it immediately decided to transfer its funding activities to the Linux Foundation by joining the RTL Working Group as Gold Member and to give automation industry a voice in the consortium's technical and administrative advisory boards. In addition, OSADL will independently continue to actively contribute by providing quality assurance of the real-time Linux kernel as well as by supporting safety certification and legal compliance for its members and for the community.

OSADL is looking forward to a fruitful collaboration in the Linux Foundation RTL Working Group. We very much hope that a day will come in the foreseeable future when Linux mainline will immediately contain – without any further patching – the PREEMPT_RT configuration option. And we can only appeal to the other members of the RTL Working Group to not let Linux users wait too long. OSADL certainly will continue to go for it.

About the Open Source Automation Development Lab (OSADL):

The Open Source Automation Development Lab (OSADL) started its activities almost 10 years ago and has been organizing since then the development of Open Source software for automation companies and for the industry in general. The business concept of OSADL is based on the understanding that Open Source software does not always include all the components that are relevant for a certain business sector in the required quality. As far as smartphones and the server and mainframe business are concerned, this problem is less crucial, because in this business sectors Linux is further developed and maintained by large and very active corporations. However, industrial companies are usually not in a position to contribute in a comparable way to the Linux kernel development, but, nevertheless, depend on high quality and additional features such as real-time. In consequence, industrial companies combine forces by joining OSADL, thus ensuring the future availability of a high-quality Linux kernel suitable for industrial applications.

Important OSADL projects focus on real-time capability, quality assurance in the OSADL QA Farm and certification of the Linux kernel. In addition to these development activities, OSADL members benefit from OSADL's knowledge data base and its collection of legal assessments, they may attend OSADL seminars and workshops and take advantage of OSADL's individual services. Last but not least, members may specifically present their products with the help of OSADL and network with other companies, universities and Open Source developers.

The more than 50 OSADL member companies generate a sales volume of far more than 100 billion euros and are machine companies, manufacturers of automation hardware and software, semiconductor companies, Open Source software service providers and user associations.

More information at http://www.osadl.org/

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