Real Time BoF LinuxCon Japan 2011

This session provides a forum to discuss Real Time Linux, share how you are using it, and learn from the experiences of others.

Please come prepared to discuss your experiences with and hear about:
- fields of use (for example: stock market, audio, robotics, industrial automation, consumer products)
- what works well
- what needs to improve
- what is missing and needs to be implemented
- experiences using real time, both successes and failures
- where the future Preempt RT patchset is heading
- status of mainlining, what is left to mainline
- possible future areas of development such as scheduler improvements, a deadline scheduler, resource allocation
- benchmarking tools and techniques
- performance measurement tools and techniques
- any other topic of interest to the attendees

Frank Rowand, Sony Network Entertainment

Birds of a Feather (computing)

In computing, BoF (Birds of a Feather) can refer to:

A BoF session, an informal meet-up at conferences, where the attendees group together based on a shared interest and carry out discussions without any pre-planned agenda.

http://en.wikipedia.org/wiki/Birds_of_a_Feather_%28computing%29

Session Format

I would like for this to be an interactive session.

I would prefer to listen to other people talk.

But if no one else wants to talk, I can.....

Choose what to talk about

PREEMPT_RT Patch Size

Gleixner 2011 ELC 2011 Slides

What is coming up?

Deadline Scheduler

Tools - what has changed since 2008?

How can you contribute?

status, roadmap

OSADL latest stable: 2.6.33.7.2-rt30

   Paul Gortmaker created a broken out version

2.6.34.... (_not_ stable, best effort)

2.6.38-rt ???
   git-tip origin/rt/2.6.38 branch
   most recent commit is: a021baac Mar 17, 2011

PREEMPT_RT Patch Size

$ diffstat patch-2.6.15-rt21
   806 files changed, 27449 insertions(+), 9372 deletions(-)

$ diffstat 2.6.23-rt1
   934 files changed, 30141 insertions(+), 9591 deletions(-)
   397 patch files

$ diffstat 2.6.26-rt1
   842 files changed, 33384 insertions(+), 4985 deletions(-)
   403 patch files

$ diffstat 2.26.29.6-rt24
   1715 files changed, 81837 insertions(+), 43653 deletions(-)
   310 patch files

$ diffstat patch-2.6.33.7.2-rt30
   701 files changed, 15723 insertions(+), 4870 deletions(-)

Paul Gortmaker broken out version: 529 patch files

Gleixner ELC 2011 Slides

... and trojan horses

What is coming up?

13th real time linux workshop
(call_for_papers)

   October 20 - 22, 2011 (Thursday - Saturday)
   Prague, Czech Republic

Linux Kernel Summit

   October 24 - 26 (Monday - Wednesday)

LinuxCon Europe /
Embedded Linux Conference Europe

   October 26 - 28 (Wednesday - Friday)

Deadline Scheduler

???

Tools:
What has changed since ELC 2008 BoF?

ftrace, KernelShark
perf
cyclictest enhancements
lpptest no longer in RT patch set
RealFeel-ETRI ?
   Jung: ELC 2010 Measuring Responsiveness ...
Woerner test (serial port interrupt latency test)
   web site gone
Senoner test (audio)

What has not changed?

LRTB
Hourglass

How can you contribute?

OSADL
  ???

mainline RT_PREEMPT
  ???

test new RT releases
  !!!

rt.wiki.kernel.org

elinux.org
  http://elinux.org/Realtime_Testing_Best_Practices

linux-rt-users
  http://vger.kernel.org/vger-lists.html#linux-rt-users

Other Topics?

Resources

Status of Preempt-RT and why there is no roadmap
Thomas Gleixner, ELC 2011
   http://elinux.org/images/c/ca/Elc2011_gleixner.pdf
   https://lwn.net/Articles/440064/

Trojan Horses
   http://lkml.indiana.edu/hypermail/linux/kernel/1001.3/00384.html
   http://lkml.indiana.edu/hypermail/linux/kernel/1001.3/00389.html

13th Real Time Linux Workshop 2011 Call For Papers
   http://tree.celinuxforum.org/pipermail/celinux-dev/
   2011-February/002169.html

Resources

Real Time Wiki
  https://rt.wiki.kernel.org

Embedded Linux Wiki
  http://elinux.org

Open Source Automation Development Lab
  http://www.osadl.org/

How to get a copy of the slides

1) leave a business card with me

2) frank.rowand@am.sony.com