domineur inc.

(design, build, deploy)+

Toronto Progress User's Group

Remote Debugging with PDSOE: Virtualized UNIX

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About dave

I'm a Toronto based software developer with a small company that builds bespoke applications and software tools. I also provide consulting around software development practices.

Our primary language these days is Java and we have built some tools that IFDS is using in their CI pipeline but as with anyone who's been programming for a while I've used a lot of different languages and databases starting with C/C++ and Clipper 'till now with many things in between.

I've worked on telecom applications, APIs for building SGML and XML applications, integration software using RDF, OWL and SPARQL, software for the healthcare industry as well as less interesting things using Java/Spring/Hibernate/etc., In short we're Fully Catchword Compliant (FCC).

In my spare time I play the 'cello. You can reach me at dave@domineur.com

Don’t worry this is just an intro

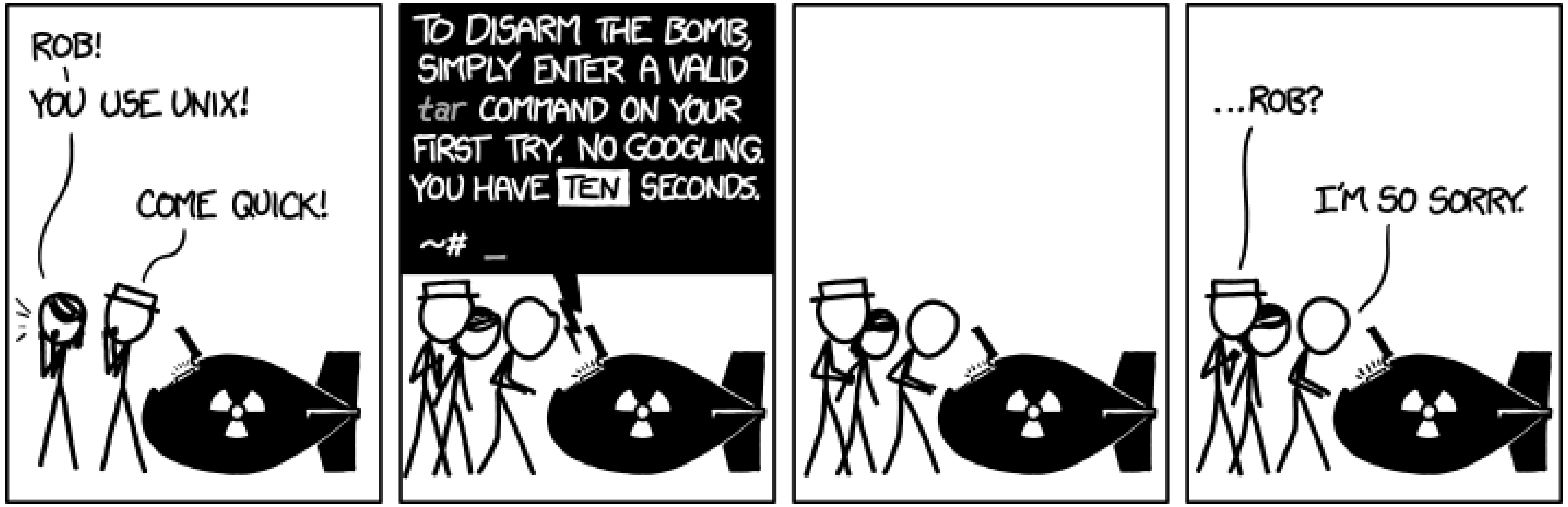
Today Hanna Boguslawksa will give a presentation on remote debugging with PDSOE, this segment is just an intro.

Develop and Build on the same platform

Here our challenge was to let developers run PDSOE which is Windows only while developing for UNIX.

But we believe in principle that the development environment should be as close as can be to the deployment environment.

So how to reconcile these?


ROB!
YOU USE UNIX!
COME QUICK!
TO DISARM THE BOMB, SIMPLY ENTER A VALID tar COMMAND ON YOUR FIRST TRY. NO GOOGLING. YOU HAVE TEN SECONDS.
~# _
...ROB?
I'M SO SORRY.

The rise of Hardware Virtualization

This is quite mainstream these days, but dates back a long time and IBM did a lot of early work in this area.

Desktop virtualization came to common attention in the late 80’s/early 90’s through various products, in particular SoftPC that emulated x86 to allow running DOS software on other platforms.

Modern hardware virtualization is far better.

Application Development Environment

We deployed this as part of an application development environment that included enterprise services such as queues and database images as well as a UNIX execution environment running as a guest Operating System under Windows.

Some Challenges Remain

If you’ve been deploying to the same more-or-less static environments over a long period of time you’ve probably lost track of the various magic pieces that go together to run your application.

Trying to create a local clone of that environment is a useful way to shake those things out and well worth the pain! This can be a safe first step to more sophisticated automation of deployments.

You may find you need:

Particular versions of helper applications, .dll’s or .so’s

Scripts or batch commands in the path

File system to store incoming or outgoing data

Etc.

Sharing Programs

The project working area is a directory structure that is shared between the host (Windows) and the guest (UNIX) operating systems so that the programs that the developer is working on can be executed in place from UNIX.

Most desktop virtualization systems will provide some mechanism to share directories, and traditional methods such as NFS are also viable, do test alternatives as some options may be quite slow depending on the numbers of files involved and which virtualization software you’re using.

Windows vs. UNIX

Just a heads up – there are minor differences between ABL on UNIX and Windows. In particular:

\ is not an escape character on Windows. ~ still is though.

Windows is not case sensitive.

If you have UNIX statements to run shell commands they won’t work on Windows

The Pain of Debugging

https://alistapart.com/author/kcornell

The cost of debugging can be very high – mostly in developer time.

You may be faced with trying to deduce behaviour based on logging messages.

Consider remote debugging is another tool in your toolbox.

OK time for Hanna!

APPENDIX

Useful things:

Oracle VirtualBox https://www.virtualbox.org/

VMWare Workstation https://www.vmware.com/products/workstation-pro.html

PDSOE Debug Docs https://documentation.progress.com/output/ua/OpenEdge_latest/index.html#page/pdsoe%2Fprogress-developer-studio-for-openedge-debugger.html%23

Red Hat https://www.redhat.com

APPENDIX

Fun things:

xkcd: https://xkcd.com/

***"A webcomic of romance,
sarcasm, math, and language."***

Rick and Morty

http://www.adultswim.com/videos/rick-and-morty/