

Combining Xenner, Xen and KVM into a giant furball

About Me

- Alexander Graf
- SUSE Studio team
- KVM and Qemu developer
 - Server class PowerPC KVM port
 - S390x Qemu guest support
 - x86 Mac OS X in KVM
 - Nested SVM
 - ...

Xenner

- Originally written by Gerd Hoffmann
- Run Xen PV guests in KVM
- No requirement for Xen hypervisor

Why?

- SUSE Studio
- Testdrive



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- All sorts of things you can dream up!

- A custom distro, with your own software and branding
- Virtual machines, for the data center and the desktop



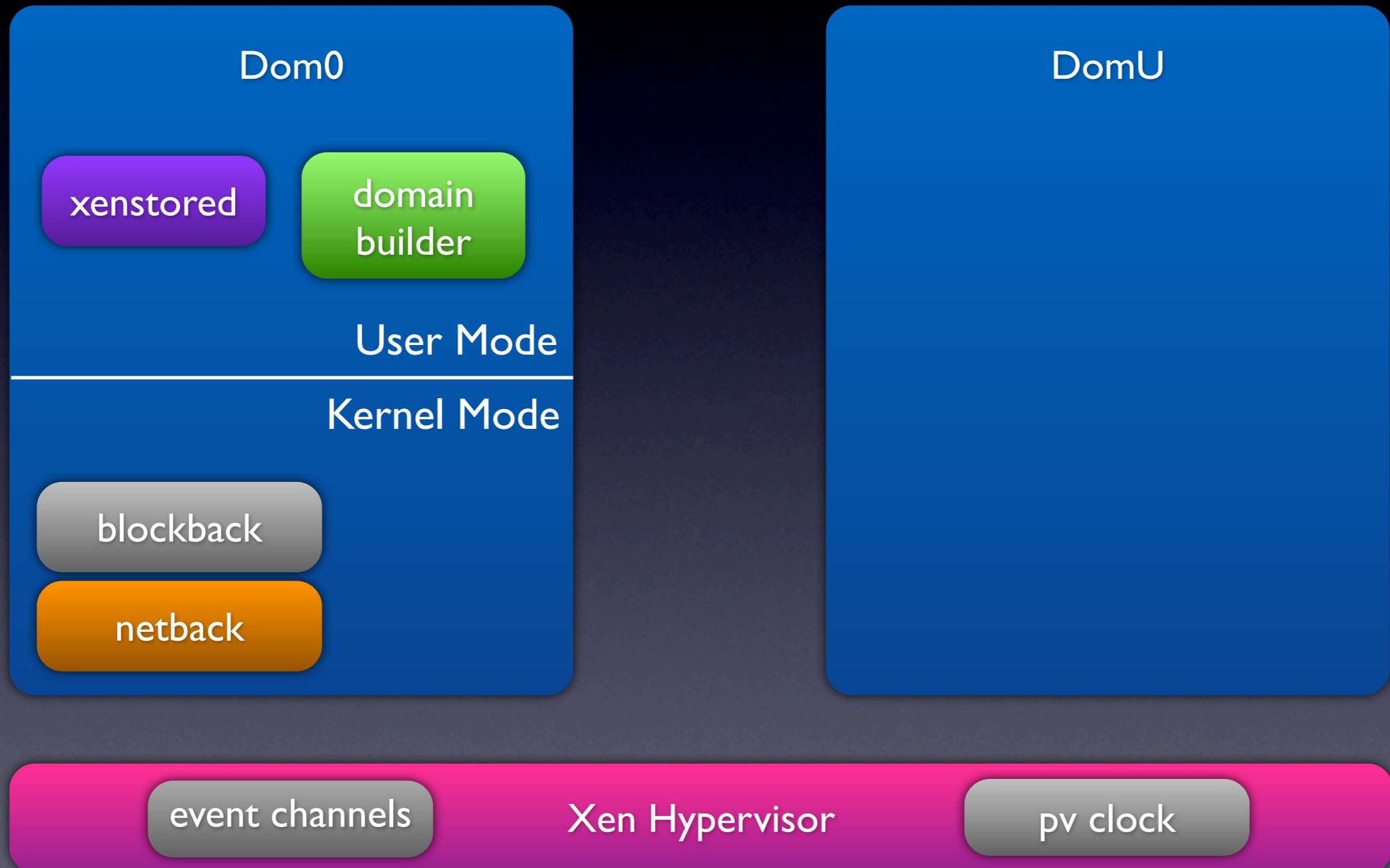
SUSE Appliance Toolkit

Take control of appliance building! Check out the [SUSE Appliance Toolkit](#), featuring **SUSE Studio Onsite**.

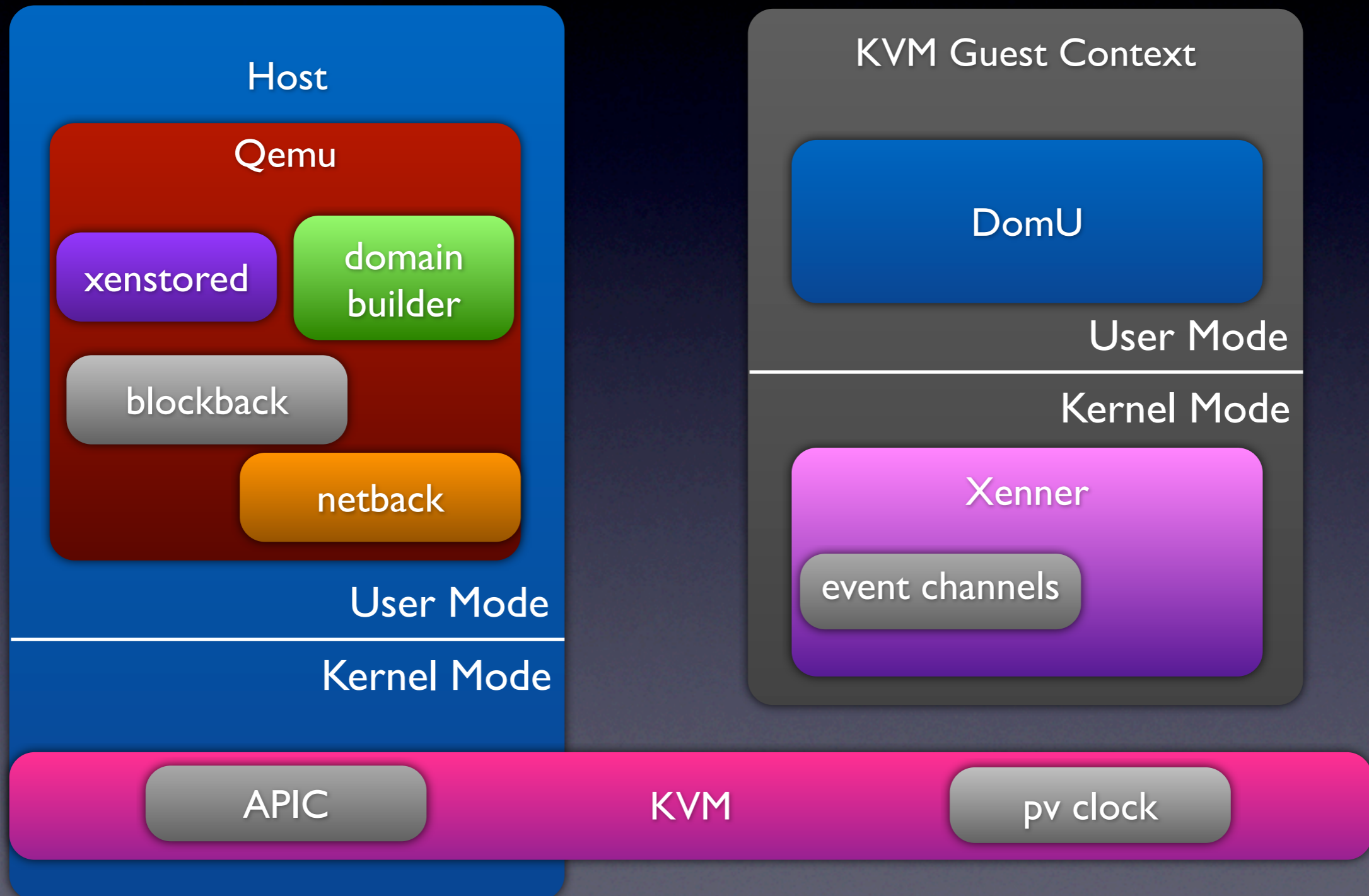
- Ctrl-Alt-F1
- Ctrl-Alt-F2
- Ctrl-Alt-F3
- Ctrl-Alt-F7
- Alt-F1
- Alt-F2
- Ctrl-Alt-Del
- Ctrl-Alt-Back
- Keyboard layout:
English (US)



Xen Architecture



Xenner Architecture



Demo

Demo

```
linux-x31j:~ # uname -a
Linux linux-x31j 2.6.32.23-0.3-xen #1 SMP 2010-10-07 14:57:45 +0200 x86_64 x86_64 x86_64 GNU/Linux
linux-x31j:~ # cat /proc/cpuinfo
processor       : 0
vendor_id     : AuthenticAMD
cpu family    : 6
model        : 2
model name    : QEMU Virtual CPU version 0.13.50
stepping     : 3
cpu MHz      : 2600.340
cache size   : 512 KB
fpu         : yes
fpu_exception : yes
cpuid level  : 4
wp          : yes
flags       : fpu de tsc msr pae cx8 apic cmov pat clflush mmx fxsr sse syscall nx lm up pni popcnt hypervisor lahf_lm abm sse4a
bogomips   : 5212.25
TLB size   : 1024 4K pages
clflush size : 64
cache_alignment : 64
address sizes : 40 bits physical, 48 bits virtual
power management:

linux-x31j:~ # █
```

pv clock

- KVM PV clock layout = Xen PV clock layout
- Just pass it through!

Why separate?

- Endianness
- Host \neq Guest

Why unite?

- Bugfixing
- Features
- Interface changes

Domain Builder

- Xen: libxc builds everything
- Xenner: split between qemu and xenner
- endianness
- host != guest
- reuse of infrastructure
 - elf loader
 - page tables

Xenstored

- different needs
 - serve all vs serve 1 guest
 - exec
 - simplicity
 - isolation
- safe to reuse?
- split out to separate project?



Donnerstag, 4. November 2010