Debugging coredumps

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Getting kernel coredump

- On the ESX host after crash
  - Reboot / hard reset after creating core is complete. After seeing log --> Finalized dump header (11/11) DiskDump: Successful
  - # esxcfg-dumppart --copy --devname /vmfs/devices/disks/naa.xxxxx:x
  - # esxcfg-dumppart -l
  - Copy the coredump to dev machine.
- On the dev box, from within the same tree (follows versioning)
  - bora$ build/build/vmkdump_extract/obj/uw32/vmkdump_extract
    - Creates vmkernel-core.xxx, vmkernel-log.xxx, etc.
  - bora$ support/scripts/debug-esx
    - (live) /dev/ttyS0 [--break]
    - (dump) vmkernel-core.xxx

Getting vmx coredump

- vmx-debug-zdump.xxx usually in VM home directory or as specified in vmware.log
- Copy it to dev box. From within the same tree
  - bora$ support/scripts/debug-uw vmx-debug-zdump.xxx
  - No extraction needed here

On sandbox builds

- Get the tree location for given build#
  - bld info <build#>
  - For CS #, get build# from buildweb
- > VMBLD=<type> VMTREE=<tree-location> <tree-location>/...../debug-x coredump.
- For eg. Build Tree: /build/storage60/release/bora-1048475
- $ VMBLD=beta VMTREE=/build/storage60/release/bora-1048475/bora /build/storage60/release/bora-1048475/bora/support/scripts/debug-esx vmkernel-core.0
- Or use debugzilla.py to do all of above automatically

GDB macros

- VMX macros bora/vmx/debug/vmxmacros.gdb
- Kernel macros loaded by default. Use ”help user-defined” to print all available macros

GDB cheatsheet

- Some handy gdb commands
  - set print pretty
  - ptype <variable>
  - Gdb cheatsheet
  - print variable values in different formats. Eg. /x, /t
  - disassemble
  - info locals to get all local variables
  - bt full
- A more complete cheatsheet here