After reading this https://worthdoingbadly.com/aixqemu and this https://lists.gnu.org/archive/html/qemu-ppc/2018-05/msg00387.html, I was inspired and very curious. Could I get AIX 7.2 running on QEMU on my MacBook Pro (running Mac OS X 10.13.6)?

Well, the answer my friends, is yes...sort of.

Many thanks to Rob McNelly who originally tweeted this link, https://worthdoingbadly.com/aixqemu. If he had not, I would never have made the journey to QEMU land. So thanks Rob!

Also, thanks to Liang Guo for his assistance. Your guidance was greatly appreciated.

Note: What I describe here is NOT supported by IBM. It is purely a lab experiment to see what was possible with qemu-system-ppc64.

If you want to follow along at home, please follow and test the steps outlined here, https://worthdoingbadly.com/aixqemu, first. If this works then you should be good to go with the rest of this article.

I've never used QEMU until now. So all of this is very new to me. I'm still learning, so if you see something wrong with my instructions. Sorry. I'll do better next time.

The first thing you need to do, is install AIX 7.2 in a Logical Partition (LPAR VM), on a Power system, somewhere. If you don't have an IBM Power System of your own, you could try using the https://www.ibm.com/partnerworld/page/stg_com_sys_power-development-platform. I recommend using **AIX 7.2 TL3 SP1** for this experiment. My source LPAR was running 7200-03-01 on POWER8. Once you have an AIX system that you can use, follow each of the steps outlined below.

1. Create mksysb image of the source AIX system.

```
AIXlpar# mksysb -i /nim/mksysb/AIXhost-mksysb

Creating information file (/image.data) for rootvg.

Creating list of files to back up.

Backing up 93071 files.......

93071 of 93071 files (100%)
0512-038 mksysb: Backup Completed Successfully.
```

2. Create ISO image from the mksysb image created in step 1.

```
AIXlpar# mkdvd -S -I /nim/mksysb -m /nim/mksysb/AIXlpar-mksysb
Initializing mkdvd log: /var/adm/ras/mkcd.log...
Verifying command parameters...
Creating temporary file system: /mkcd/cd_fs...
Populating the CD or DVD file system...
Building chrp boot image...
Copying backup to the CD or DVD file system...
..
Creating Rock Ridge format image: /nim/mksysb/cd_image_20119974
Running mkisofs ...
.
mkrr_fs was successful.

Making the CD or DVD image bootable...


Removing temporary file system: /mkcd/cd_fs...
#

# ls -ltr
total 43709952
-rw-r--r--   1 root     system   2905600000 Oct 08 08:38 AIXlpar-mksysb
-rw-r--r--   1 root     system   3022819328 Oct 08 08:41 cd_image_20119974
# mv cd_image_20119974 AIX72.iso
# ls -ltr
total 43709952
-rw-r--r--   1 root     system   2905600000 Oct 08 08:38 AIXlpar-mksysb
-rw-r--r--   1 root     system   3022819328 Oct 08 08:41 AIX72.iso
```

3. Copy the ISO image to your MacBook.

```
$ scp AIXlpar:/nim/mksysb/AIX72.iso .
```

4. Assuming that QEMU is installed on your Mac, create a qcow2 disk image. Now you have two files, 1) AIX72.iso (which is the mksysb ISO of your AIX VM from your Power system) and 2) AIX72.img, which will be used to install (restore) the mksysb ISO image in the QEMU environment; this is your install hdisk device for rootvg.

```
$ qemu-img create -f qcow2 AIX72.img 100G
Formatting 'AIX72.img', fmt=qcow2 size=107374182400 cluster_size=65536
lazy_refcounts=off refcount_bits=16

$ qemu-img info AIX72.img
image: AIX72.img
file format: qcow2
virtual size: 100G (107374182400 bytes)
disk size: 196K
cluster_size: 65536
Format specific information:
    compat: 1.1
    lazy refcounts: false
    refcount bits: 16
    corrupt: false
```

5. Boot from the ISO image (AIX72.iso) and install AIX into the QEMU disk image (AIX72.img). The 'boot cdrom: -s verbose' option, will start the VM and boot from the virtual CD device (in this case the ISO image we created). The verbose option is really only required if you are curious as to what is happening during the boot and installation steps. BE PATIENT! It will take several mintues for the VM to boot.

Note: There is a lot of output when verbose boot is enabled. I have trimmed the output shown (in this article) to make it easier to read.

Once the BOS installation menu appears, you can "*follow the bouncing ball*" and complete the mksysb restore to hdisk0. If you've ever installed AIX in the past, you'll be very familiar with this process.

```
$ qemu-system-ppc64 -cpu POWER9 -machine pseries -m 2048 -serial mon:stdio \
-drive file=AIX72.img,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi -device scsi-hd,drive=drive-virtio-disk0 \
-cdrom AIX72.iso \
-prom-env boot-command='boot cdrom: -s verbose'

SLOF ********************************************************************
QEMU Starting
 Build Date = Jun 21 2018 19:08:08
 FW Version = git-7d37babcfa48a6eb
 Press "s" to enter Open Firmware.

Populating /vdevice methods
Populating /vdevice/vty@71000000
Populating /vdevice/nvram@71000001
Populating /vdevice/l-lan@71000002
Populating /vdevice/v-scsi@71000003
       SCSI: Looking for devices
          8200000000000000 CD-ROM   : "QEMU     QEMU CD-ROM      2.5+"
Populating /pci@800000020000000
                     00 0000 (D) : 1234 1111   qemu vga
                     00 0800 (D) : 1033 0194   serial bus [ usb-xhci ]
                     00 1000 (D) : 1af4 1004   virtio [ scsi ]
Populating /pci@800000020000000/scsi@2
       SCSI: Looking for devices
          100000000000000 DISK     : "QEMU     QEMU HARDDISK    2.5+"
Installing QEMU fb

Scanning USB
  XHCI: Initializing
    USB Keyboard
    USB mouse
No console specified using screen & keyboard

  Welcome to Open Firmware

  Copyright (c) 2004, 2017 IBM Corporation All rights reserved.
  This program and the accompanying materials are made available
  under the terms of the BSD License available at
  http://www.opensource.org/licenses/bsd-license.php


Trying to load: -s verbose from: /vdevice/v-scsi@71000003/disk@8200000000000000:
...   Successfully loaded

AIX
...etc...
AIX Version 7.2
exec(/etc/init){1,0}

INIT: EXECUTING /sbin/rc.boot 1
exec(/usr/bin/sh,-c,/sbin/rc.boot 1){917792,1}
exec(/sbin/rc.boot,/sbin/rc.boot,1){917792,1}
+ PHASE=1
+ + bootinfo -p
exec(/usr/sbin/bootinfo,-p){983330,917792}
```

```
PLATFORM=chrp
...
----------------
Time: 0        LEDS: 0x538
Invoking top level program -- "/usr/lib/methods/cfgrule_vrtcore"
exec(/bin/sh,-c,/usr/lib/methods/cfgrule_vrtcore ){1048868,983342}
exec(/usr/lib/methods/cfgrule_vrtcore){1048868,983342}
....etc...

 ******* Please define the System Console. *******

Type a 1 and press Enter to use this terminal as the
  system console.
...etc...

>>>  1 Type 1 and press Enter to have English during install.
...etc...

>>> Choice [1]:1

                    Error Warning << Note: You can ignore this warning message...


An invalid disk (42-T1-01) was specified in the
location field of the data file.

To reboot the system, press reset.

>>> 1   Continue with Install
...etc...

>>> Choice [1]: 1

                    Welcome to Base Operating System
                    Installation and Maintenance

Type the number of your choice and press Enter.  Choice is indicated by >>>.

>>> 1 Start Install Now with Default Settings

    2 Change/Show Installation Settings and Install

    3 Start Maintenance Mode for System Recovery

    4 Make Additional Disks Available

    5 Select Storage Adapters


    88  Help ?
    99  Previous Menu

>>> Choice [1]:2

             System Backup Installation and Settings

Either type 0 and press Enter to install with the current settings, or type the
number of the setting you want to change and press Enter.

    Setting:                              Current Choice(s):

    1 Disk(s) where you want to install ...... hdisk0
         Use Maps............................. No
    2 Shrink File Systems..................... No
    3 Import User Volume Groups............... No
    4 Recover Devices........................ No

>>> 0 Install with the settings listed above.
```

```
                             +---------------------------------------------
    88  Help ?              |    WARNING: Base Operating System Installation will
    99  Previous Menu       |    destroy or impair recovery of ALL data on the
                            |    destination disk hdisk0.
>>> Choice [0]: 0
```

6. With AIX installed, boot from the ISO image again ('boot cdrom:'), enter maintenance mode and edit the /sbin/helpers/jfs2/fsck64 file. You'll need to replace the command with a script that simply exits with a zero return code. When you are done, run 'sync;sync' and halt the VM.

```
$ qemu-system-ppc64 -cpu POWER9 -machine pseries -m 2048 -serial mon:stdio \
-drive file=AIX72.img,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi -device scsi-hd,drive=drive-virtio-disk0 \
-cdrom AIX72.iso \
-prom-env boot-command='boot cdrom:'
...etc...
                    Welcome to Base Operating System
                    Installation and Maintenance

Type the number of your choice and press Enter.  Choice is indicated by >>>.

>>> 1 Start Install Now with Default Settings

    2 Change/Show Installation Settings and Install

    3 Start Maintenance Mode for System Recovery

    4 Make Additional Disks Available

    5 Select Storage Adapters


    88  Help ?
    99  Previous Menu

>>> Choice [1]:3



                    Maintenance

Type the number of your choice and press Enter.

>>> 1 Access a Root Volume Group
    2 Copy a System Dump to Removable Media
    3 Access Advanced Maintenance Functions
    4 Erase Disks
    5 Configure Network Disks (iSCSI)
    6 Select Storage Adapters
    7 Install from a System Backup


>>> Choice [1]: 1



                Warning:

If you choose to access a root volume group, you will not be able to return
to the Base Operating System Installation menus without rebooting.
```

Type the number of your choice and press Enter.

    0 Continue

    88 Help ?
>>> 99 Previous Menu

>>> Choice [99]:0

                    Access a Root Volume Group

Type the number for a volume group to display the logical volume information
and press Enter.

    1)   Volume Group 00000000000000000000000166344f68a5 contains these disks:
        hdisk0 102400   00-10

  Choice: 1

                 Volume Group Information

    Volume Group ID 00000000000000000000000166344f68a5 includes the following
    logical volumes:

       hd5   **hd6**   **hd8**   **hd4**   **hd2**   **hd9var**
       hd3   **hd1**   **hd10opt**   **hd11admin** **lg_dumplv** **livedump**

Type the number of your choice and press Enter.

   1) Access this Volume Group and start a shell
   2) Access this Volume Group and start a shell before mounting filesystems

  99) Previous Menu

    Choice [99]: 1
Importing Volume Group...
...etc...
Filesystems mounted for maintenance work.
 # cd /sbin/helpers/jfs2
 # >fsck64
 # vi fsck64
#!/bin/ksh
exit 0
:w!
ls -ltr | grep fsck64
-r-xr-xr-x   1 root   system   18 Oct 3 05:25 fsck64
cat fsck64
#!/bin/ksh
exit 0
#
 # sync ; sync
 # halt

....Halt completed....
cgibson@xwing : ~/Downloads/POWER/aix/AIX72 $

7. Boot from the disk image (AIX72.img, 'boot disk:'). Don't used the verbose option (unless you need to). This will boot the VM directly from your AIX hdisk device (AIX72.img). BE PATIENT!

```
$ qemu-system-ppc64 -cpu POWER9 -machine pseries -m 2048 -serial mon:stdio \
-drive file=aix72.img,if=none,id=drive-virtio-disk0 \
-device virtio-scsi-pci,id=scsi -device scsi-hd,drive=drive-virtio-disk0 \
-cdrom aix72.iso \
-prom-env boot-command='boot disk:'


SLOF ********************************************************************
QEMU Starting
 Build Date = Jun 21 2018 19:08:08
 FW Version = git-7d37babcfa48a6eb
 Press "s" to enter Open Firmware.

Populating /vdevice methods
Populating /vdevice/vty@71000000
Populating /vdevice/nvram@71000001
Populating /vdevice/l-lan@71000002
Populating /vdevice/v-scsi@71000003
      SCSI: Looking for devices
        8200000000000000 CD-ROM   : "QEMU     QEMU CD-ROM      2.5+"
Populating /pci@800000020000000
                   00 0000 (D) : 1234 1111   qemu vga
                   00 0800 (D) : 1033 0194   serial bus [ usb-xhci ]
                   00 1000 (D) : 1af4 1004   virtio [ scsi ]
Populating /pci@800000020000000/scsi@2
      SCSI: Looking for devices
        100000000000000 DISK     : "QEMU     QEMU HARDDISK    2.5+"
...etc...

Trying to load:  from: /pci@800000020000000/scsi@2/disk@100000000000000: ...
Successfully loaded
....etc...
Saving Base Customize Data to boot disk
Starting the sync daemon
Starting the error daemon

System initialization completed.
TE=OFF
CHKEXEC=OFF
CHKSHLIB=OFF
CHKSCRIPT=OFF
CHKKERNEXT=OFF
STOP_UNTRUSTD=OFF
STOP_ON_CHKFAIL=OFF
LOCK_KERN_POLICIES=OFF
TSD_FILES_LOCK=OFF
TSD_LOCK=OFF
TEP=OFF
TLP=OFF
Successfully updated the Kernel Authorization Table.
Successfully updated the Kernel Role Table.
Successfully updated the Kernel Command Table.
Successfully updated the Kernel Device Table.
Successfully updated the Kernel Object Domain Table.
Successfully updated the Kernel Domains Table.
Successfully updated the Kernel RBAC log level.
Successfully updated the Kernel RBAC log level.
OPERATIONAL MODE Security Flags
ROOT                    :      ENABLED
TRACEAUTH               :      DISABLED
System runtime mode is now OPERATIONAL MODE.
Setting tunable parameters...
Starting Multi-user Initialization
```

```
 Performing auto-varyon of Volume Groups
 Activating all paging spaces
0517-075 swapon: Paging device /dev/hd6 is already active.
 Performing all automatic mounts
Multi-user initialization completed
...etc...

AIX Version 7
Copyright IBM Corporation, 1982, 2018.
Console login:
```

8. AIX will eventually boot to a login prompt (console tty).

```
AIX Version 7
Copyright IBM Corporation, 1982, 2018.
Console login:
```

9. At this point you should be able to login to the VM.

```
AIX Version 7
Copyright IBM Corporation, 1982, 2018.
Console login: root
root's Password:
*******************************************************************************
*                                                                             *
*                                                                             *
*  Welcome to AIX Version 7.2!                                                *
*                                                                             *
*                                                                             *
*  Please see the README file in /usr/lpp/bos for information pertinent to    *
*  this release of the AIX Operating System.                                  *
*                                                                             *
*                                                                             *
*******************************************************************************
Last unsuccessful login: Wed Oct  3 18:38:16 AEST 2018 on /dev/vty0 from localhost
Last login: Fri Oct  5 13:35:42 AEST 2018 on /dev/vty0

#
# chdev -l inet0 -a hostname=aix_on_mac
```

10. I had to remove/disable a bunch of services, to make the VM usable.

```
# rmitab mbverify
# rmitab phauiserver
# rmitab pfcdaemon
# rmitab diagd
# rmitab artex
# rmitab clcomd
# rmitab xmdaily
# rmitab nim
# rmitab cron
# rmitab rcnfs
# rmitab writesrv
# rmitab qdaemon
# rmitab wparpcmsrv
# rmitab aso
# rmitab naudio2

# chrctcp -S -d tftpd

# lsitab -a
init:2:initdefault:
brc::sysinit:/sbin/rc.boot 3 >/dev/console 2>&1 # Phase 3 of system boot
```

```
powerfail::powerfail:/etc/rc.powerfail 2>&1 | /usr/bin/alog -tboot > /dev/console #
Power Failure Detection
tunables:23456789:wait:/usr/sbin/tunrestore -R > /dev/console 2>&1 # Set tunables
securityboot:2:bootwait:/etc/rc.security.boot > /dev/console 2>&1
rc:23456789:wait:/etc/rc 2>&1 | /usr/bin/alog -tboot > /dev/console # Multi-User
checks
srcmstr:23456789:respawn:/usr/sbin/srcmstr # System Resource Controller
rctcpip:23456789:wait:/etc/rc.tcpip > /dev/console 2>&1 # Start TCP/IP daemons
rctmiscsi:23456789:wait:/etc/rc.tmiscsi > /dev/console 2>&1
rckrb5:2:wait:/etc/rc.krb5 > /dev/console 2>&1
fbcheck:23456789:wait:/usr/sbin/fbcheck 2>&1 | /usr/bin/alog -tboot > /dev/console
# run /etc/firstboot
clusterconf:23456789:once:/usr/sbin/clusterconf
piobe:2:wait:/usr/lib/lpd/pioinit_cp >/dev/null 2>&1  # pb cleanup
cons:0123456789:respawn:/usr/sbin/getty /dev/console
uprintfd:23456789:respawn:/usr/sbin/uprintfd
shdaemon:2:off:/usr/sbin/shdaemon >/dev/console 2>&1 # High availability daemon
trustedboot:2:wait:/etc/rc.trustedboot > /dev/console 2>&1 # Get trusted log and
start TCSD
l2:2:wait:/etc/rc.d/rc 2
l3:3:wait:/etc/rc.d/rc 3
l4:4:wait:/etc/rc.d/rc 4
l5:5:wait:/etc/rc.d/rc 5
l6:6:wait:/etc/rc.d/rc 6
l7:7:wait:/etc/rc.d/rc 7
l8:8:wait:/etc/rc.d/rc 8
l9:9:wait:/etc/rc.d/rc 9
rcwpars:2:once:/etc/rc.wpars > /dev/console 2>&1 # Corrals autostart
logsymp:2:once:/usr/lib/ras/logsymptom # for system dumps
perfstat:2:once:/usr/lib/perf/libperfstat_updt_dictionary >/dev/console 2>&1
ha_star:h2:off:/etc/rc.ha_star >/dev/console 2>&1
pmperfrec:2:once:/var/perf/pm/bin/config_pm_ext.sh -P yes
ctrmc:2:once:/usr/bin/startsrc -s ctrmc > /var/ct/ctrmc-inittab.err 2>&1

aix_on_mac:/ # lssrc -a | grep active
 clcomd          caa            3604796      active
 sshd            ssh            4850090      active
 ctrmc           rsct           5177646      active
 pmperfrec                      4653482      active
 IBM.HostRM      rsct_rm        5767458      active
 IBM.ConfigRM    rsct_rm        5243314      active
 IBM.DRM         rsct_rm        5374386      active
 IBM.MgmtDomainRM rsct_rm       4063670      active
 IBM.ServiceRM   rsct_rm        5439970      active
```

At this point, you now have an AIX VM running on QEMU. You can now enter familiar AIX
commands and explore the environment.

```
aix_on_mac:/ # oslevel -s
7200-03-01-1838

aix_on_mac:/ # uname -L
0 aix_on_kvm

aix_on_mac:/ # lparstat -i
Node Name                              : aix_on_mac
Partition Name                         : aix_on_kvm
Partition Number                       : 0
Type                                   : Shared
Mode                                   : Capped
Entitled Capacity                      : 1.00
Partition Group-ID                     : 1
Shared Pool ID                         : 1
Online Virtual CPUs                    : 1
Maximum Virtual CPUs                   : 1
Minimum Virtual CPUs                   : 1
Online Memory                          : 2048 MB
```

```
Maximum Memory                                    : 2048 MB
Minimum Memory                                    : 2048 MB
Variable Capacity Weight                          : 128
Minimum Capacity                                  : 1.00
Maximum Capacity                                  : 1.00
Capacity Increment                                : 1.00
Maximum Physical CPUs in system                   : 1
Active Physical CPUs in system                    : 1
Active CPUs in Pool                               : 1
Shared Physical CPUs in system                    : -
Maximum Capacity of Pool                          : -
Entitled Capacity of Pool                         : -
Unallocated Capacity                              : 0.00
Physical CPU Percentage                           : 100.00%
Unallocated Weight                                : 0
Memory Mode                                       : Dedicated
Total I/O Memory Entitlement                      : -
Variable Memory Capacity Weight                   : -
Memory Pool ID                                    : -
Physical Memory in the Pool                       : -
Hypervisor Page Size                              : -
Unallocated Variable Memory Capacity Weight: -
Unallocated I/O Memory entitlement                : -
Memory Group ID of LPAR                           : -
Desired Virtual CPUs                              : 1
Desired Memory                                    : 2048 MB
Desired Variable Capacity Weight                  : 128
Desired Capacity                                  : 1.00
Target Memory Expansion Factor                    : -
Target Memory Expansion Size                      : -
Power Saving Mode                                 : -
Sub Processor Mode                                : -


aix_on_mac:/ # prtconf
System Model: IBM pSeries (emulated by qemu)
Machine Serial Number: Not Available
Processor Type: PowerPC_POWER9
Processor Implementation Mode: POWER 9
Processor Version: PV_9_Compat
Number Of Processors: 1
Processor Clock Speed: 1000 MHz
CPU Type: 64-bit
Kernel Type: 64-bit
LPAR Info: 0 aix_on_kvm
Memory Size: 2048 MB
Good Memory Size: 2048 MB
Platform Firmware level: Not Available
Firmware Version: SLOF,aik
Console Login: enable
Auto Restart: true
Full Core: false
NX Crypto Acceleration: Not Capable

Network Information
        Host Name: aix_on_mac
        IP Address: 10.1.1.10
        Sub Netmask: 255.255.255.0
        Gateway:
        Name Server:
        Domain Name:


Paging Space Information
        Total Paging Space: 512MB
        Percent Used: 1%


Volume Groups Information
============================================================================
Active VGs
```

```
================================================================================
rootvg:
PV_NAME            PV STATE          TOTAL PPs   FREE PPs    FREE DISTRIBUTION
hdisk0             active            799         710         159..146..85..160..160
================================================================================

INSTALLED RESOURCE LIST

The following resources are installed on the machine.
+/- = Added or deleted from Resource List.
*   = Diagnostic support not available.

  Model Architecture: chrp
  Model Implementation: Uni-Processor, PCI bus

+ sys0                                                  System Object
+ sysplanar0                                            System Planar
* vio0                                                  Virtual I/O Bus
* vscsi0                                                Virtual SCSI Client
Adapter
* cd0                                                   Virtual SCSI Optical
Served by VIO Server
* ent0                                                  Virtual I/O Ethernet
Adapter (l-lan)
* vsa0                                                  LPAR Virtual Serial
Adapter
* vty0                                                  Asynchronous Terminal
* pci0                                                  PCI Bus
* scsi0          qemu_virtio-scsi-pci:0000:00:02.0      Virtio SCSI Client
Adapter (f41a0800)
* hdisk0         qemu_virtio-scsi-pci:0000:00:02.0-LW_0  MPIO Other Virtio SCSI
Disk Drive
+ L2cache0                                              L2 Cache
+ mem0                                                  Memory
+ proc0                                                 Processor

aix_on_mac:/ # df
Filesystem     512-blocks      Free %Used    Iused %Iused Mounted on
/dev/hd4        2883584     2328520   20%    15047    6% /
/dev/hd2        6291456     1794272   72%    57149   22% /usr
/dev/hd9var     2621440     1686568   36%     4234    3% /var
/dev/hd3        4456448     4182992    7%     1083    1% /tmp
/dev/hd1         262144      260680    1%       21    1% /home
/dev/hd11admin   262144      261416    1%        5    1% /admin
/proc                 -           -    -        -    - /proc
/dev/hd10opt    2359296      807288   66%    12416   13% /opt
/dev/livedump    524288      523552    1%        4    1% /var/adm/ras/livedump

aix_on_mac:/ # lsvg
rootvg

aix_on_mac:/ # lspv
hdisk0          00000000344f6122                        rootvg          active

aix_on_mac:/ # lsvg -l rootvg
rootvg:
LV NAME            TYPE      LPs    PPs    PVs  LV STATE      MOUNT POINT
hd5               boot      1      1      1    closed/syncd  N/A
hd6               paging    4      4      1    open/syncd    N/A
hd8               jfs2log   1      1      1    open/syncd    N/A
hd4               jfs2      11     11     1    open/syncd    /
hd2               jfs2      24     24     1    open/syncd    /usr
hd9var            jfs2      10     10     1    open/syncd    /var
hd3               jfs2      17     17     1    open/syncd    /tmp
hd1               jfs2      1      1      1    open/syncd    /home
hd10opt           jfs2      9      9      1    open/syncd    /opt
hd11admin         jfs2      1      1      1    open/syncd    /admin
lg_dumplv         sysdump   8      8      1    open/syncd    N/A
```

```
livedump          jfs2       2       2       1       open/syncd
/var/adm/ras/livedump

aix_on_mac:/ # lscfg -vp
INSTALLED RESOURCE LIST WITH VPD

The following resources are installed on your machine.

  Model Architecture: chrp
  Model Implementation: Uni-Processor, PCI bus

  sys0                                              System Object
  sysplanar0                                        System Planar
  vio0                                              Virtual I/O Bus
  vscsi0                                            Virtual SCSI Client
Adapter
  cd0                                               Virtual SCSI Optical
Served by VIO Server
  ent0                                              Virtual I/O Ethernet
Adapter (l-lan)

        Network Address.............525400123456
        Displayable Message.........Virtual I/O Ethernet Adapter (l-lan)

  vsa0                                              LPAR Virtual Serial
Adapter
  vty0                                              Asynchronous Terminal
  pci0                                              PCI Bus
  scsi0          qemu_virtio-scsi-pci:0000:00:02.0    Virtio SCSI Client
Adapter (f41a0800)

        Hardware Location Code......qemu_virtio-scsi-pci:0000:00:02.0

  hdisk0         qemu_virtio-scsi-pci:0000:00:02.0-LW_0  MPIO Other Virtio SCSI
Disk Drive

        Manufacturer................QEMU
        Machine Type and Model......QEMU HARDDISK
        Part Number.................
        ROS Level and ID............322E352B
        Serial Number...............
        EC Level....................
        FRU Number..................
        Device Specific.(Z0)........00000512FA000012
        Device Specific.(Z1)........
        Device Specific.(Z2)........
        Device Specific.(Z3)........
        Device Specific.(Z4)........
        Device Specific.(Z5)........
        Device Specific.(Z6)........

  L2cache0                                          L2 Cache
  mem0                                              Memory
  proc0                                             Processor

  PLATFORM SPECIFIC

  Name:  /
    Model:  IBM pSeries (emulated by qemu)
    Node:  /
    Device Type:  chrp

  Name:  openprom
    Model:  SLOF,aik
    Node:  openprom

  Name:  vga
    Node:  vga@0
```

```
        Device Type:  display
        Physical Location: qemu_VGA:0000:00:00.0

    Name:  usb
      Node:  usb@1
      Device Type:  xhci
      Physical Location: qemu_nec-usb-xhci:0000:00:01.0

    Name:  scsi
      Node:  scsi@2
      Physical Location: qemu_virtio-scsi-pci:0000:00:02.0
aix_on_mac:/ #

aix_on_mac:/opt/freeware/packages # date
Mon Oct  8 10:56:55 AEDT 2018

aix_on_mac:/ # uptime
  10:57AM   up 24 mins,  1 user,  load average: 1.72, 1.76, 1.54

aix_on_mac:/ # nmon
```

```
|  ----------------------------
|  N   N M   M  OOOO   N    N   For online help type: h
|  NN  N MM MM O    O  NN   N   For command line option help:
|  N N N M MM M O    O N N  N     quick-hint  nmon -?
|  N  N N M    M O    O N  N N   full-details  nmon -h
|  N   NN M    M O    O N   NN  To start nmon the same way every time?
|  N    N M    M  OOOO   N    N   set NMON ksh variable, for example:
|  ----------------------------      export NMON=cmt
|    TOPAS_NMON
|                           1 - CPU currently
|                           1 - CPU configured
|                        1000 - MHz CPU clock rate
|             PowerPC_POWER9 - Processor
|                      64 bit - Hardware
|                      64 bit - Kernel
|           0,aix_on_kvm - Logical Partition
|           7.2.3.1 TL03 - AIX Kernel Version
|               aix_on_mac - Hostname
|               aix_on_mac - Node/WPAR Name
|                   000000 - Serial Number
|  IBM pSeries (emulated by qemu) - Machine Type
```

```
aix_on_mac:/ # topas

Topas Monitor for host:aix_on_mac          EVENTS/QUEUES    FILE/TTY
Mon Oct  8 11:00:58 2018   Interval:2      Cswitch      78 Readch        0
747                                        Syscall      98 Writech     219
CPU     User% Kern% Wait% Idle%  Physc Entc% Reads        0 Rawin         0
Total    0.4   8.2   0.0  91.4    1.00 100.20 Writes       0 Ttyout      219
                                           Forks        0 Igets         0
12twork   BPS  I-Pkts O-Pkts   B-In  B-Out Execs        0 Namei        11
Total       0      0      0      0      0 Runqueue  2.00 Dirblk        0
                                           Waitqueue  0.0
Disk   Busy%     BPS     TPS  B-Read B-Writ                MEMORY
Total    0.0       0       0       0      0 PAGING           Real,MB   2048
   0                                       Faults       0 % Comp      26
FileSystem       BPS     TPS  B-Read B-Writ Steals       0 % Noncomp   13
Total              0       0       0      0 PgspIn       0 % Client    13
                                           PgspOut      0
0ame           PID  CPU%  PgSp Owner        PageIn       1 PAGING SPACE
topas      5046588  1.7 1.79M root         PageOut      0 Size,MB     512
5il         721178  0.4  124K root         Sios         0 % Used       1
3ock_rcv   2556252  0.4 60.0K root                        % Free      99
sec_rcv    2687318  0.3 60.0K root         NFS (calls/sec)
clcomd     4522472  0.2 1.69M root         SerV2        0 WPAR Activ   0
sendmail   3998082  0.1 1.16M root         CliV2        0 WPAR Total   0
netm        655640  0.0 60.0K root         SerV3        0 Press: "h"-help
vrtscsi_   1311022  0.0 84.0K root         CliV3        0       "q"-quit
vtiol       327950  0.0 64.0K root         SerV4        0
rmcd       4456908  0.0 11.9M root         CliV4        0
syncd      1835398  0.0  604K root
ksh        3932560  0.0  588K root
pilegc      459026  0.0 92.0K root
init             1  0.0  772K root
IBM.Mgmt   5374384  0.0 5.34M root
```

```
lvmbb      1179946  0.0 60.0K root
j2gt       1245534  0.0 64.0K root
vmptacrt    196874  0.0 60.0K root
j2pg       1442098  0.0  196K root
j2sync     1507636  0.0 76.0K root


aix_on_mac:/cg # lsmpio
name    path_id  status    path_status  parent  connection

hdisk0  0        Enabled  Sel          scsi0   0,0

aix_on_mac:/cg # lsmpio -q
Device           Vendor Id  Product Id      Size        Volume Name
-------------------------------------------------------------------------------
hdisk0           QEMU       QEMU HARDDISK    100.00GiB  -

aix_on_mac:/ # lspv -u
hdisk0          00000000344f6122                        rootvg         active
33130drive-virtio-disk00DQEMU HARDDISK04QEMUvrtscsi           8eca6bf6-b924-
0872-c039-8cb2a62de21a

aix_on_mac:/ # lsdev -Cc adapter
ent0   Available        Virtual I/O Ethernet Adapter (l-lan)
pkcs11 Available        ACF/PKCS#11 Device
scsi0  Available 00-10 Virtio SCSI Client Adapter (f41a0800)
vsa0   Available        LPAR Virtual Serial Adapter
vscsi0 Available        Virtual SCSI Client Adapter

aix_on_mac:/ # lsdev -Cc disk
hdisk0 Available 00-10 MPIO Other Virtio SCSI Disk Drive

aix_on_mac:/ # lsps -a
Page Space      Physical Volume   Volume Group   Size %Used Active  Auto   Type  Chksum
hd6             hdisk0            rootvg         512MB    1   yes     yes    lv     0

aix_on_mac:/ # smtctl
smtctl: SMT is not supported on this system.

aix_on_mac:/ # echo cvai | kdb -script
read vscsi_scsi_ptrs OK, ptr = 0x7449E90
(0)> cvai
Executing cvai command
NAME      STATE    CMDS_ACTIVE  ACTIVE_QUEUE      HOST
vscsi0    0x000007 0x0000000000 0x0               qemu->vscsi0

End of execution for cvai command
(0)> Executing q command

aix_on_mac:/ # lspath
Enabled hdisk0 scsi0
```
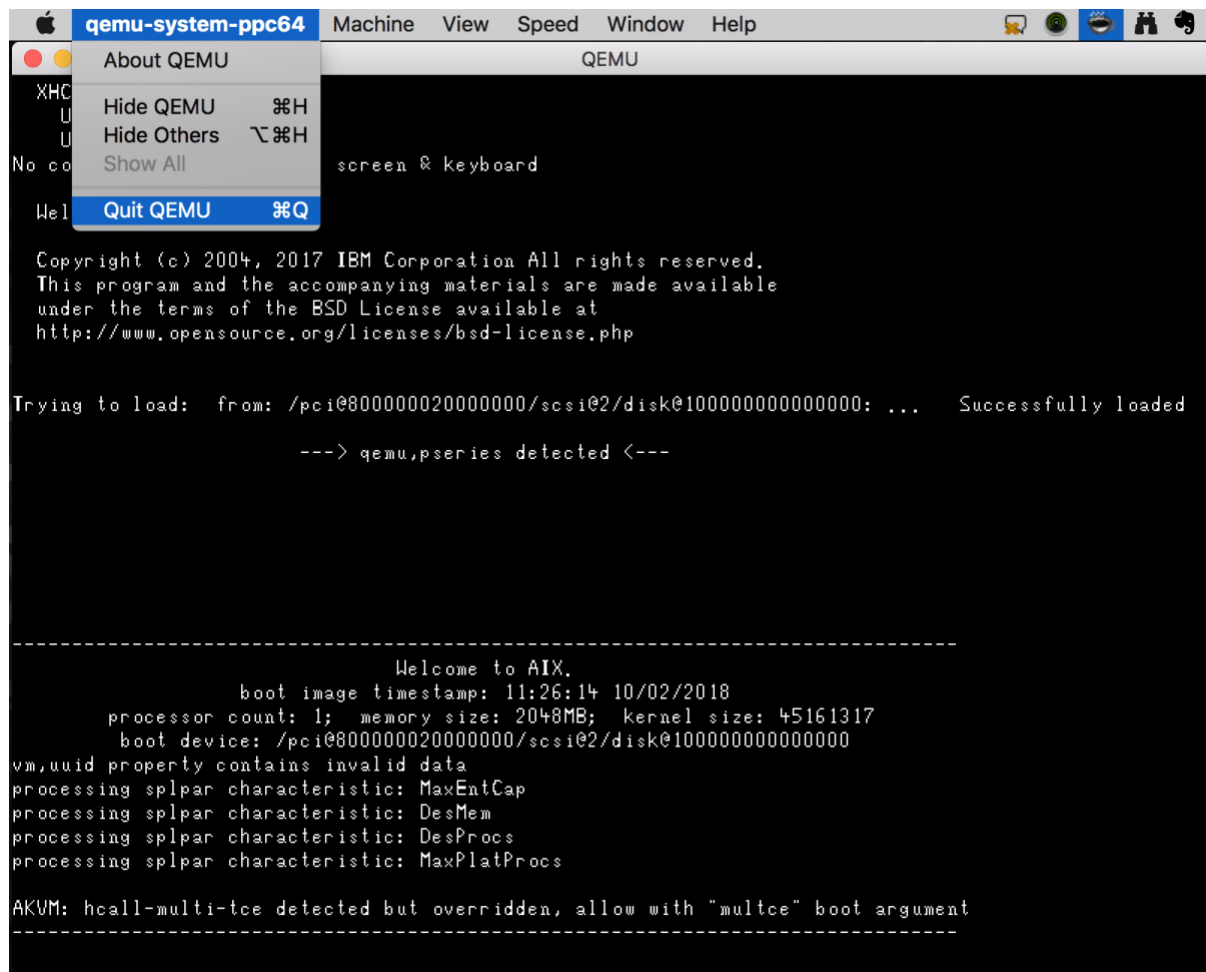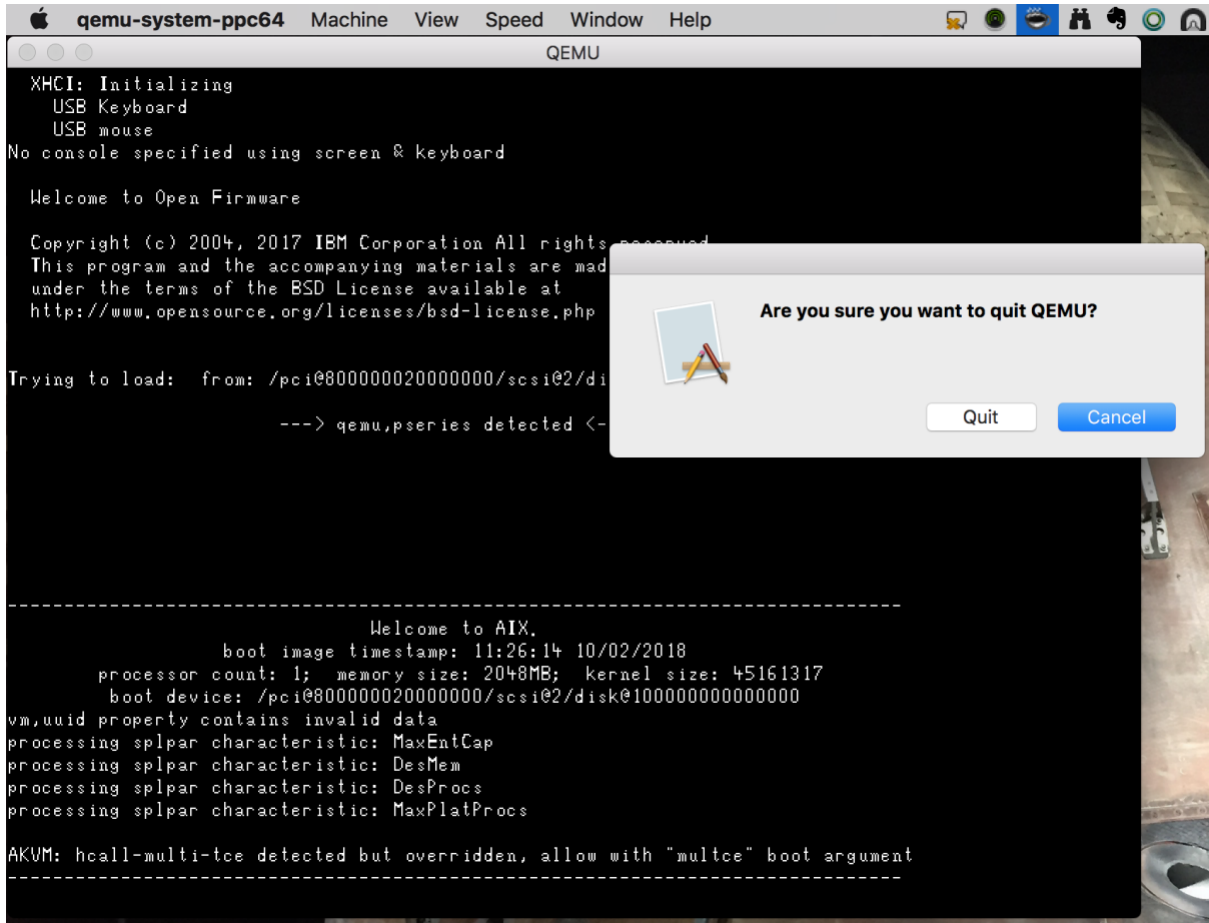
Warning! Some commands don't work!

```
aix_on_mac:/ # ps
Segmentation fault(coredump)
```

To stop the VM, you can either issue the 'halt' command from inside the AIX VM or select 'Quit' from the QEMU console menu (as shown below).

🍎 qemu-system-ppc64   Machine   View   Speed   Window   Help

QEMU

```
XHCI: Initializing
   USB Keyboard
   USB mouse
No console specified using screen & keyboard

   Welcome to Open Firmware

   Copyright (c) 2004, 2017 IBM Corporation All rights reserved.
   This program and the accompanying materials are mad
   under the terms of the BSD License available at
   http://www.opensource.org/licenses/bsd-license.php


Trying to load:  from: /pci@800000020000000/scsi@2/di

                 ---> qemu,pseries detected <-
```

Are you sure you want to quit QEMU?

Quit   Cancel

```
--------------------------------------------------------------------
                       Welcome to AIX.
             boot image timestamp: 11:26:14 10/02/2018
         processor count: 1;  memory size: 2048MB;  kernel size: 45161317
           boot device: /pci@800000020000000/scsi@2/disk@100000000000000
vm,uuid property contains invalid data
processing splpar characteristic: MaxEntCap
processing splpar characteristic: DesMem
processing splpar characteristic: DesProcs
processing splpar characteristic: MaxPlatProcs

AKVM: hcall-multi-tce detected but overridden, allow with "multce" boot argument
--------------------------------------------------------------------
```

In the next phase of my journey into "AIX on QEMU", I plan to try and get networking up and running inside the AIX VM. I think this blog post might help… https://blog.san-ss.com.ar/2016/04/setup-nat-network-for-qemu-macosx