

OpenPower

Jeremy Kerr

Firmware developer

IBM Linux Technology Center

jk@ozlabs.org

Firmware

OpenPower

System architecture

Development collaboration

Linux platform

openpowerfoundation.org

POWER8

Machine State Register (MSR)



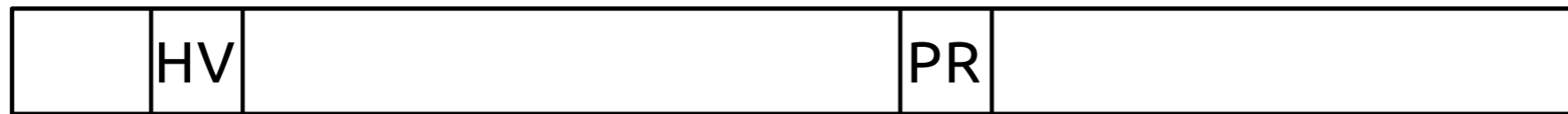
PR=1

Problem state (userspace)

PR=0

Supervisor (operating system)

Machine State Register (MSR)

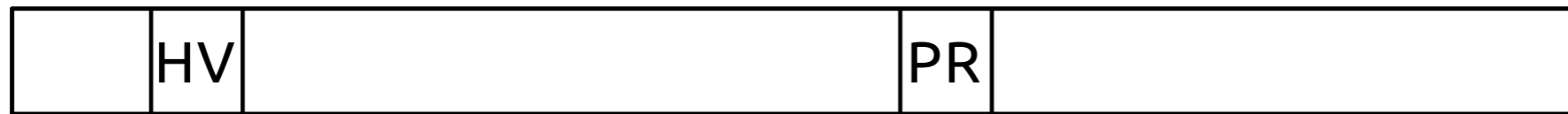


PR=1 Problem state (userspace)

PR=0,HV=0 Supervisor (operating system)

PR=0,HV=1 Hypervisor

Machine State Register (MSR)

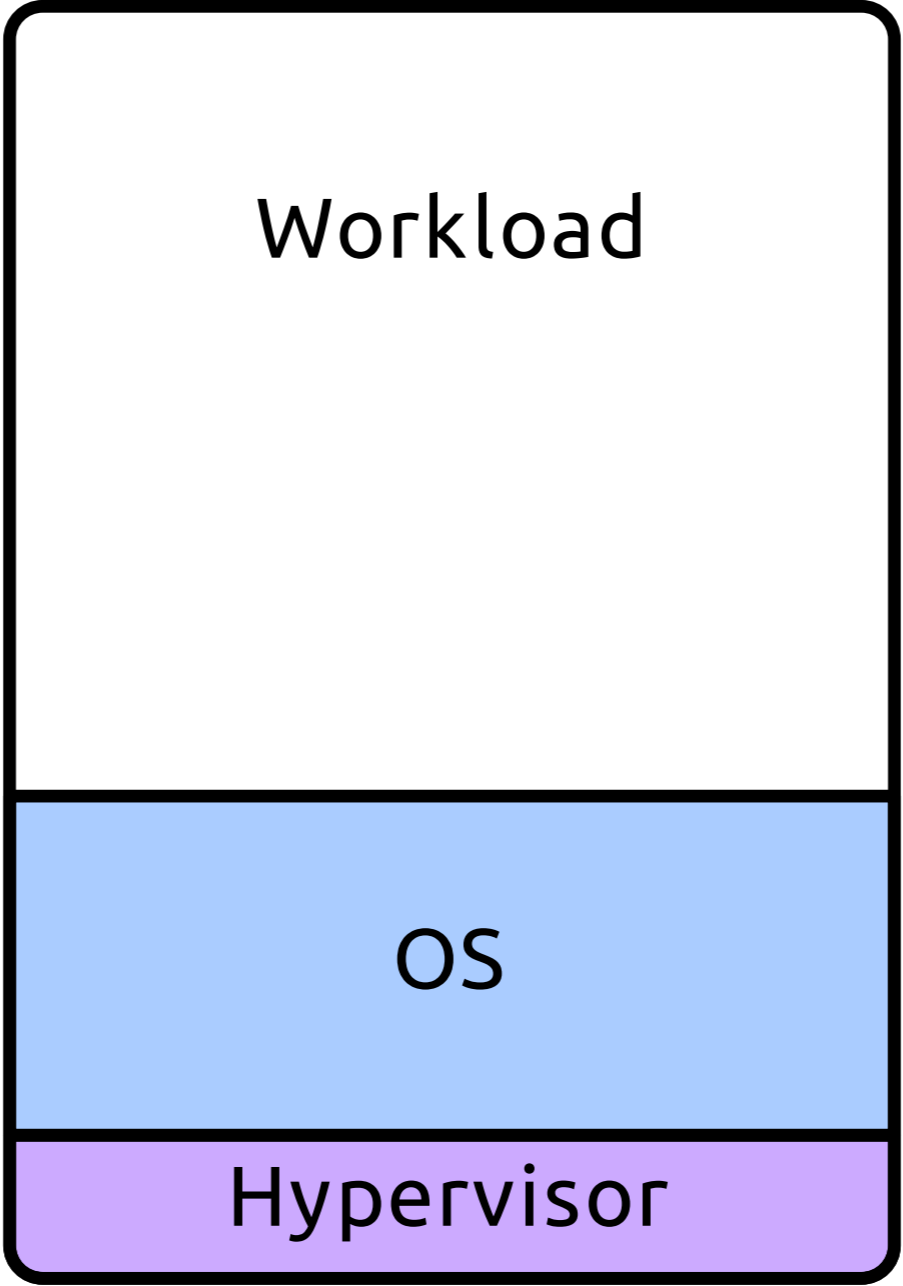


PR=1 Problem state (userspace)

PR=0,HV=0 Supervisor (operating system)

~~PR=0,HV=1 Hypervisor~~

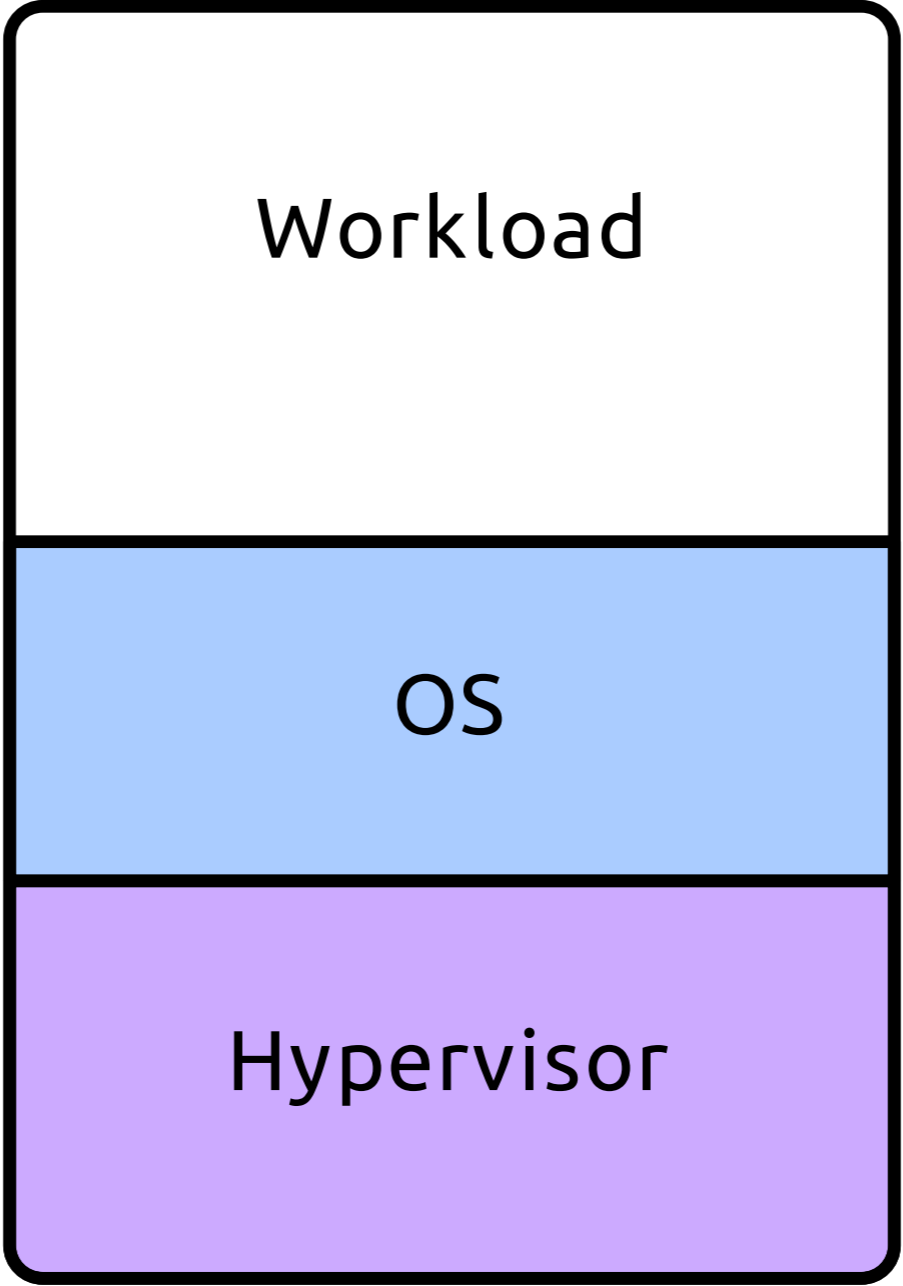
PowerVM



Workload

OS

Hypervisor



Workload

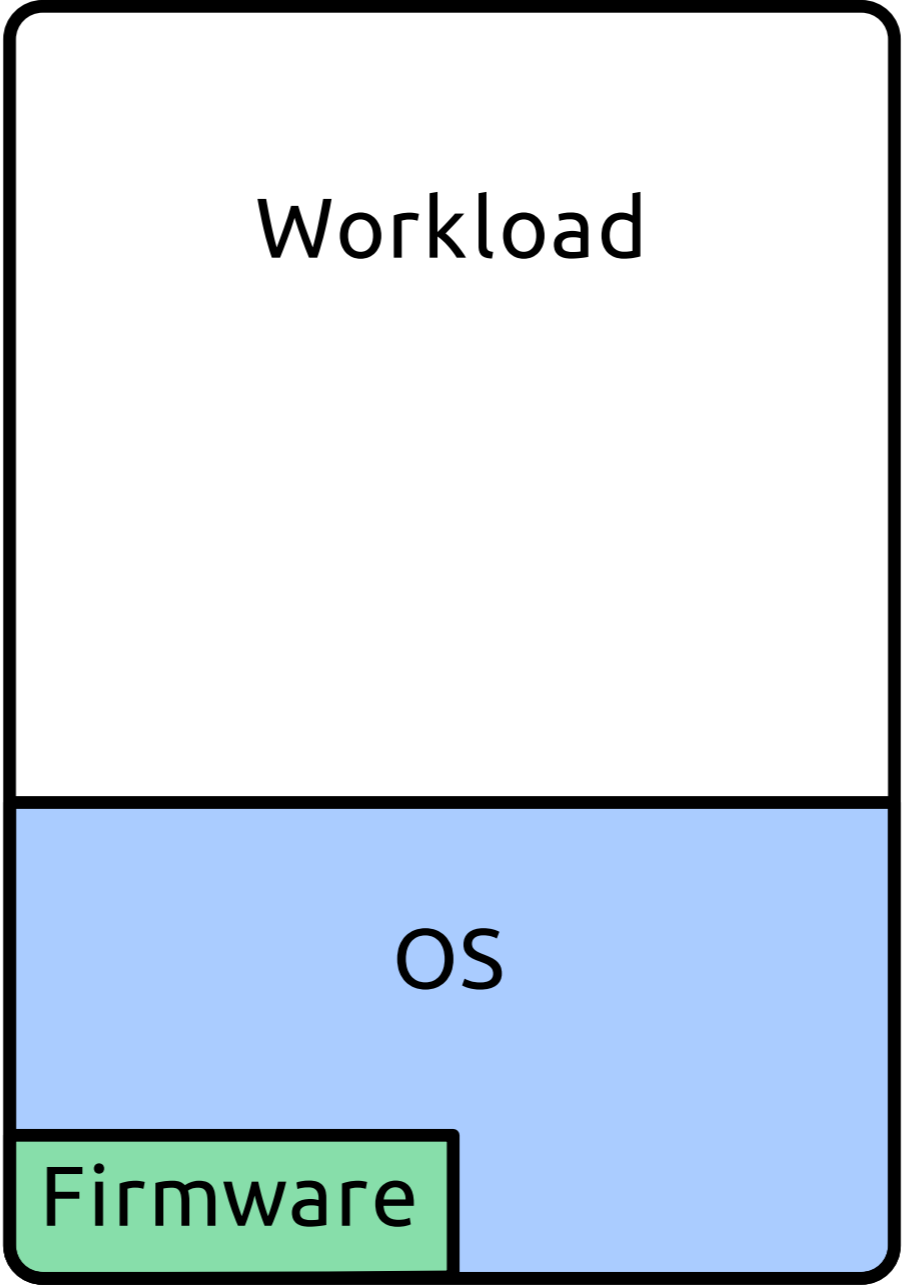
OS

Hypervisor



Workload

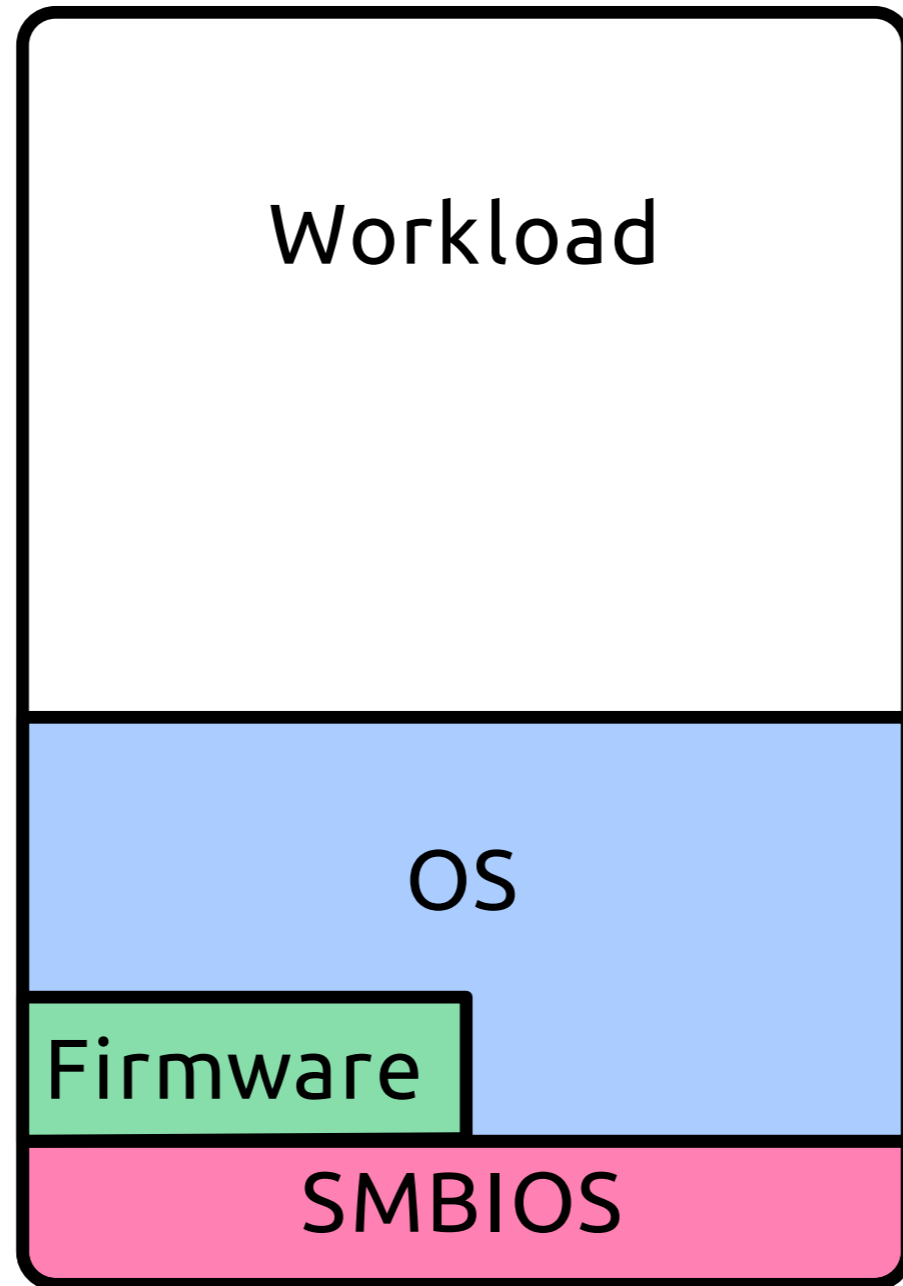
OS

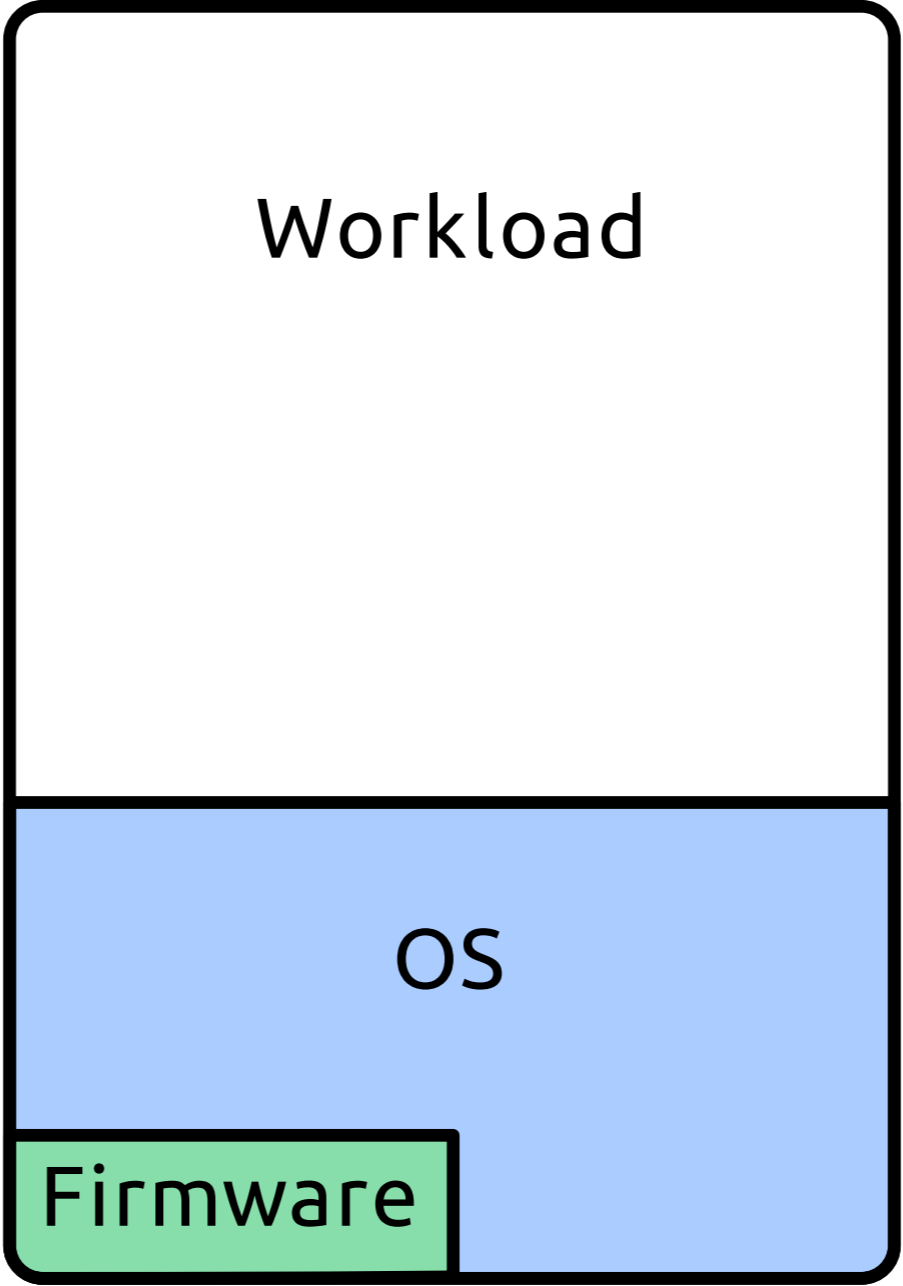


Workload

OS

Firmware



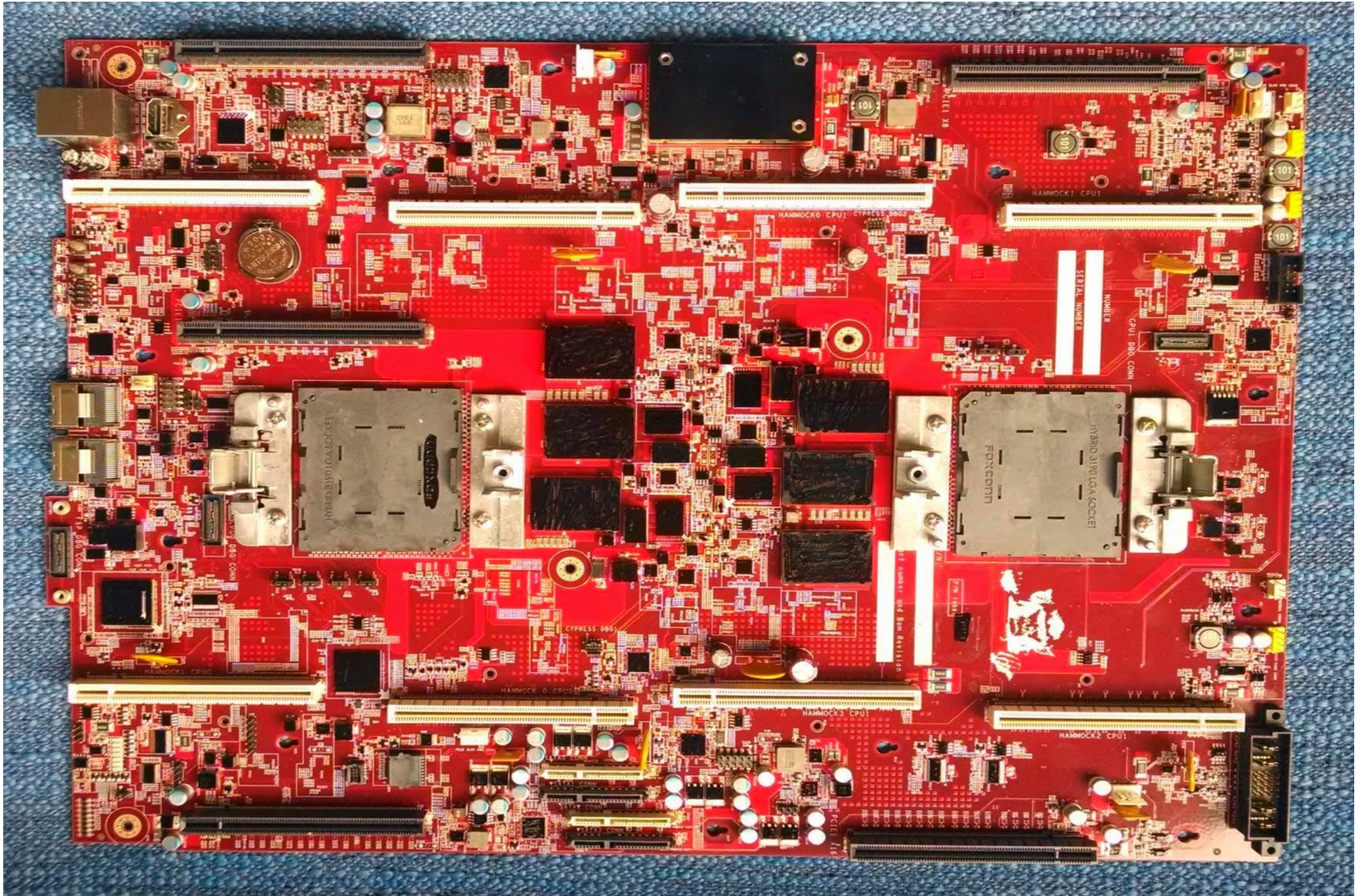


Workload

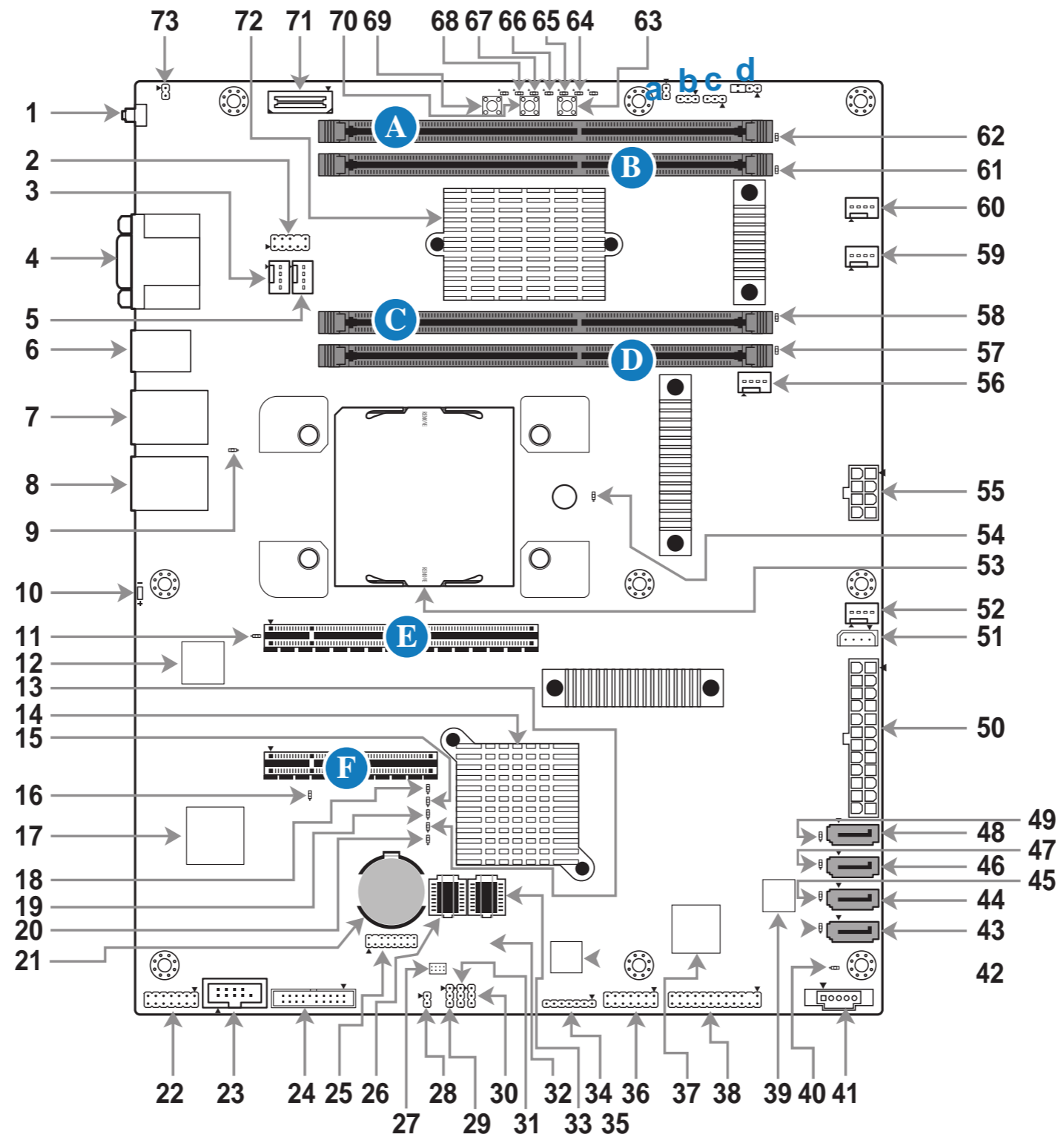
OS

Firmware

github.com/open-power



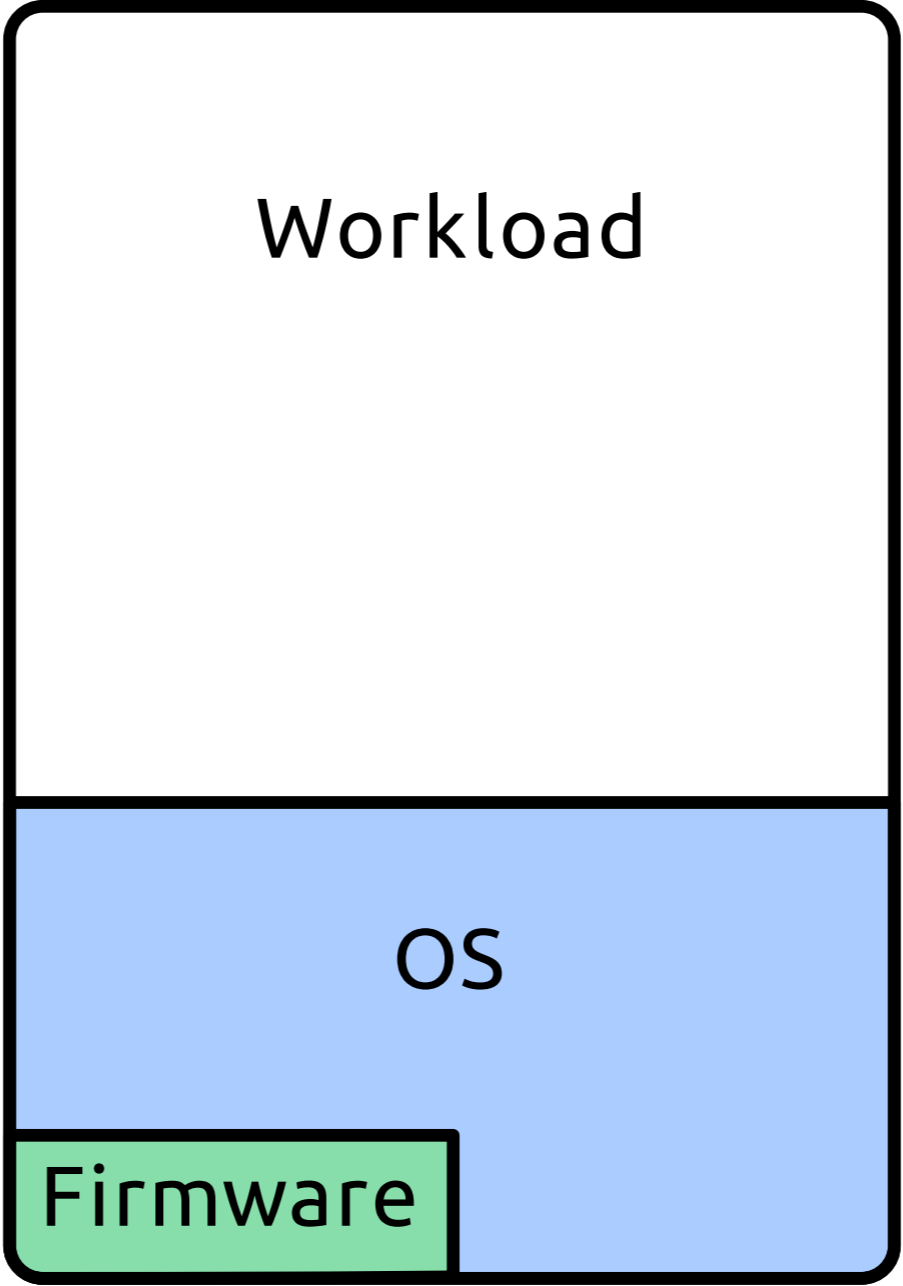




OpenPower Implementation

Hostboot: early boot
firmware

skiboot: boot & runtime
firmware



Workload

OS

Firmware

skiboot: boot & runtime
firmware

petitboot: OS loader

kernel: “powernv” platform
port

OCC: on-chip-controller

BMC

op-build: build infrastructure

```
git clone git://github.com/open-power/op-build
```

```
cd op-build
```

```
. op-build-env
```

```
op-build palmetto_defconfig
```

```
op-build
```

Customisation

```
op-build SKIBOOT_VERSION=2.1
```

Customisation

```
op-build SKIBOOT_SOURCE=git://example.com/linux.git/
```


Firmware

Thank you!

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Resources

github.com/open-power/

skiboot@lists.ozlabs.org

arch/powerpc/platforms/powernv/