

POWER your Cloud

BYOD

Build Your Own Datacloud

Open Source Software



Open Source Hardware

OpenPOWER CXL - OpenCAPI

PowerISA v2.07 - POWER8

PowerISA v3.0 - POWER9

PowerISA v3.1 - Power10

RISC \leftrightarrow CISC

ppc64le \Leftrightarrow ppc64
Little \Leftrightarrow Big Endian

SMT4 / SMT8

$$\text{P8 S : } 2s \times 12c \times 8t = 192$$

$$\text{P8 E : } 4s \times 12c \times 8t = 384$$

$$\text{P9 S : } 2s \times 22c \times 4t = 176$$

$$\text{P9 E : } 4s \times 12c \times 8t = 384$$

$$\text{P10 S : } 2s \times 24c \times 8t = 384$$

$$\text{P10 E : } 4s \times 15c \times 8t = 480$$

OPAL : hostboot

IPL with nvram

skiboot + petitboot

Open Baseboard Management Controller

openbmc

Industry Standard Rack Server

Scale OUT and Scale UP
1U, 2U, 4U rack machines
1, 2, 4 socket machines

Manufacturers

- IBM
- Raptor Engineering
- RED Semiconductor
- Pengiun Computers
- SuperMicro
- Tyan
- Wistron
- Google
- Rackspace
- YADRO
- Inspur Power Systems
- ...

Open Source Distributions

- Red Hat (ppc64 and **ppc64le**)
- SuSE (ppc64 and **ppc64le**)
- Ubuntu (ppc64le)
- CentOS (ppc64 and **ppc64le**)
- AlmaLinux (ppc64le)
- PowerEL (**ppc64** and **ppc64le**)
- FreeBSD (ppc64le / ppc64)
- OpenBSD (ppc64)

KVM Qemu, Docker, LXC, ...
LibVirt, OpenStack,
OpenNebula, ...
1 host machine = 1024 vm

Commonly used OSS available
Porting applications is easy

Apache HTTP, Nginx, Tomcat,
Passenger, ...

PostgreSQL, MariaDB,
MySQL, MongoDB, Redis, ...
MariaDB upto 1.5 billion TPS

C, C++, Golang, Rust, Java,
.NET, ...

Perl, Python, Ruby, Typescript,
...

Support for major open source programming languages

May the **POWER** be with you

www.powerel.org

Toshaan Bharvani - <toshaan@vantosh.com>