Ubuntu on RISC-V
State of things

Matthieu Clemenceau — Director Foundations

Lukasz Zemczak — Engineering Manager Foundations

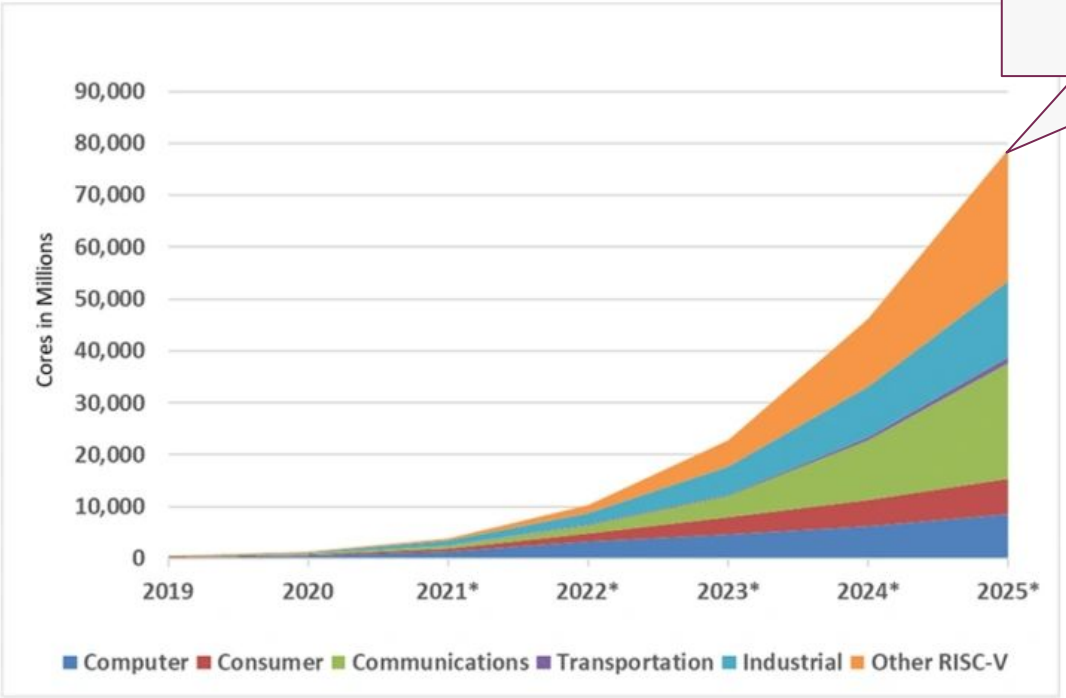
CANONICAL Ubuntu

In the News

Intel invests in open-source RISC-V processors, creates billion-dollar fund
Intel and RISC-V working together is a game-changer, and today is the day that RISC-V becomes a
Imagination Tec
unveils Ca
family
September 06, 2022
NASA Makes RISC-V the Go-to Ecosystem for Future Space Missions
SiFive X280 delivers 100x increase in computational capability with leading power efficiency, fault tolerance, and compute flexibility to propel next-generation planetary and surface missions
RISC-V grows open source processor membership 130% in 2021
for Broader
Chiplets
M Financing
ve Is Set To Challenge

Rapid Growth Predicted

62.4 billion
RISC-V CPU cores
In 2025



Source: Semico Research Corp.

RISC-V is all about a new business model

Open standards

Freedom of design

Available hardwares

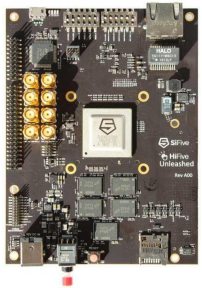
What it takes to make a board acceptable

Scheduled availability

Reasonable pricing

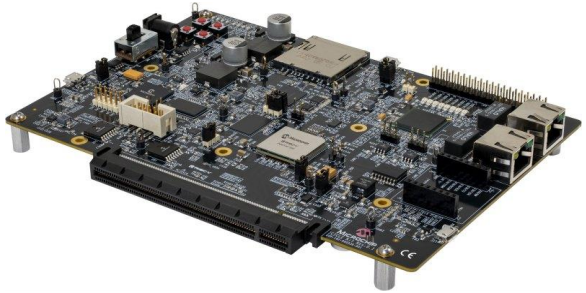
Upstreaming activity

Reasonable number of non-upstream



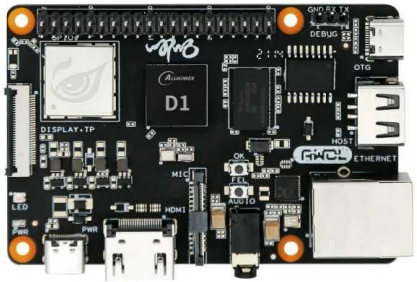
Sifive Hifive Unleashed
2018

SiFive Hifive Unmatched, 2021



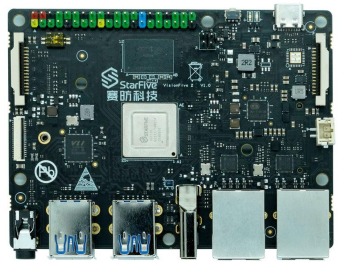
Microchip PolarFire Icicle Kit, 2021

StarFive VisionFive, 2021



Allwinner Nezha, 2021

LicheeRV, 2021



StarFive VisionFive 2, 2021

RISC-V is a first class Ubuntu architecture

Ubuntu Images

Published RISC-V Ubuntu Images

Ubuntu 20.04.3 (Focal)

- SiFive HiFive Unleashed
- SiFive HiFive Unmatched
- and QEMU

Published RISC-V Ubuntu Images

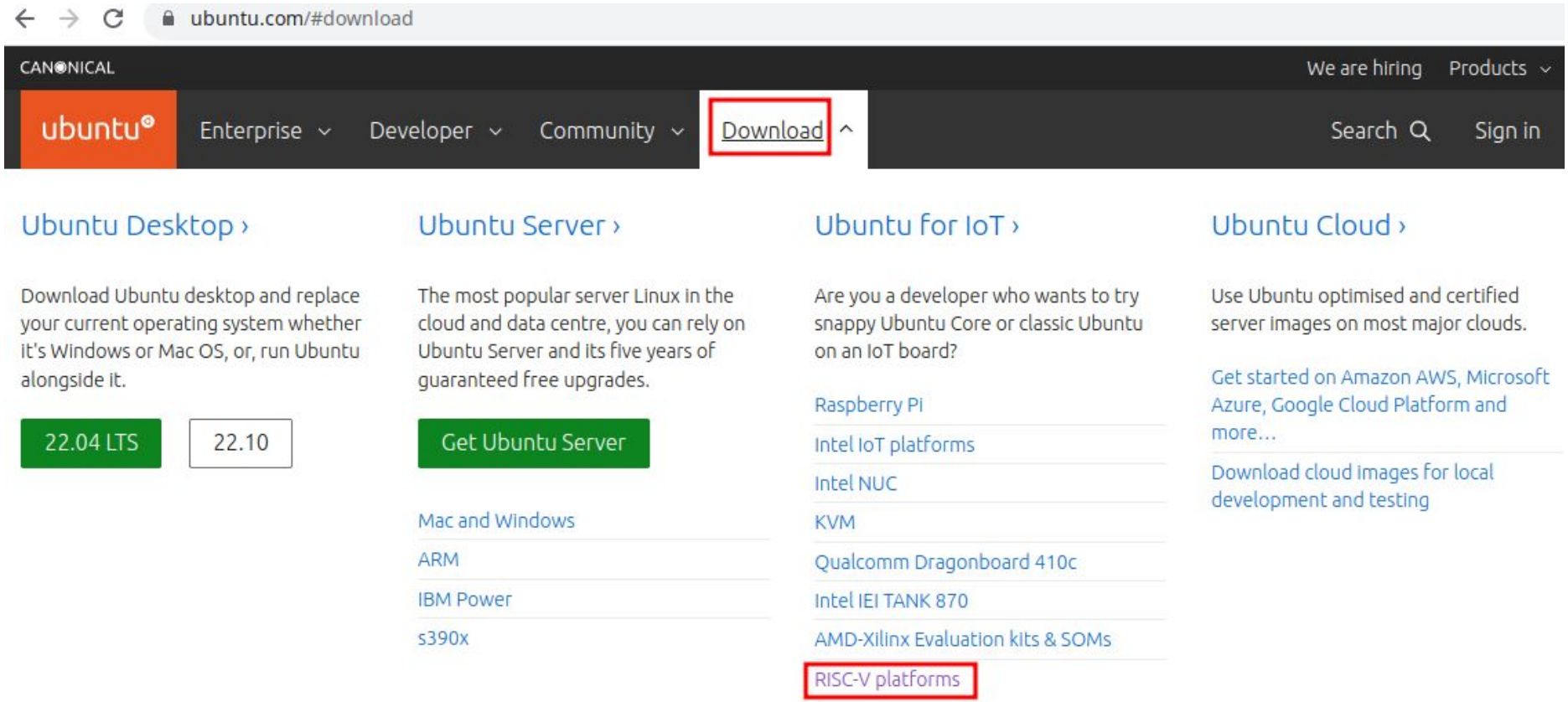
Ubuntu 22.04.1 (Jammy)

- SiFive HiFive Unmatched
- Allwinner Nezha D1
- StarFive VisionFive

Published RISC-V Ubuntu Images

Ubuntu 22.10 (Kinetic)

- SiFive HiFive Unmatched
- Allwinner Nezha D1
- StarFive VisionFive
- LicheeRV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Get started on Amazon AWS, Microsoft Azure, Google Cloud Platform and more…
Download cloud images for local development and testing

SiFive Unmatched, QEMU | StarFive VisionFive | AllWinner Nezha | Sipeed LicheeRV Dock | Live installer

Download Ubuntu Server Preinstalled Image

Ubuntu Server 22.10

Note: It is an early RISC-V developer access through Ubuntu 22.10 and this is a preinstalled image, if you have a NVMe drive, we advise you to use the Ubuntu Server live installer which can be found here.

Download 64-bit

Ubuntu Server 22.04.1

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Download 64-bit

Packages support

amd64 - 68211

riscv64 - 63445 (93 %)

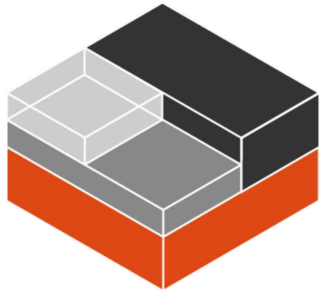
For developers

OpenJDK

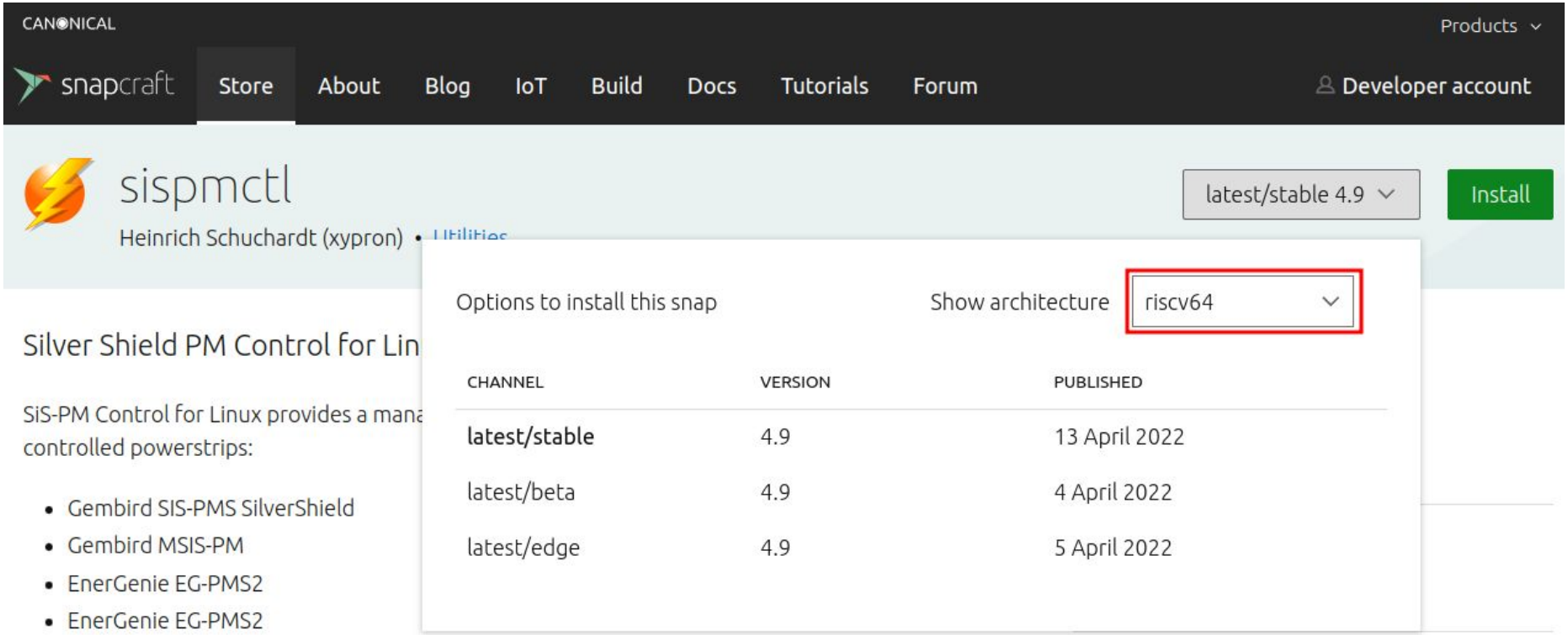
C

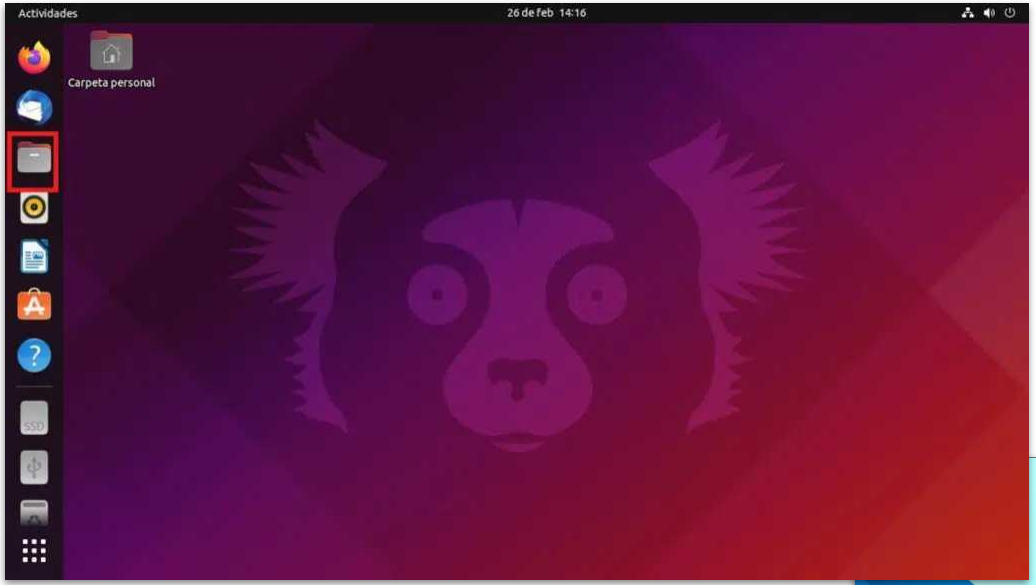
QEMU

docker



Snapcraft for riscv64 is fully functional

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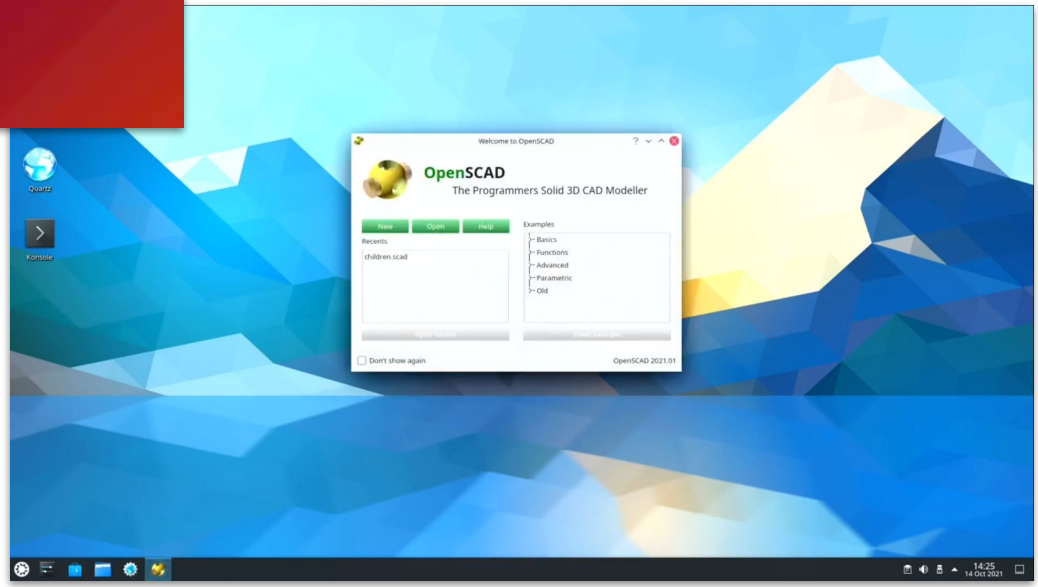
Welcome to OpenSCAD
OpenSCAD
The Programmers Solid 3D CAD Modeller
New
Open
Help
Recents
children.scad
Examples
Basics
Functions
Advanced
Parametric
Old
Don't show again
OpenSCAD 2021.01
Quartz
Konsole
14:25
14 Oct 2021

OpenJDK

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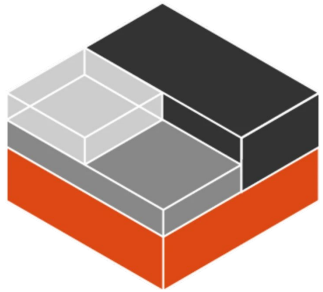
QEMU

docker



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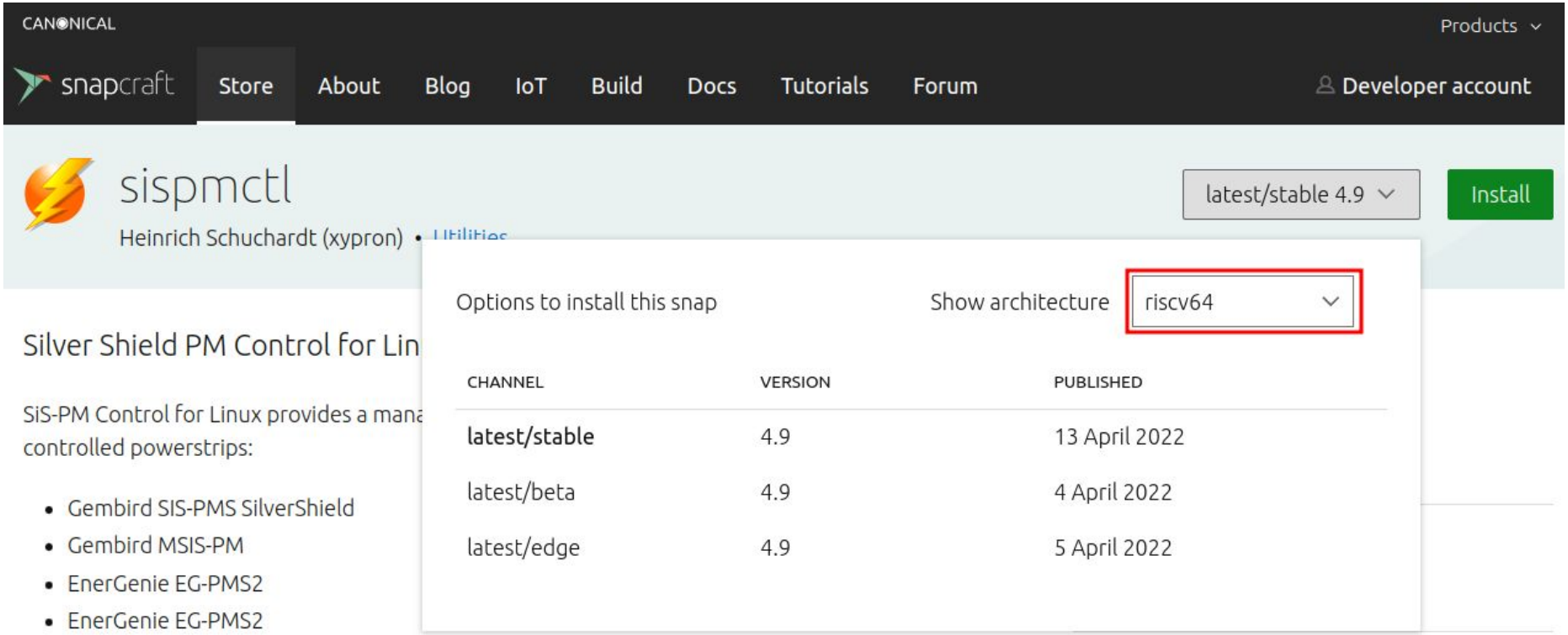

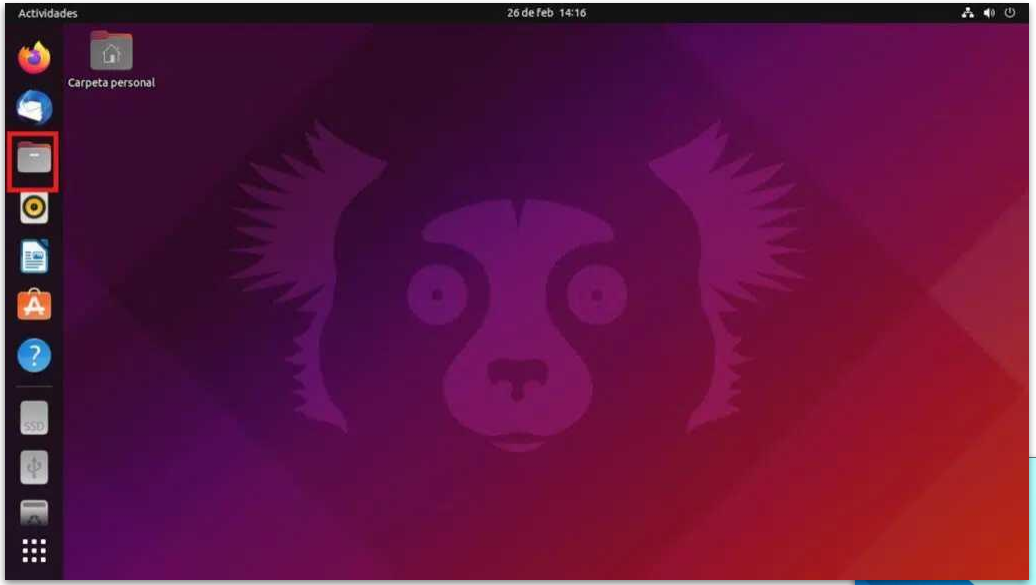
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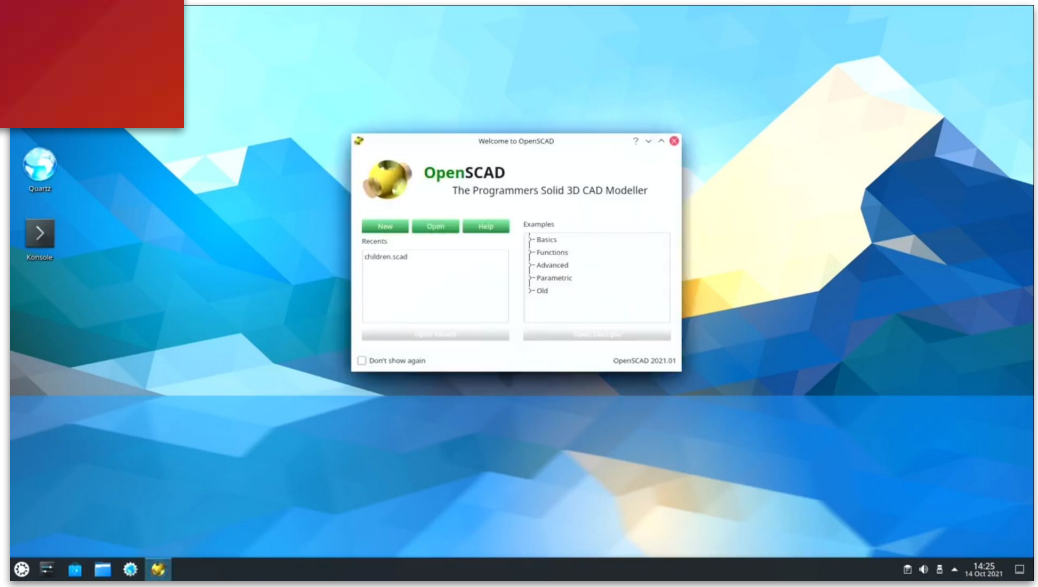
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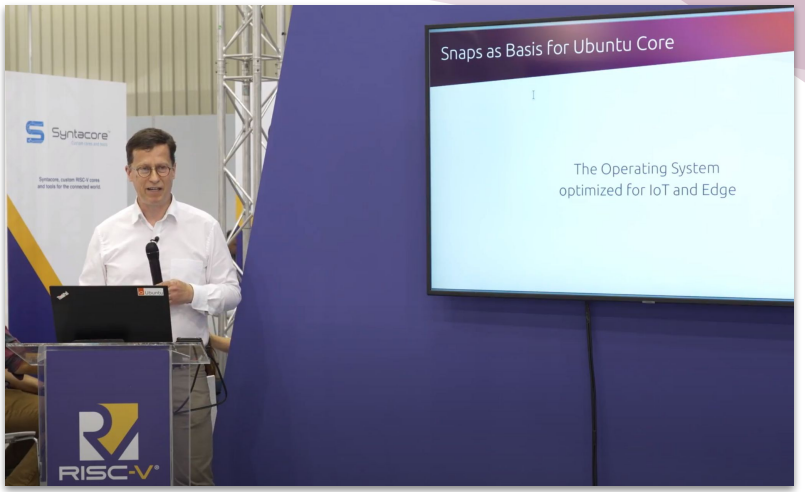
14 Oct 2021

Spreading the word

RISC-V at Embedded World

Booth showing

Ubuntu on RISC-V



Talks by

- Gordan Markuš
- Heinrich Schuchardt
  - Developing Containerized RISC-V Applications
- Ondrej Kubik

What’s next ?

For Ubuntu and Canonical

Continue close gap within our ecosystem

Ubuntu Core, MAAS, Snaps, Launchpad

More Hardware and Partnership

For RISC-V

Specification for secure world

Hardware with virtualization support

Server grade hardware

Interested in Ubuntu and RISC-V ?

Want to know more about RISC-V and Ubuntu

- Installation instructions for various supported boards:
  - https://wiki.ubuntu.com/RISC-V
- Downloads
  - https://ubuntu.com/download/risc-v
- Where to ask questions ?
  - #ubuntu-riscv on IRC libera
  - https://discourse.ubuntu.com/c/foundations

Thank you. Questions?