

# IEEE UEMCON 2021 Workshop

Concepts of blockchains on IoT devices

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# Objectives

Showing concepts of computing pseudo-blockchains using virtual Raspberry Pis.

These are not blockchains, but they are a related structures

We will cover basic principles of distributed computing

Including working with basic virtualized Raspberry Pis

# Methods and tools

QEMU virtual machines supporting ARM Raspberry Pis

Mac (M1 experimental now)

Windows

Python 3 and several Python libraries

# Outline

## Path

Three parts

*Highlighting differences between Microsoft Windows based machines and Apple Mac computers*

**Part 1:** Install and test QEMU virtual machines

**Part 2:** Install and test Raspberry Pi Raspberries images

**Part 3:** The workshop

Building basic blockchains with two virtualized Raspberry Pis

# Important notes

**Do Parts 1 and 2 in advance!**

Parts 1 and 2 should be done at least one day in advance of Part 3

Part 3 is the workshop itself, Parts 1 and 2 are advanced preparation

Parts 1 and 2 can take several hours

It is important to do them in advance

# Copyrights and no liability

We leave it to the user to validate and check for security issues on all software

**The systems you install, for this workshop, are at your own risk - we cannot assume any implicit or explicit responsibility for their behavior, risk, or damage.**

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