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# Declarative VMs: Because Infrastructure Should Be Simple

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@messemar

# About:me

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# Motivation

**Have you ever felt the need to deploy a generic virtual machine on your NixOS system?**

- For trying out a package, that is not available in NixOS?
- For a solution that brings its own operating system?
- For isolating workloads from the rest of the system?

# Motivation: How is a Virtual Machine Deployed on NixOS?

- Manual using LibVirt
  - Setting up a XML file for the VM, manually or via GUI
  - Setting up a network XML file
  - Configuring auto start at system boot time
- More Automatic via Virtual Machine Management Solutions
  - Incus, OpenStack, Proxmox
  - Requires setup work for the management solution first

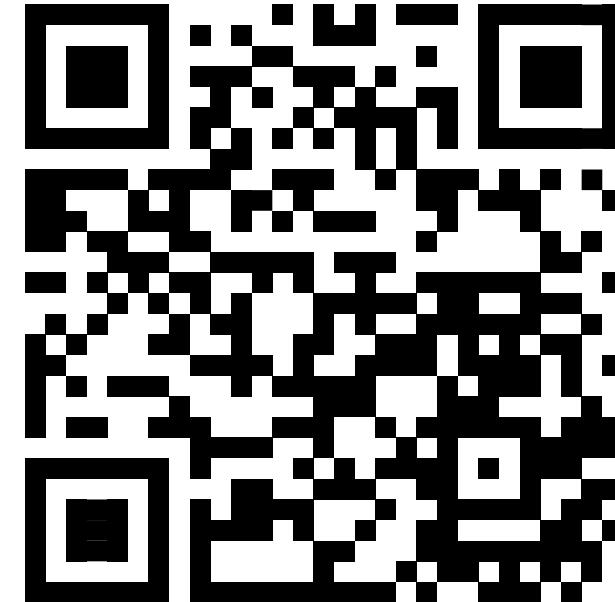
# Introducing ctrl-os.vms

```
1 config, pkgs, ... }:
2 {
3     ctrl-os.vms = {
4         gatewayInterface = "eth0";
5         networks.default.allowedTCPPorts = [ "2222:192.168.20.2:22" ];
6         virtualMachines = {
7             testmachine = {
8                 image = /path/to/raw/vm/image;
9                 imageSize = 4096;
10                cores = 1;
11                memorySize = 2048;
12                autoStart = true;
13                network = "default";
14                cloudInitUserConfigFile = /path/to/cloud-init/user/config.yaml;
15                cloudInitNetworkConfigFile = /path/to/cloud-init/network/config.yaml;
16            };
17        };
18    };
19 }
```

Documentation: <https://docs.ctrl-os.com/modules/ctrl-os-vms/>

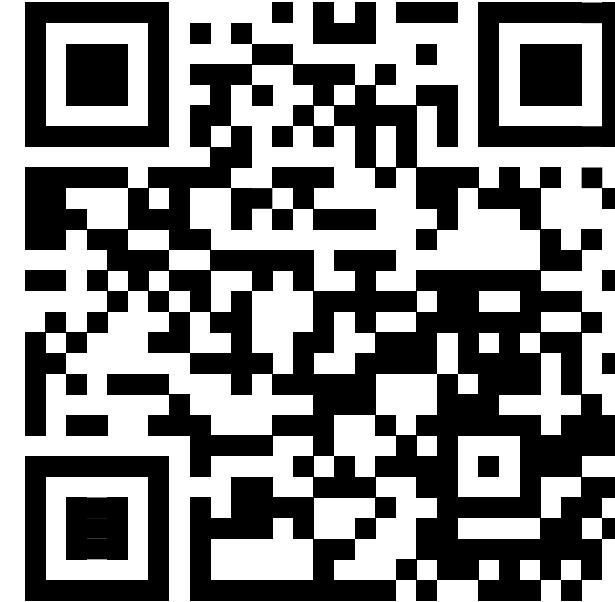
# Introducing ctrl-os.vms

- Part of  cyberus-ctrl-os/ctrl-os-modules
  - Collection of curated NixOS modules, that works great with CTRL-OS
  - License: Apache 2.0
- CTRL-OS offers Long-Term support for NixOS



<https://github.com/cyberus-ctrl-os/ctrl-os-modules>

# Questions?



<https://github.com/cyberus-ctrl-os/ctrl-os-modules>