





# Declarative VMs: Because Infrastructure Should Be Simple



@messemar

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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 it's own operating system?
- For isolating workloads from the rest of the system?

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# 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

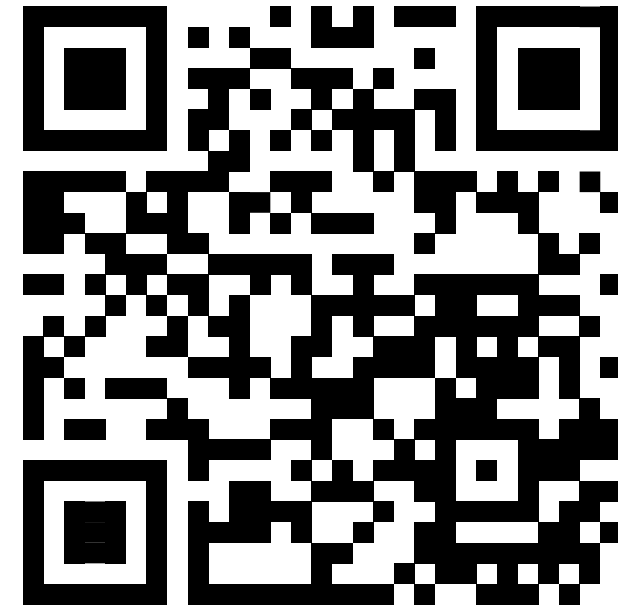
# Introducing ctrl-os.vms

```
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

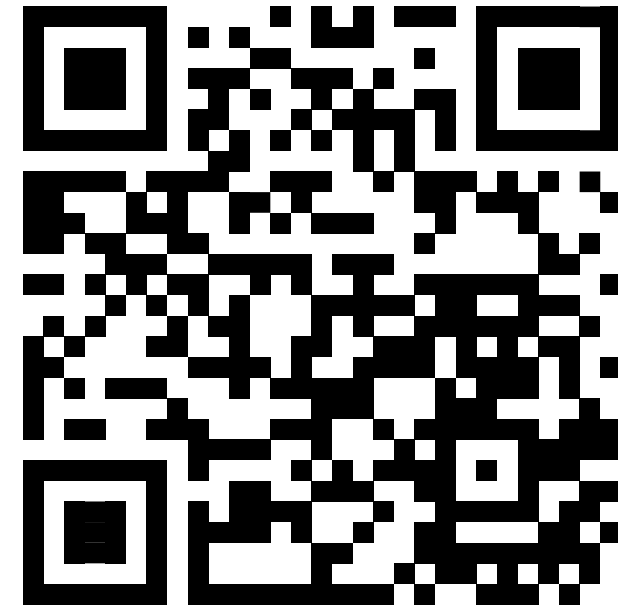
- Part of  cyberus-ctrl-os/ctrl-os-modules
  - Collection of curated NixOS modules, that works great with CTRL-OS
  - License: Apache 2.0
- CTRL-OS offers Long-Term support for NixOS



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

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## Questions?



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