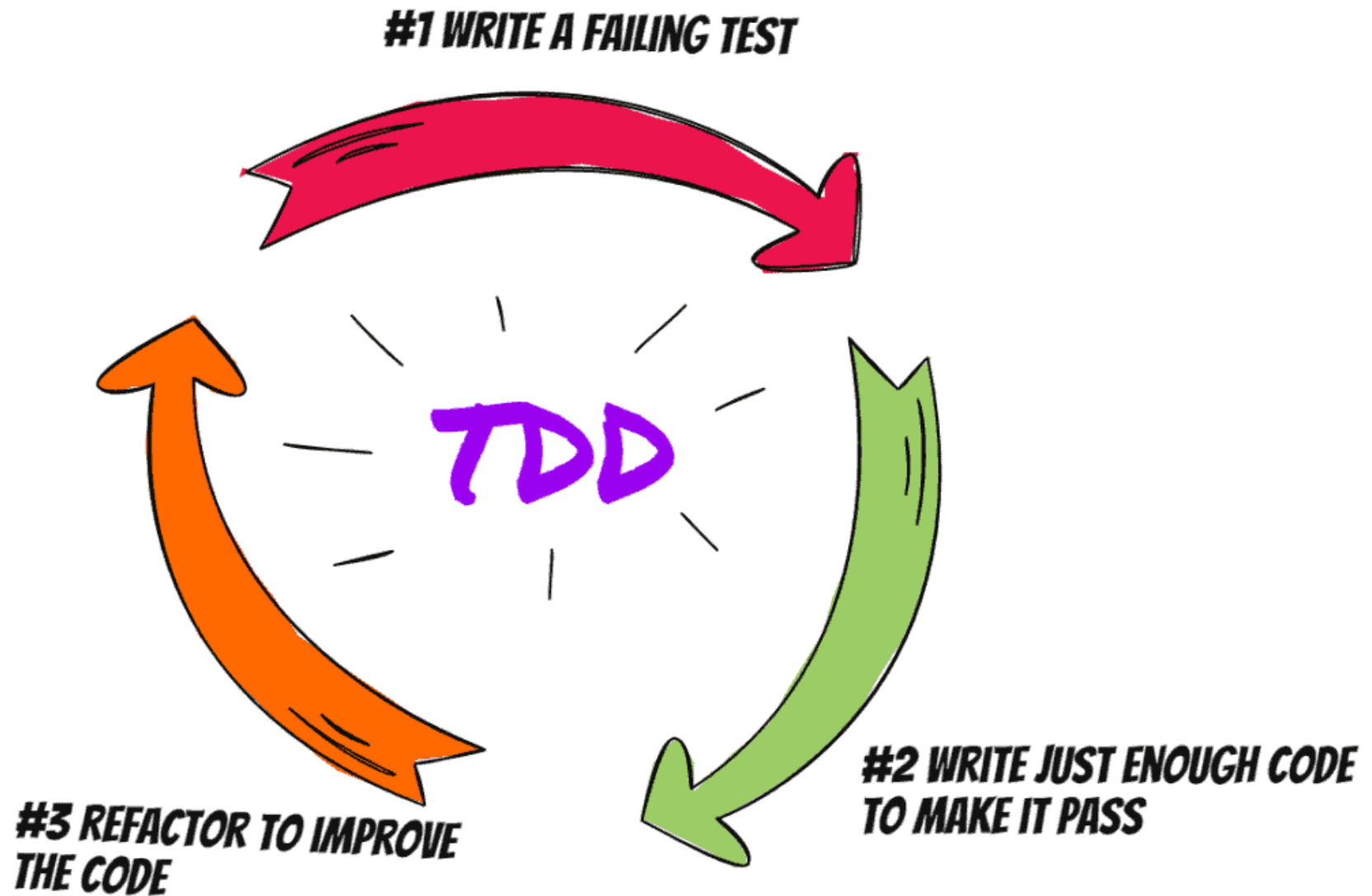


A cyberpunk cityscape at night, featuring a dense skyline of buildings with glowing neon lights in shades of blue, red, and yellow. The scene is set in the rain, with numerous vertical streaks of light reflecting off the wet surfaces. The overall atmosphere is dark and futuristic.

NETRUNNER

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TDD – Test Driven Development

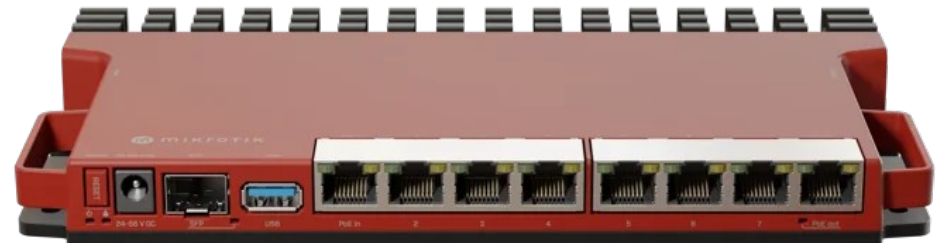


Why not TDN? – Test Driven Networking

Test Results

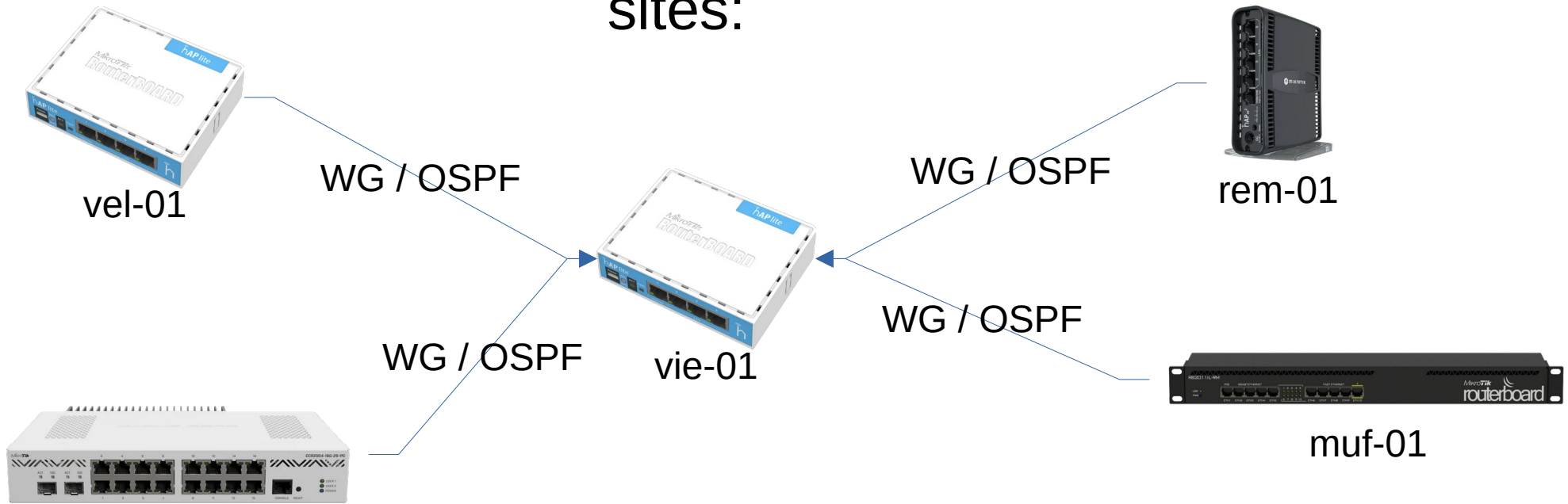
[FAILED] | 2026-01-21 13:37:48.232999 | no NAS access for guests

- Write testcases
- configure network
- run test

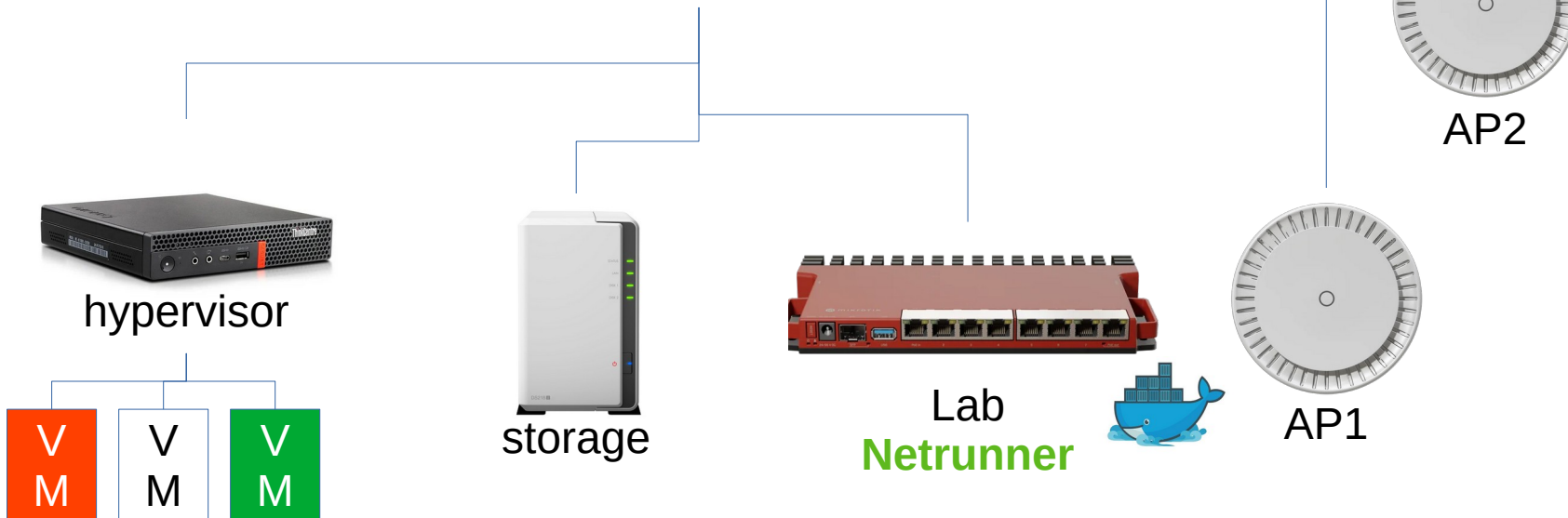


Protects against unwanted infrastructure changes.

sites:



Core switch



segments:

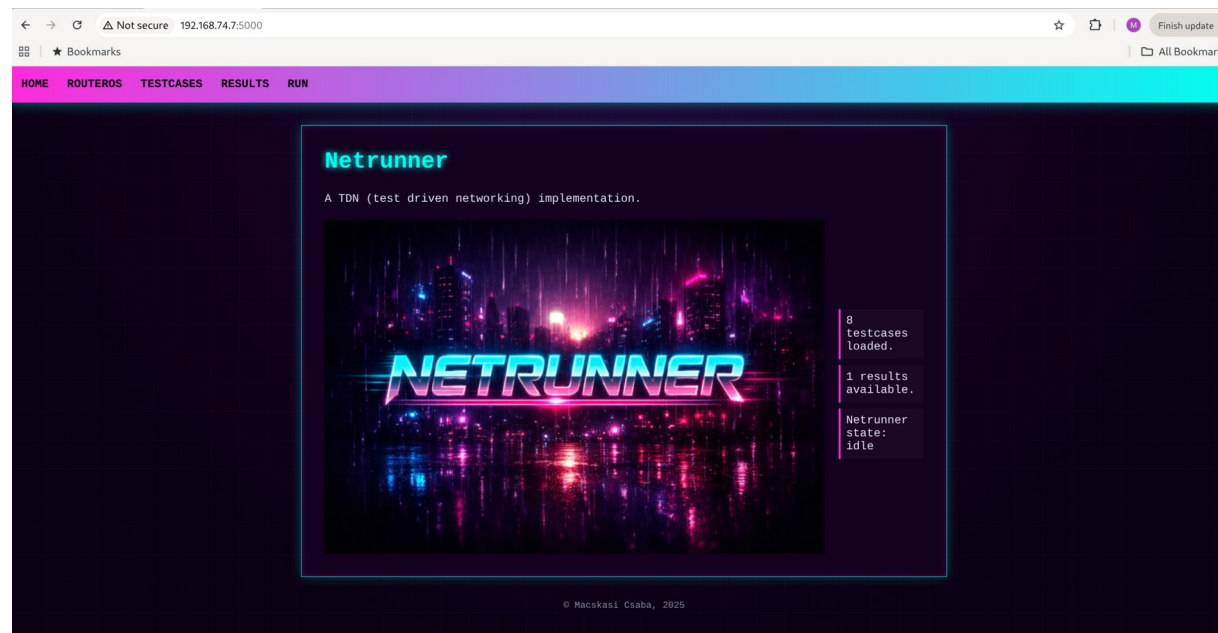
- wifi
- guest
- IOT / infra
- server
- work
- cam
- lab

Testcases

requirement	test
As a guests I want to be able to use Google.	Send HTTP request from guest VLAN to https://google.com
Servers should be isolated.	SSH / RDP requests from guest network to server network.
NAS must be accessible for employees	SMB reachable from work VLAN
Remote authentication should be possible	RADIUS / AD reachable from remote subnet

Netrunner

- hosted on RouterOS (arm, arm64, x86)
- runs in a container
- web interface
- bridged connection via VETH
- uses router's network features
- supports remote routers



Setup

VETH interface

```
/interface veth add address="" dhcp=no gateway="" gateway6="" mac-address=24:0A:0F:EE:71:4B name=veth1
```

VLAN for container

```
/interface vlan add interface=bridge name=vlan3999 vlan-id=3999  
/ip address add address=172.16.39.1/24 interface=vlan3999 network=172.16.39.0  
/interface bridge port add bridge=bridge interface=veth1 pvid=3999
```

DHCP for container

```
/ip pool add name=netrunner-pool ranges=172.16.39.2/31  
/ip dhcp-server network add address=172.16.39.0/24 dns-server=172.16.39.1  
gateway=172.16.39.1  
/ip dhcp-server add address-pool=netrunner-pool interface=vlan3999 name=netrunner-server
```

Firewall rules

```
/ip firewall nat add action=masquerade chain=srcnat comment="netrunner default outbound access" src-address=172.16.39.0/24  
# The netrunner webapp will be accessible via 192.168.74.7  
/ip firewall nat add action=dst-nat chain=dstnat comment="web access to netrunner" dst-address=192.168.74.7 dst-port=5000 protocol=tcp to-addresses=172.16.39.3 to-ports=5000
```

Add container

```
/container add cmd=/entrypoint.sh file=usb1-part1/netrunner.tar interface=veth1  
name=netrunner root-dir=usb1-part1/tmp workdir=/app
```

Testcase definition

Edit Test Case

Name	no NAS access for guests
Type	http
Source Address	192.168.75.50/24
Source VLAN	75
Destination Address	192.168.74.240
Destination Port	
Gateway	192.168.75.254
aux	



Pass On Failure

Save

http
-- Select --
ping
http
https
ssh
rdp
dns
tcp
udp
remote

t

Testcase overview

Test Cases

Google DNS reachable | ping | 8.8.8.8

DUP

EDIT

DELETE

RUN

gw reachable | ping | 192.168.73.254

DUP

EDIT

DELETE

RUN

webfig reachable | http | https://192.168.74.254

DUP

EDIT

DELETE

RUN

local dns works | udp | 192.168.74.254

DUP

EDIT

DELETE

RUN

lab doesnt resolve dns | udp | 192.168.74.7

DUP

EDIT

DELETE

RUN

no NAS access for guests | http | 192.168.74.240

DUP

EDIT

DELETE

RUN

NAS access for wifi | http | 192.168.74.240

DUP

EDIT

DELETE

RUN

remote test case | remote | 192.168.74.254

DUP

EDIT

DELETE

RUN

ADD

Export

Delete all

Choose File No file chosen

Import

Run all

Time for results!

Test Results

[OK] | 2026-01-26 13:19:28.875272 | Google DNS reachable

[OK] | 2026-01-26 13:19:28.997614 | gw reachable

[OK] | 2026-01-26 13:19:29.467905 | webfig reachable

[OK] | 2026-01-26 13:19:32.591927 | local dns works

[OK] | 2026-01-26 13:19:32.700972 | lab doesnt resolve dns

[OK] | 2026-01-26 13:19:36.392446 | no NAS access for guests

[OK] | 2026-01-26 13:19:40.045032 | NAS access for wifi

[OK] | 2026-01-26 13:19:40.581406 | remote test case

Where does Netrunner live?

- opensource, free to use
- source on Github: <https://github.com/mcsaba87/netrunner>
- precompiled containers: <insert link here>



Q&A, Thank you

NETRUNNER

macskasi.csaba@gmail.com