



nornir_pygnmi

pyGNMI

How can pygnmi help with network automation?

What is the purpose of nornir_pygnmi?

- Simplify management of network devices via gNMI using Nornir automation framework

Which functionality is supported?

- Capabilities()
- Get()
- Set()

https://github.com/akarneliuk/nornir_pygnmi

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Sample Nornir script:

Inventory

```
from nornir.init_nornir import InitNornir
from nornir_utils.plugins.functions import print_result
from nornir_pygnmi.tasks import gnmi_capabilities, gnmi_get, gnmi_set
from getpass import getpass

CONFIG_FILE = "./config.yaml"
DELETE = ["/openconfig-interfaces:interfaces/interface[name=loopback]"]

if __name__ == "__main__":
    nrn = InitNornir(config_file=CONFIG_FILE)
    nrn.inventory.defaults.password = getpass("Provide password > ")

    result1 = nrn.run(task=gnmi_capabilities)
    result2 = nrn.run(task=gnmi_get, path=["/openconfig-interfaces:interfaces"])
    print_result(result=result1)

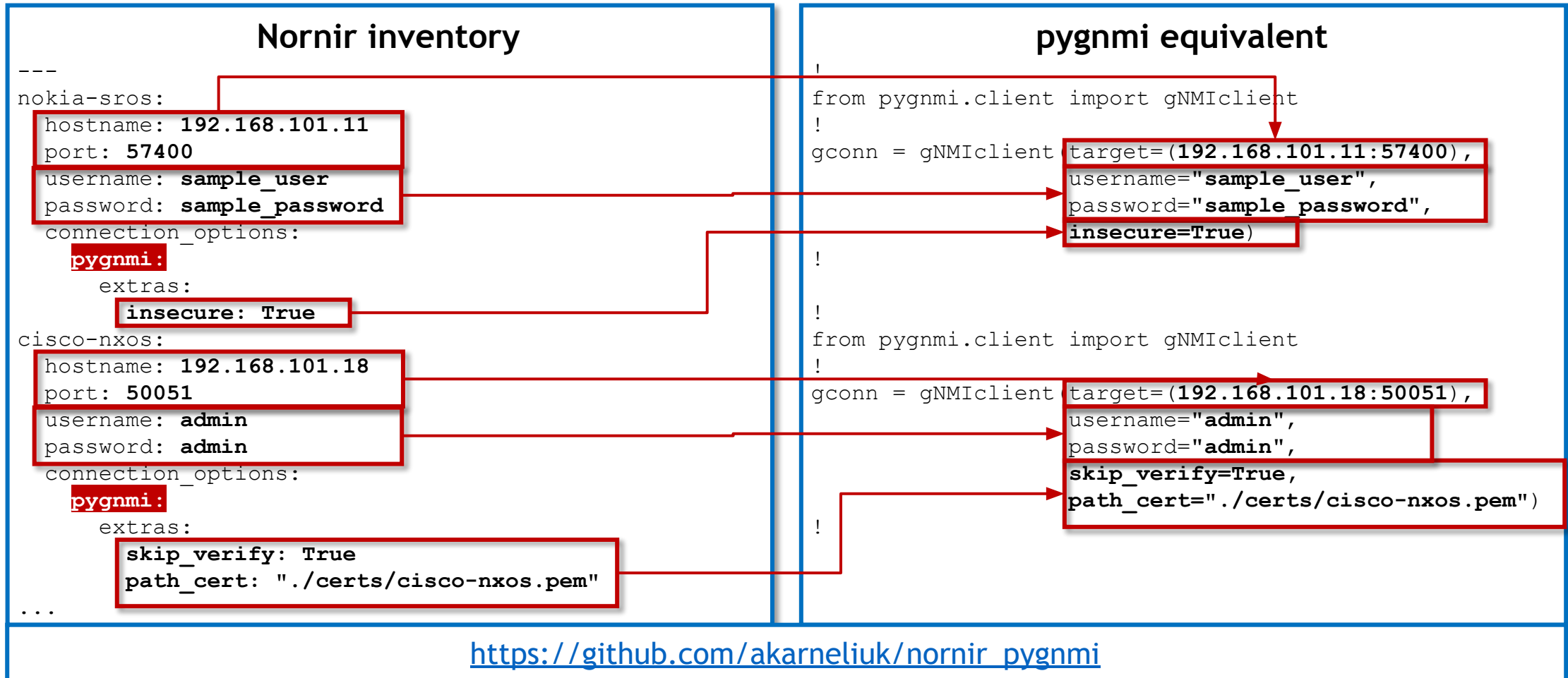
    result3 = nrn.run(task=gnmi_set, delete=DELETE)
    print_result(result=result2)

    result4 = nrn.run(task=gnmi_get, path=["/openconfig-interfaces:interfaces"])
    print_result(result=result3)
```

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How to use nornir_pygnmi (1):



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How to use nornir_pygnmi (2):

Nornir tasks

```
!  
if __name__ == "__main__":  
    nrn = InitNornir(config_file=CONFIG_FILE)  
  
    result1 = nrn.run(task=gnmi_capabilities)  
    print_result(result=result1)  
  
    result2 = nrn.run(task=gnmi_get,  
                      path=["/openconfig-interfaces:interfaces"],  
                      datatype="config",  
                      encoding="json_ietf")  
    print_result(result=result2)
```

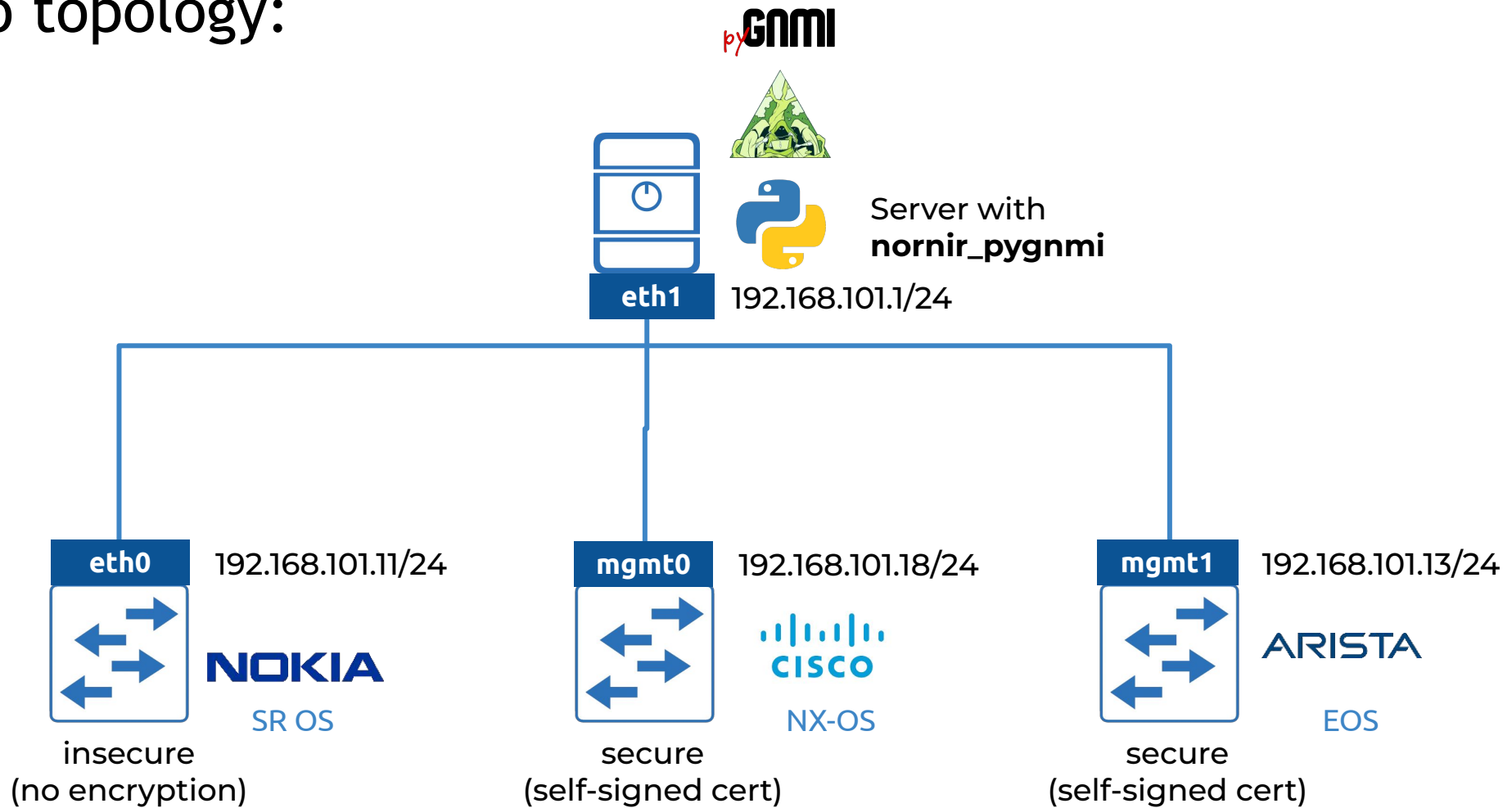
pygnmi equivalent

```
!  
from pygnmi.client import gNMIClient  
!  
gconn = gNMIClient(target=(192.168.101.11:57400),  
                  username="sample_user",  
                  insecure=True)  
  
result1 = gconn.capabilities()  
print(result1)  
  
result2 = gconn.get(  
    path=["/openconfig-interfaces:interfaces"],  
    datatype="config",  
    encoding="json_ietf"  
)  
print(result2)
```

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Demo topology:



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[LIVE DEMO] Using pygnmi to manage Cisco/Nokia/Arista network



Time to get hands dirty!