

/conf

# RootConf – 2009

Профессиональная конференция  
системных администраторов

## Сетевая виртуальная лаборатория

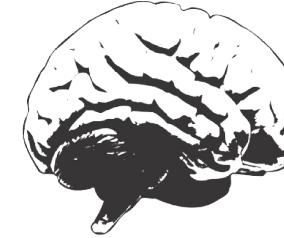
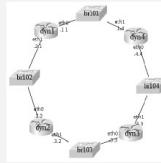
Игорь Чубин

# Часть I.

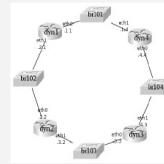
# ЗАДАЧА



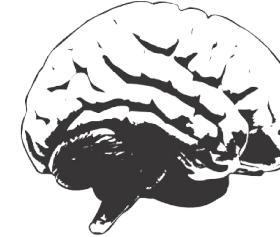
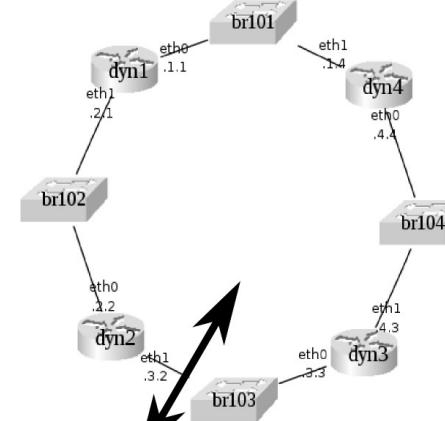
## HOWTO

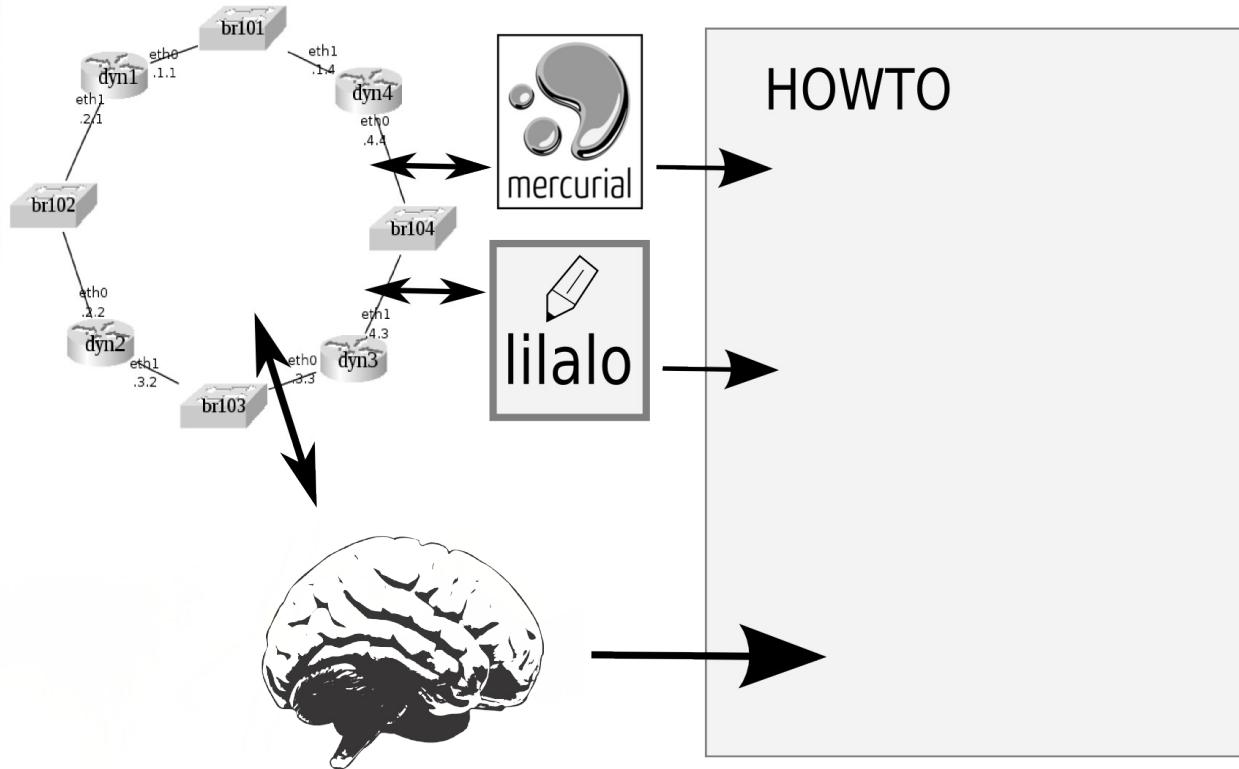


## HOWTO

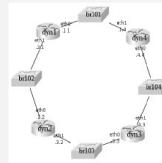


```
domains = [  
    'dyn1', 'dyn2', 'dyn3', 'dyn4'  
]  
bridges = [  
    'br101', 'br102', 'br103', 'br104'  
]  
vbridges_table = [  
    'dyn1': ['br101', 'br102'],  
    'dyn1': ['br102', 'br103'],  
    'dyn1': ['br103', 'br104'],  
    'dyn1': ['br104', 'br101'],  
]
```

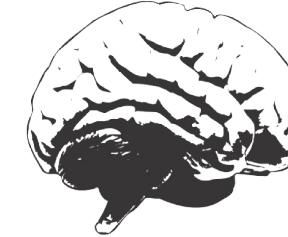




## HOWTO

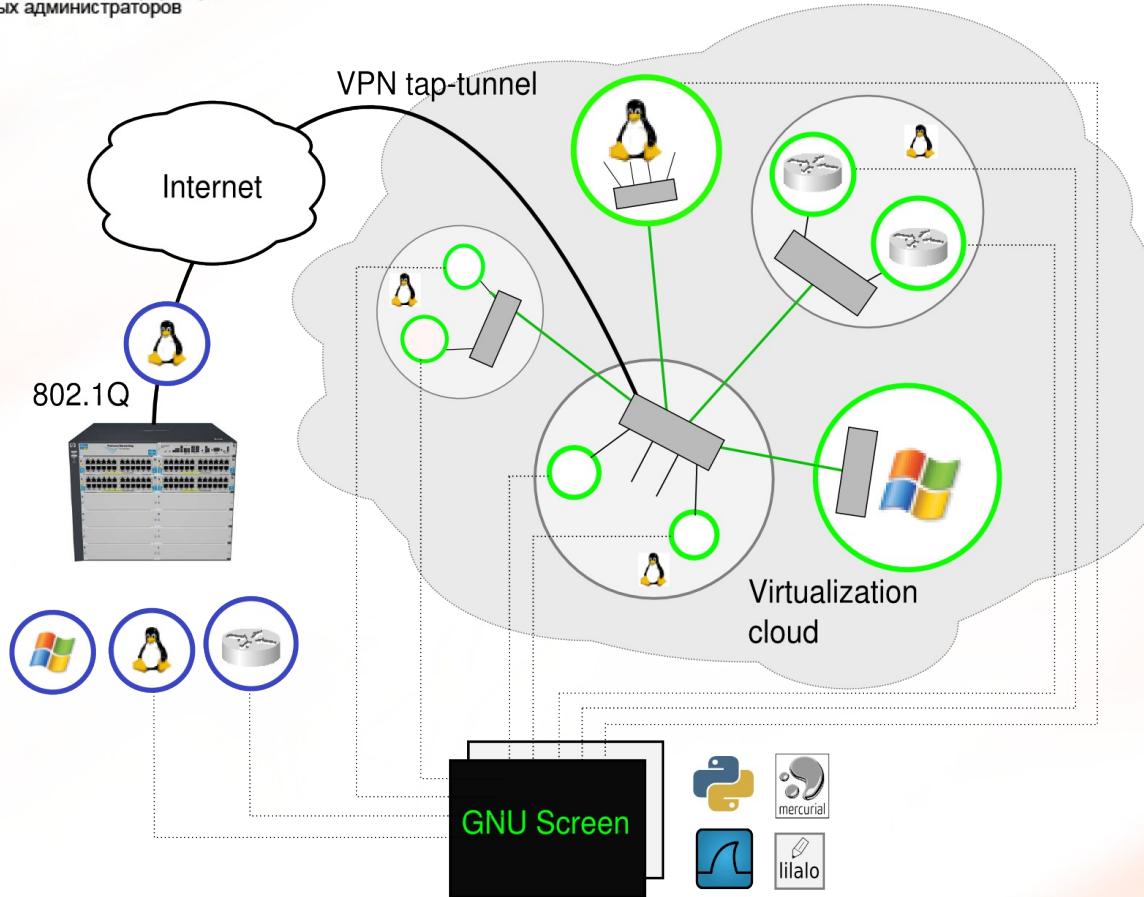


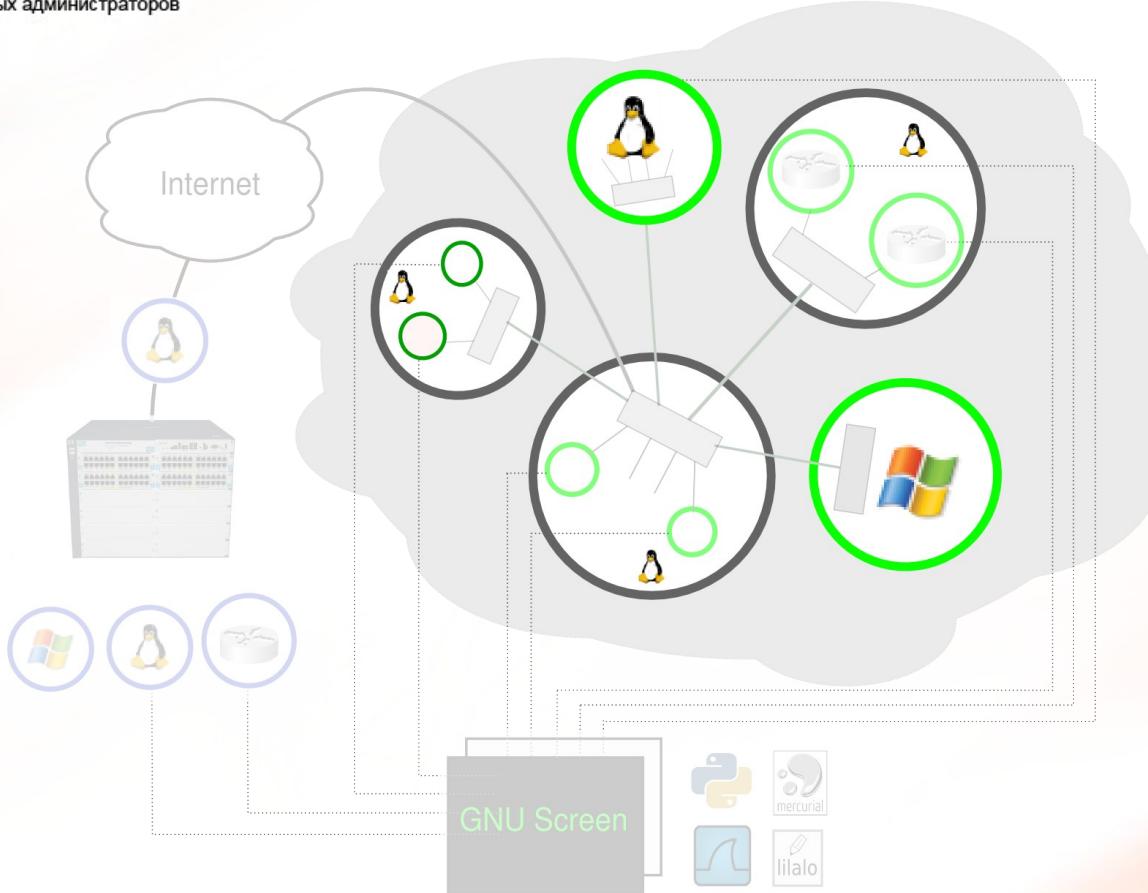
```
domains = [  
    'dyn1', 'dyn2', 'dyn3', 'dyn4'  
]  
bridges = [  
    'br101', 'br102', 'br103', 'br104'  
]  
view = [  
    'dyn1': ['br101', 'br102'],  
    'dyn1': ['br102', 'br103'],  
    'dyn1': ['br103', 'br104'],  
    'dyn1': ['br104', 'br101'],  
]
```



# Часть II. РЕШЕНИЕ

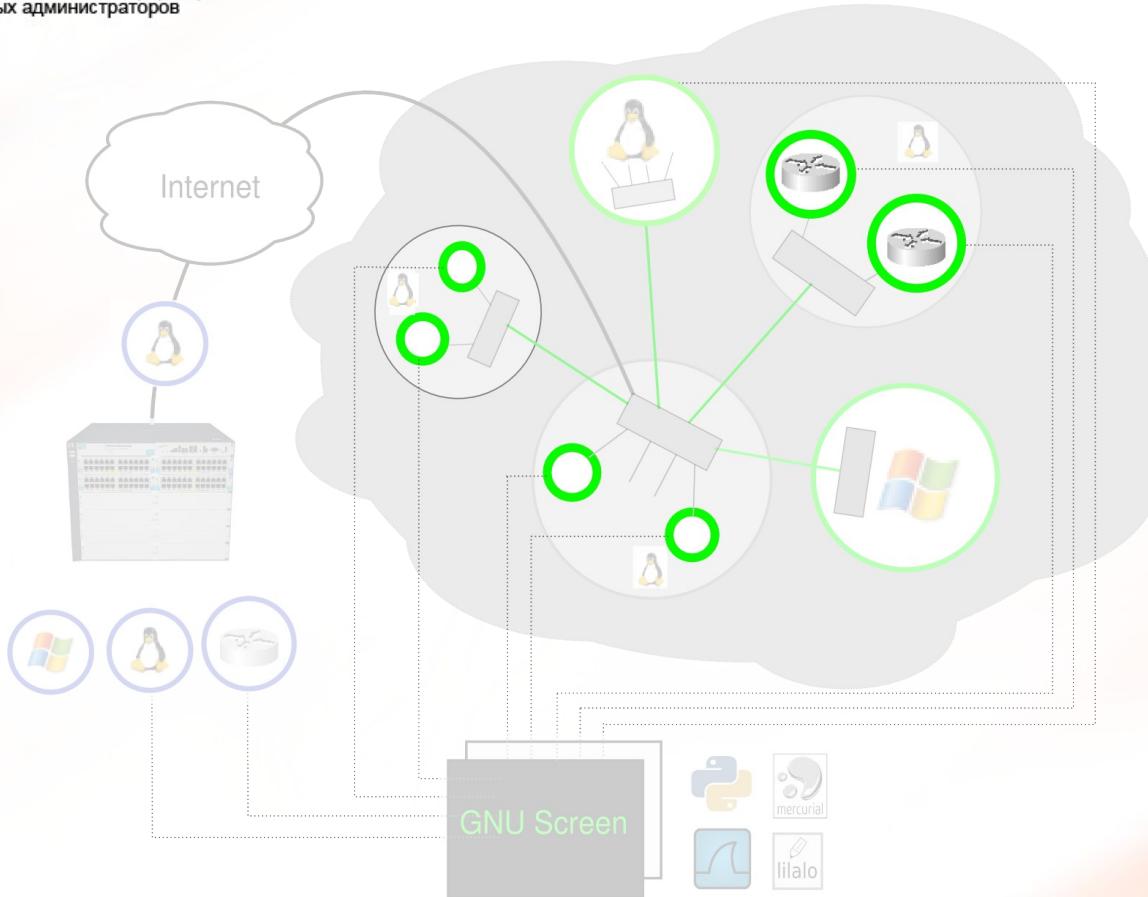






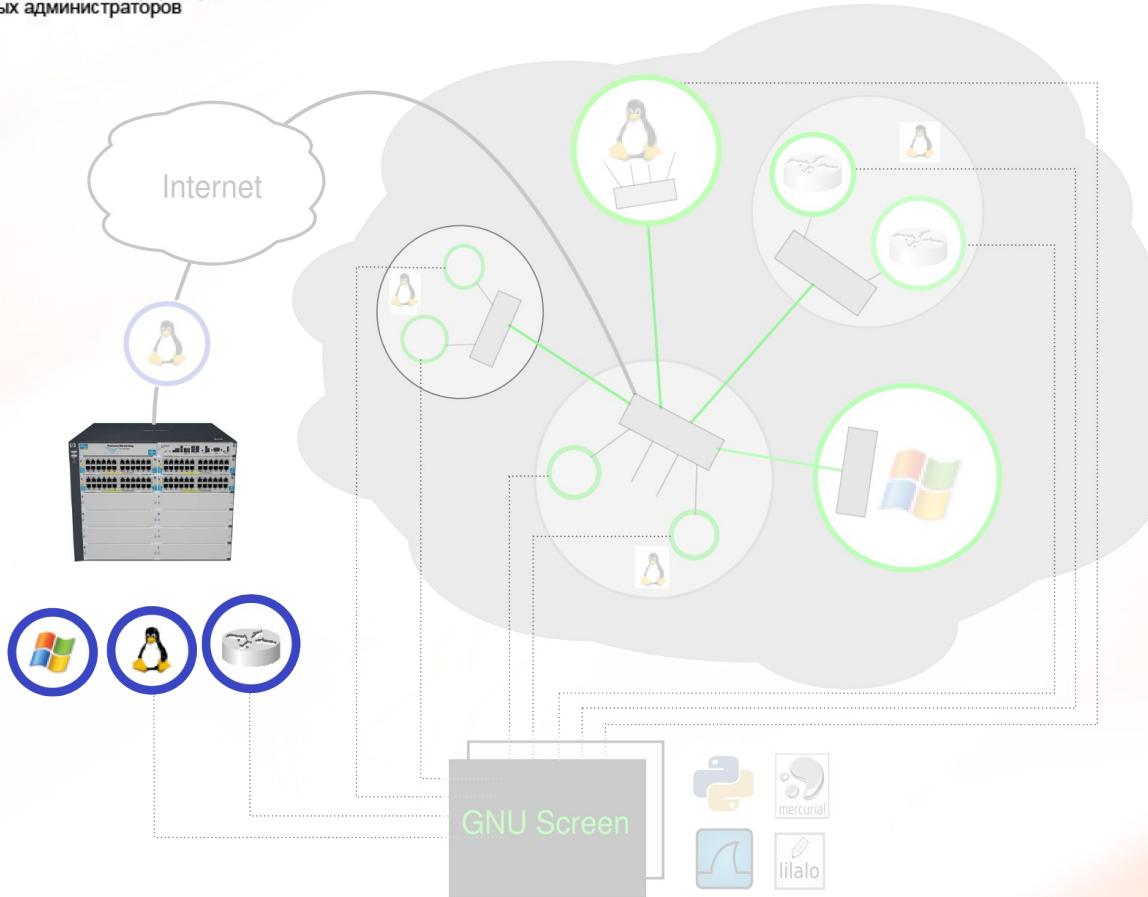
## Virtualization

- \* Xen
- \* KVM
- \* (OpenVZ)



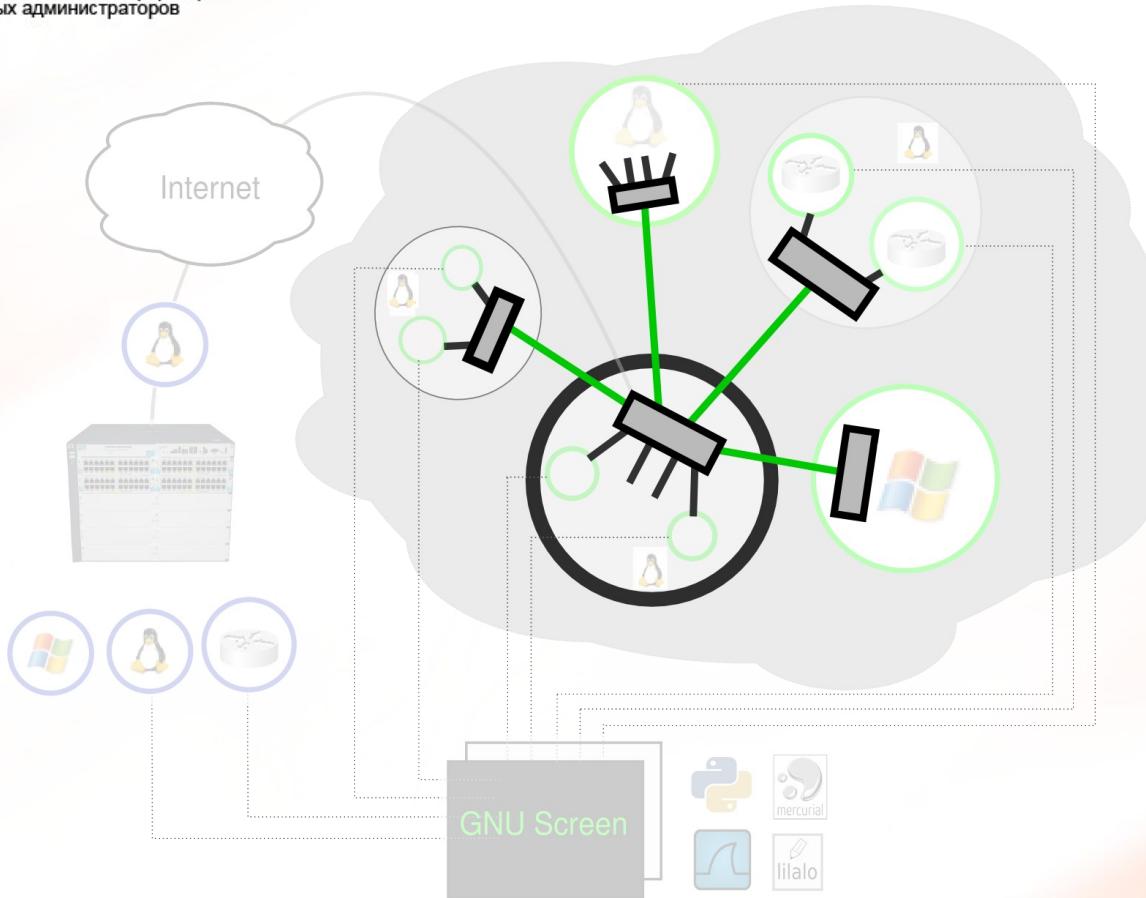
## Emulated nodes

- \* QEMU
- \* Dynamips
- \* Pixemu



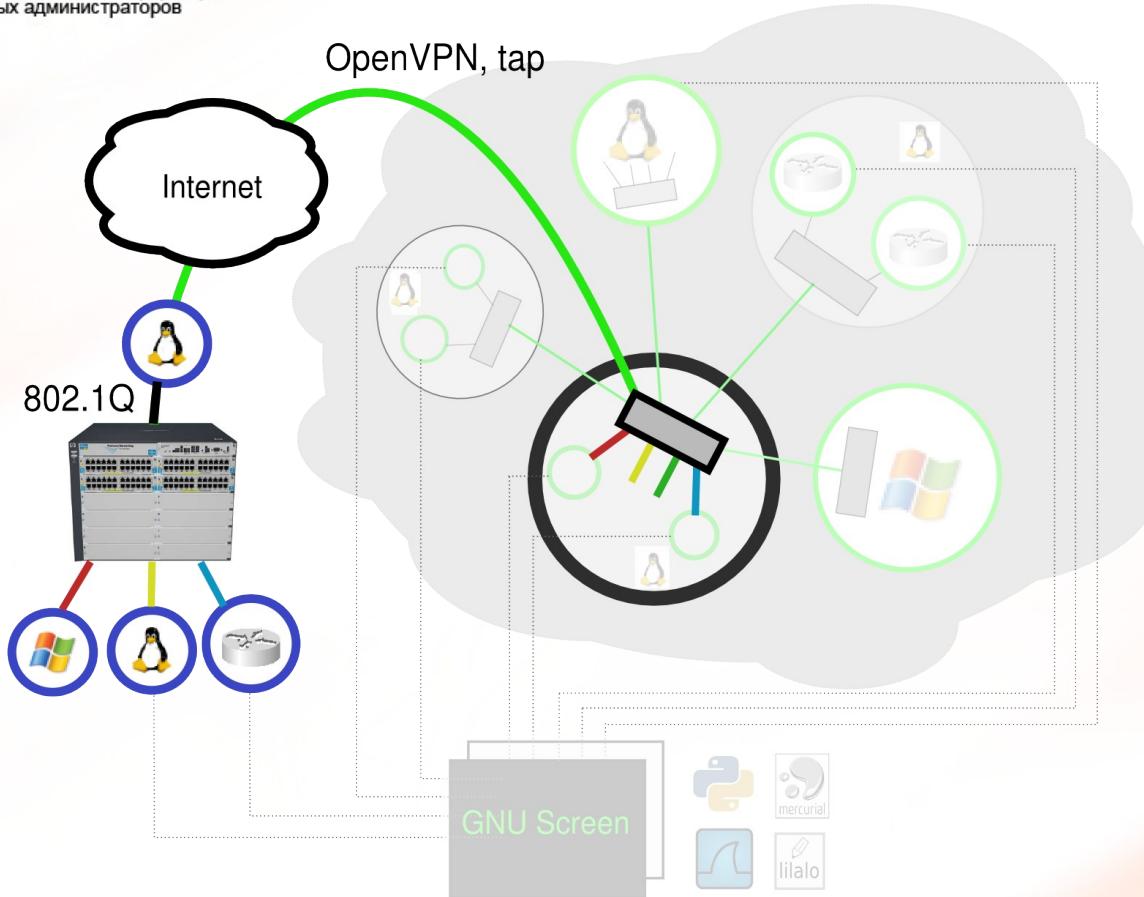
Mixed  
environment:

- \* Virtual nodes
- \* Emulated nodes
- \* Real nodes



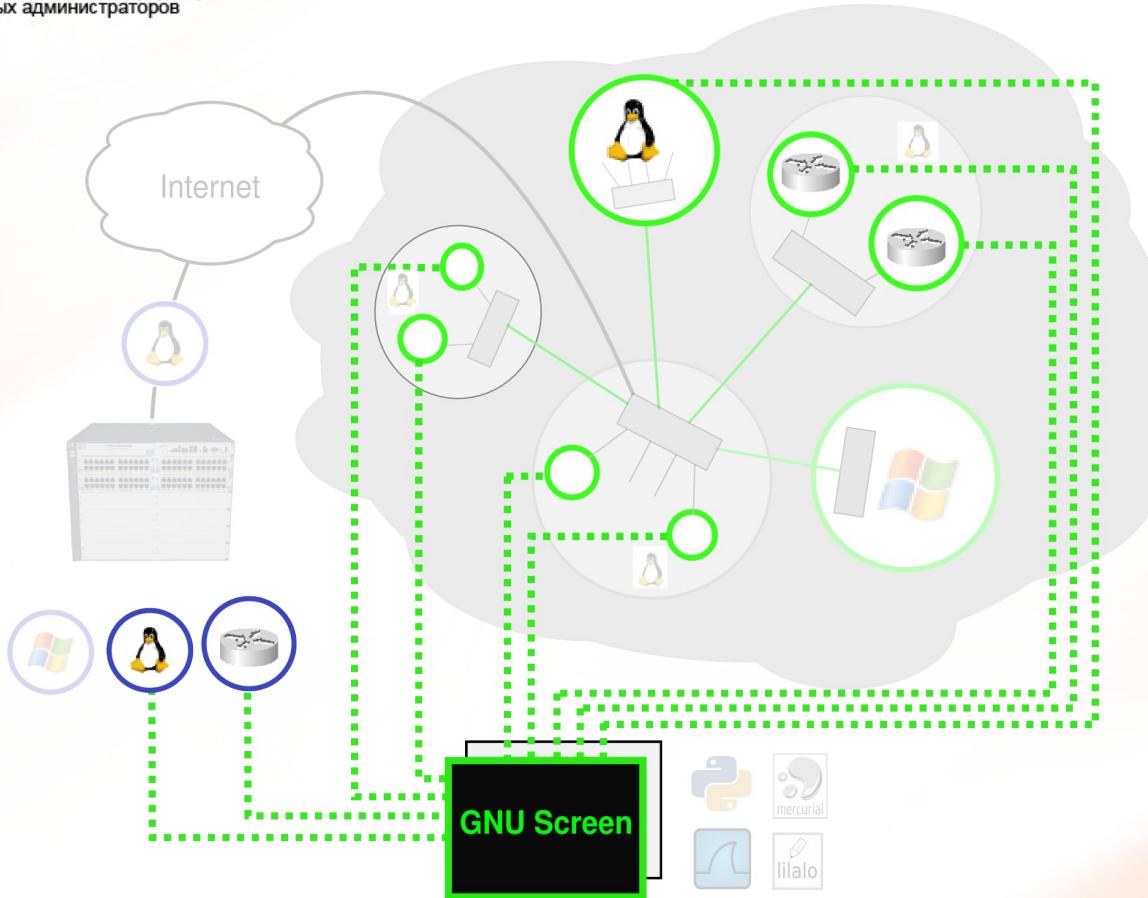
## Virtual network

- \* bridge
- \* 8021q
- \* tap
- \* openvpn
- \* ebttables
- \* tc



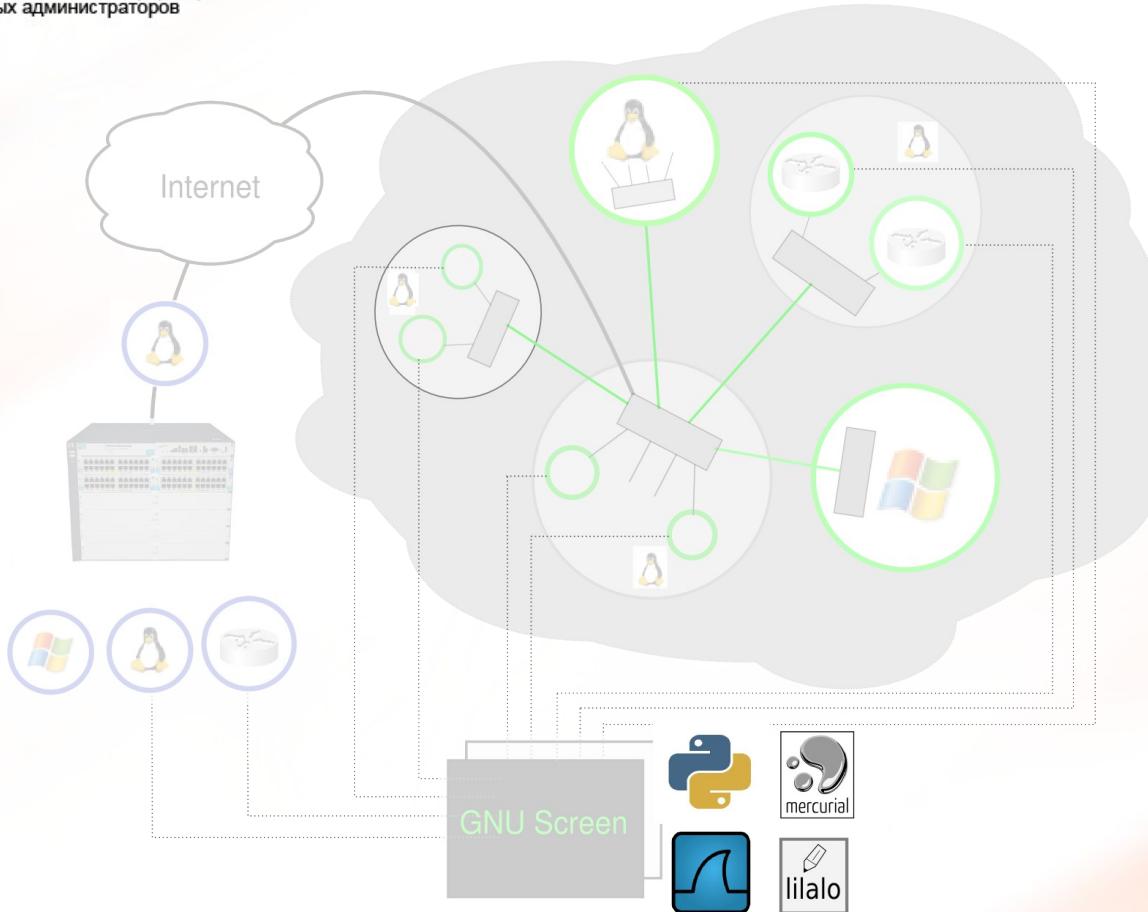
Real network  
integration

- \* openvpn
- \* tap
- \* 8021q



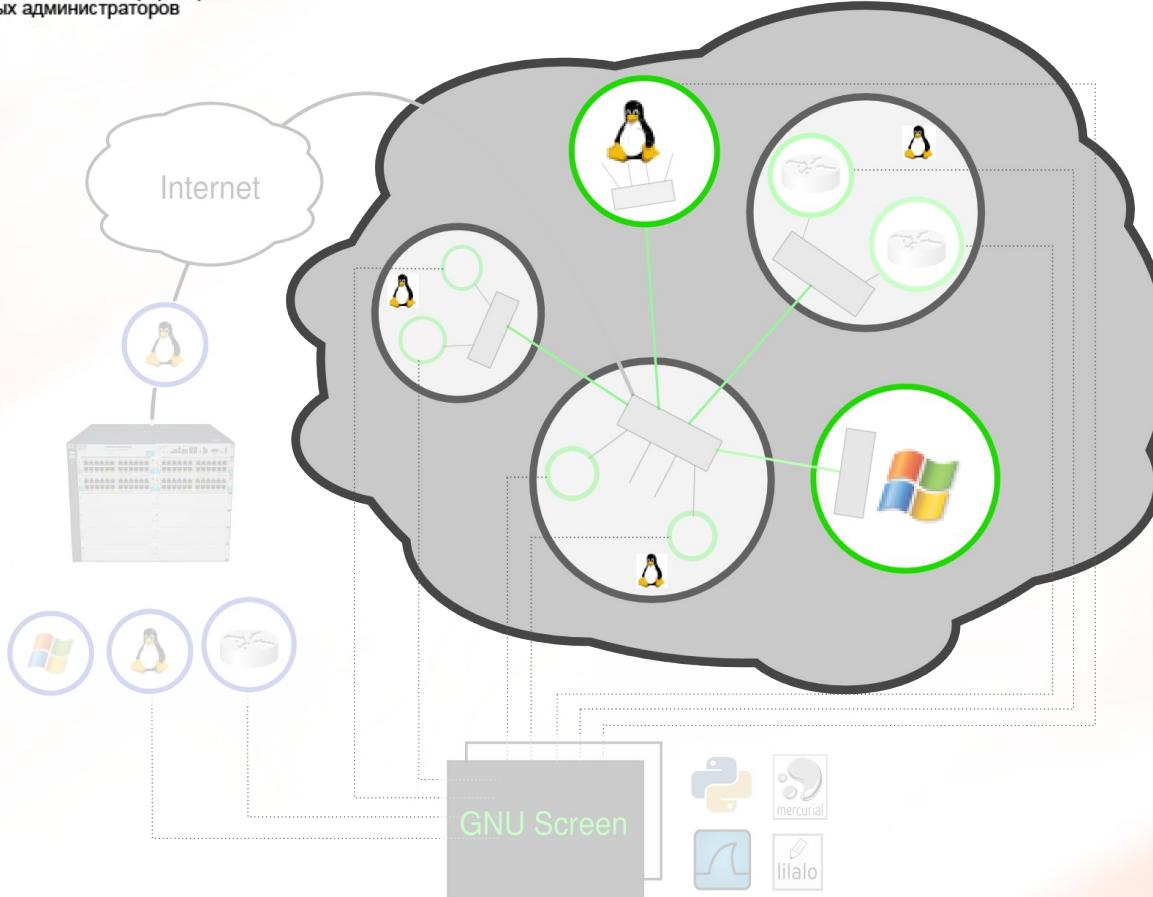
## screen

- \* `-S`
- \* `-x`
- \* `-X`
- \* `-d -m`



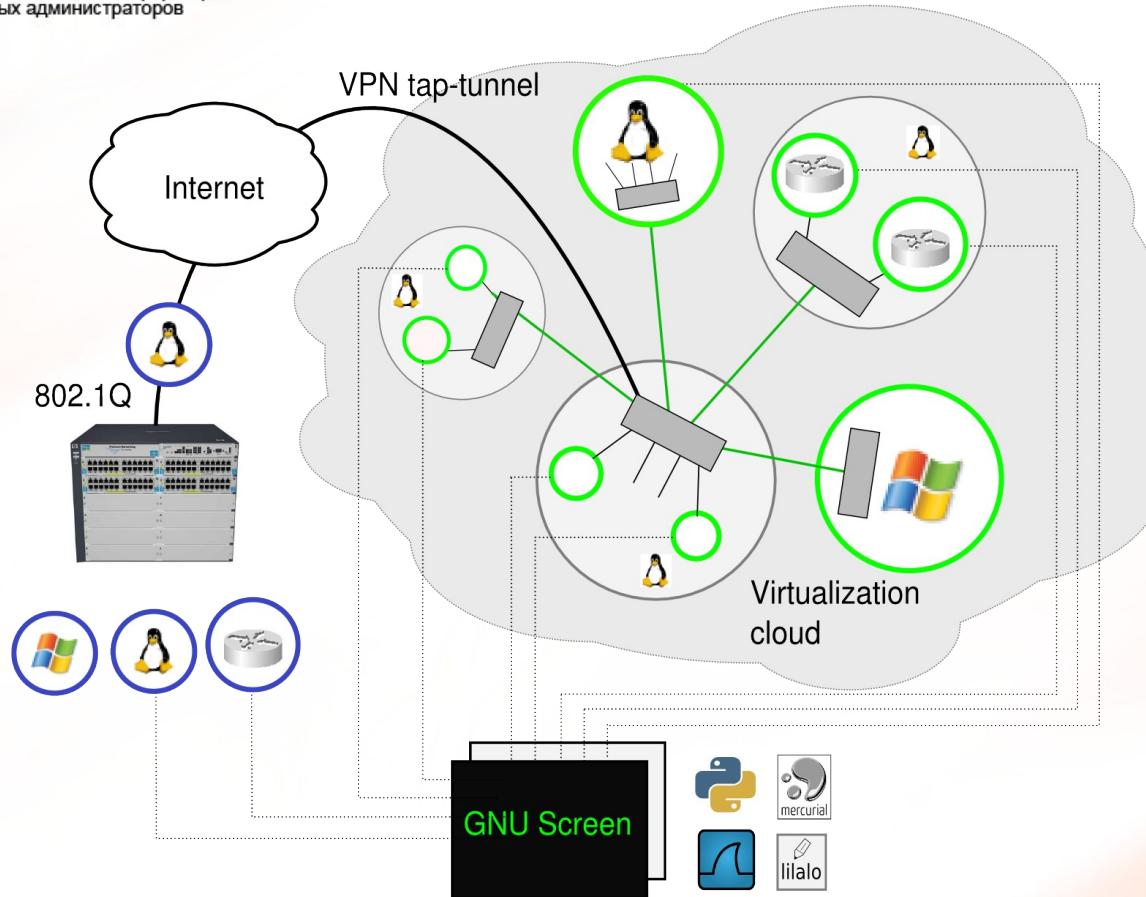
## Management and analysis:

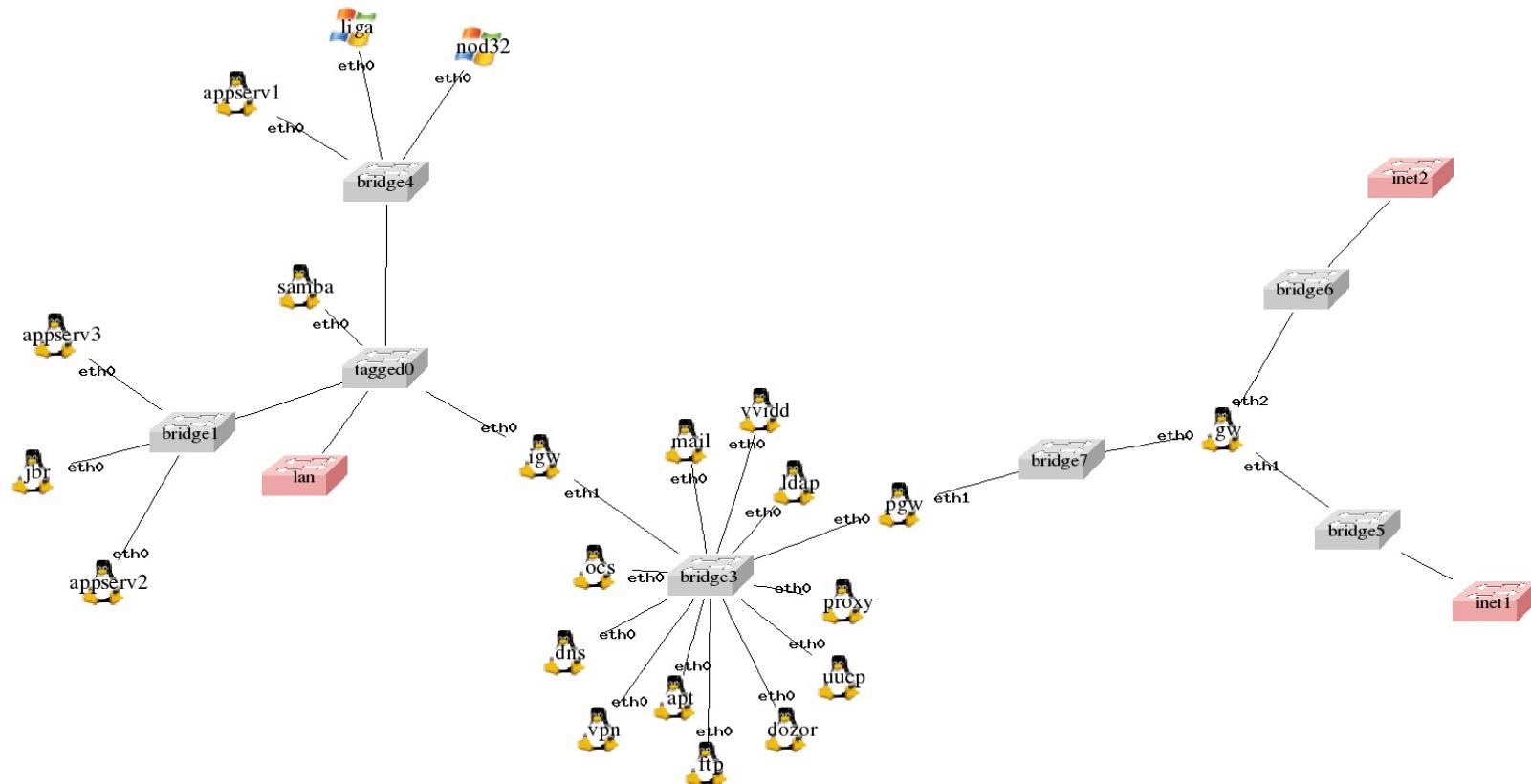
- \* python + ipython
- \* lila
- \* mercurial
- \* wireshark

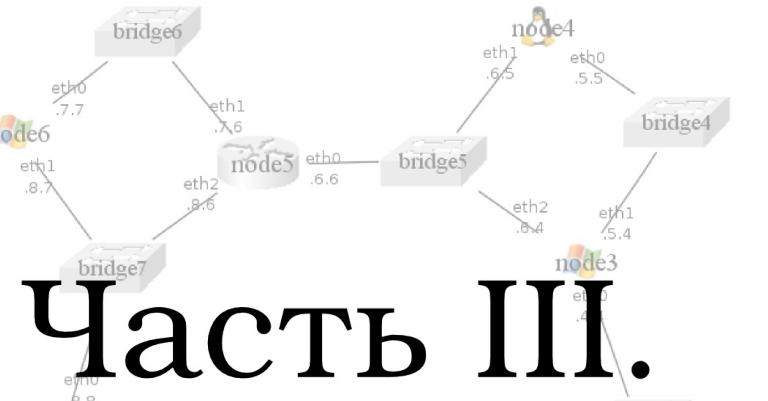


## Virtualization cluster/cloud

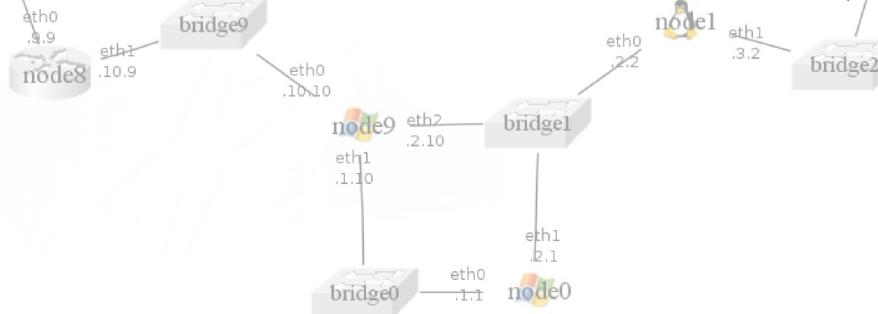
- \* Xen/KVM
  - + LVM
  - + iSCSI/AoE
- \* Amazon EC2



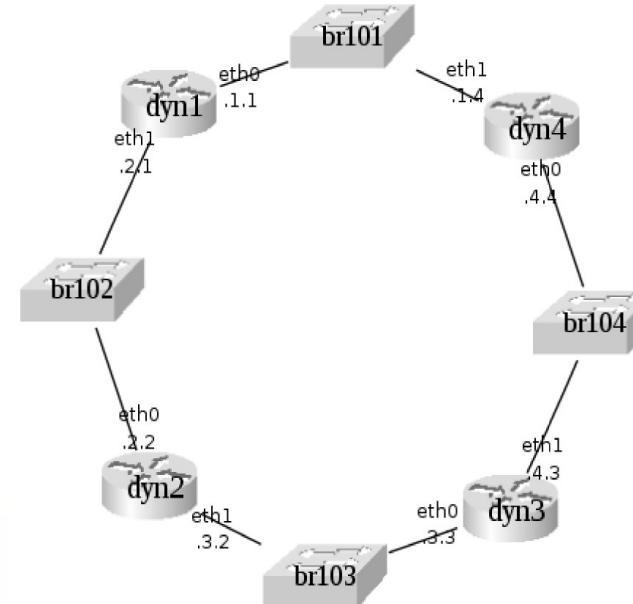




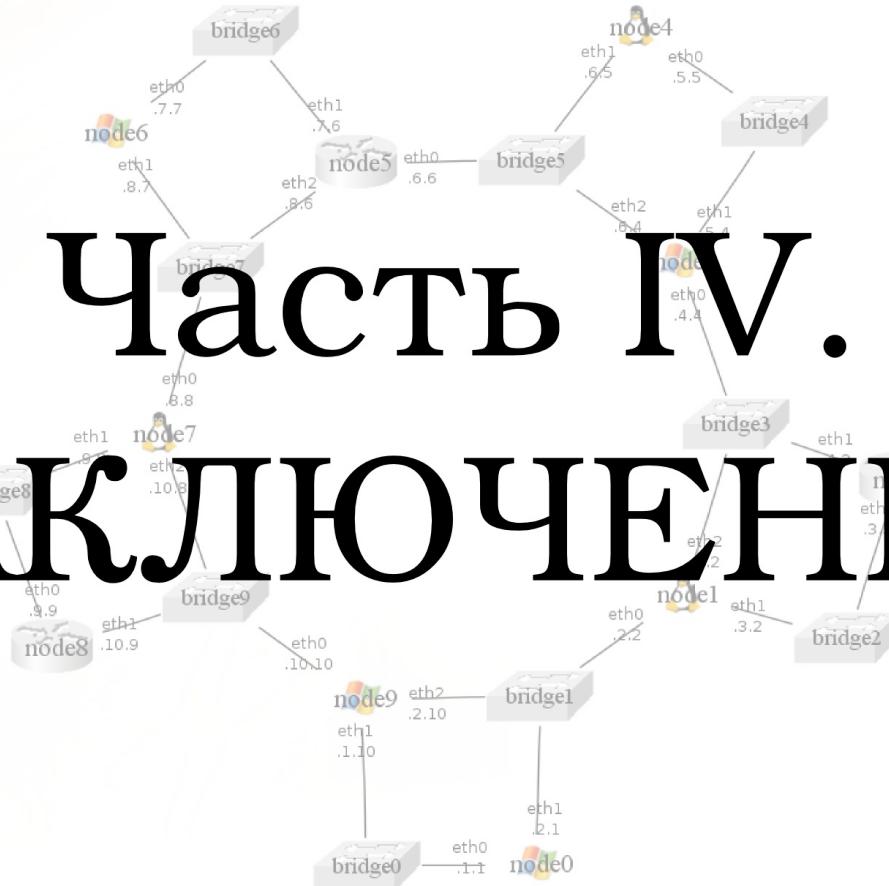
# Часть III. ДЕМОНСТРАЦИЯ



```
domains = [  
    'dyn1', 'dyn2', 'dyn3', 'dyn4'  
]  
domain_types = [ 'dynamips' ] * 4  
  
bridges = [  
    'br101', 'br102', 'br103', 'br104'  
]  
  
vbridges_table = [  
    'dyn1': ['br101', 'br102'],  
    'dyn1': ['br102', 'br103'],  
    'dyn1': ['br103', 'br104'],  
    'dyn1': ['br104', 'br101'],  
]
```



# Часть IV. ЗАКЛЮЧЕНИЕ



# СПАСИБО

- \* Татьяне Чубиной
- \* Наташе Самойленко
- \* Татьяне Штомпель и  
УЦ Сетевые Технологии (Киев)



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