

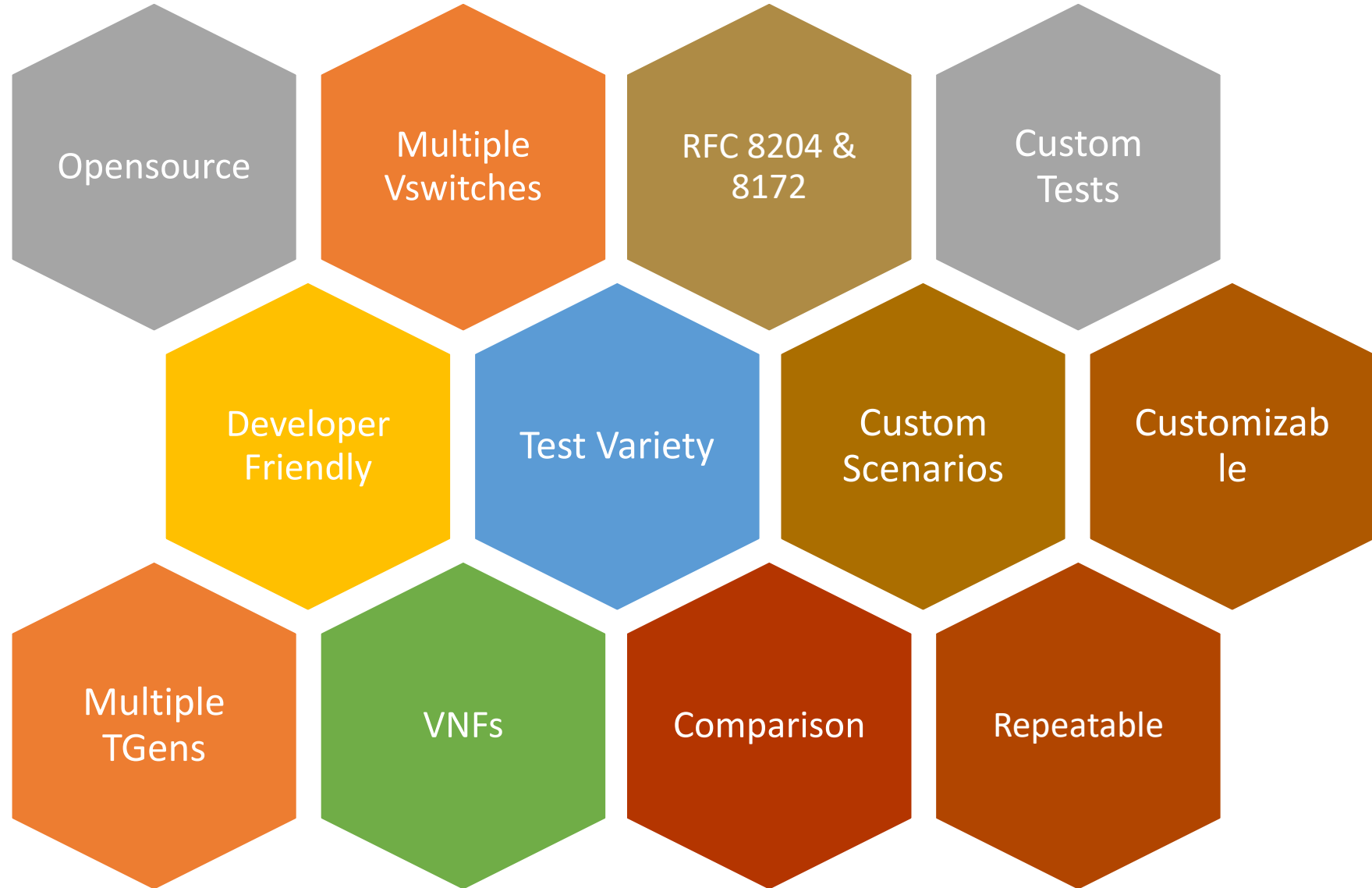
# Containerizing VSPERF

Sridhar Rao @Spirent

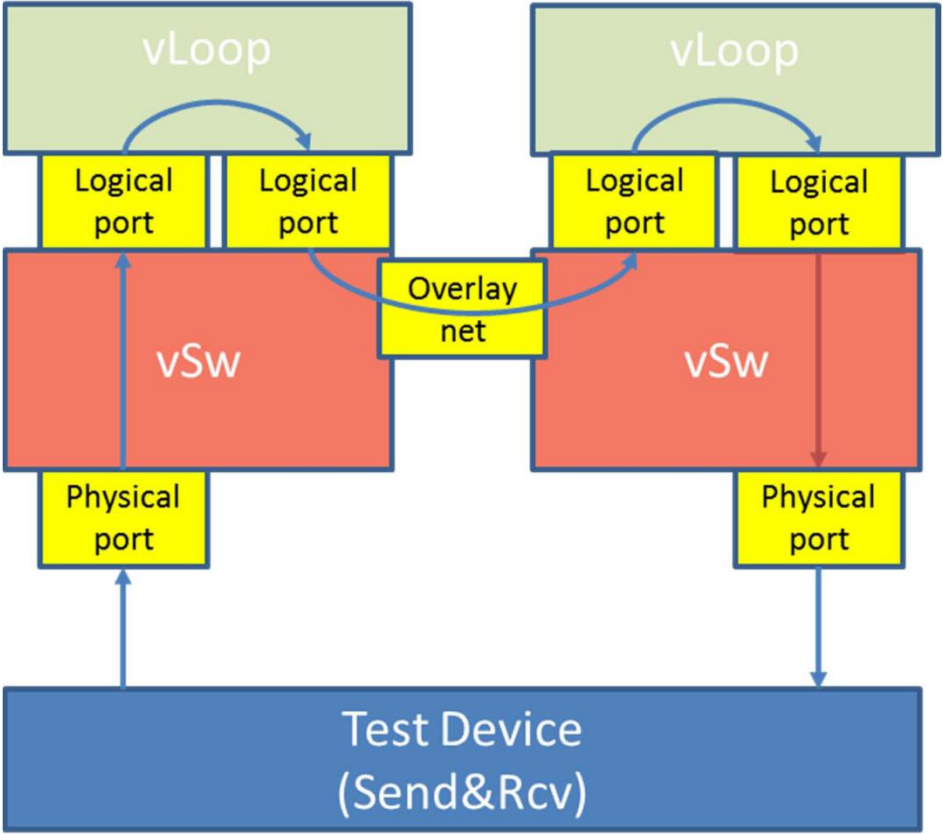
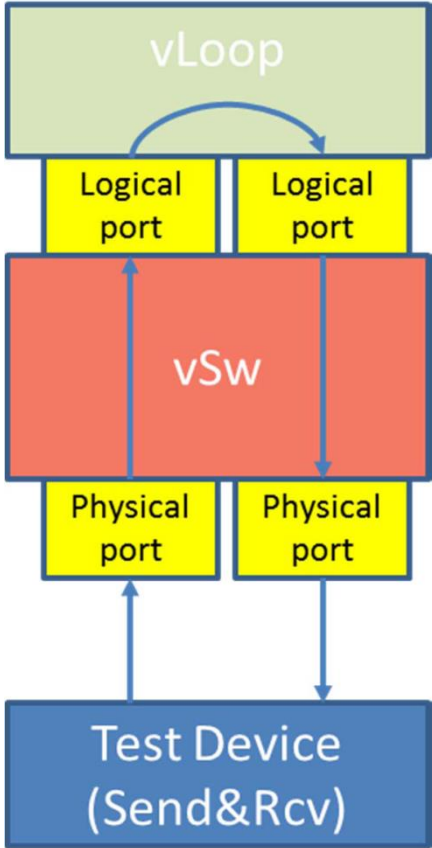
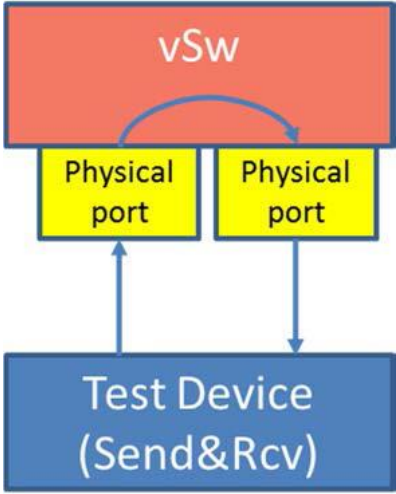
Al Morton @AT&T

# VSPERF

- VS: vSwitch
- Perf: Performance
- aka. Vswitchperf
- Python based Test-framework.
- vSwitches, VNFs, Traffic-Generators
  - Other Tools.



# Deployment Scenarios (VSPERF)



# VSPERF TESTS

Performance

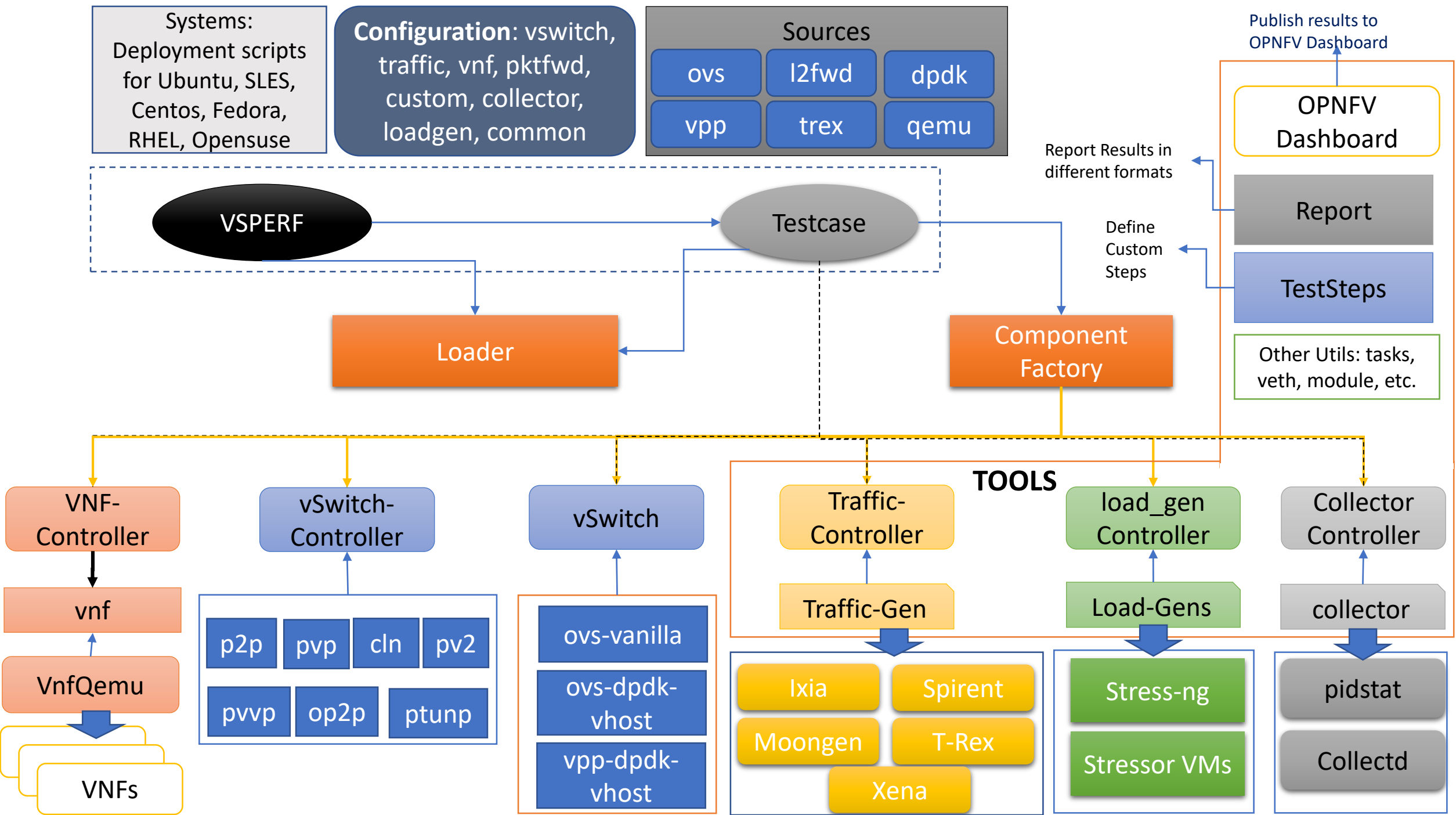


Functional



Comparative

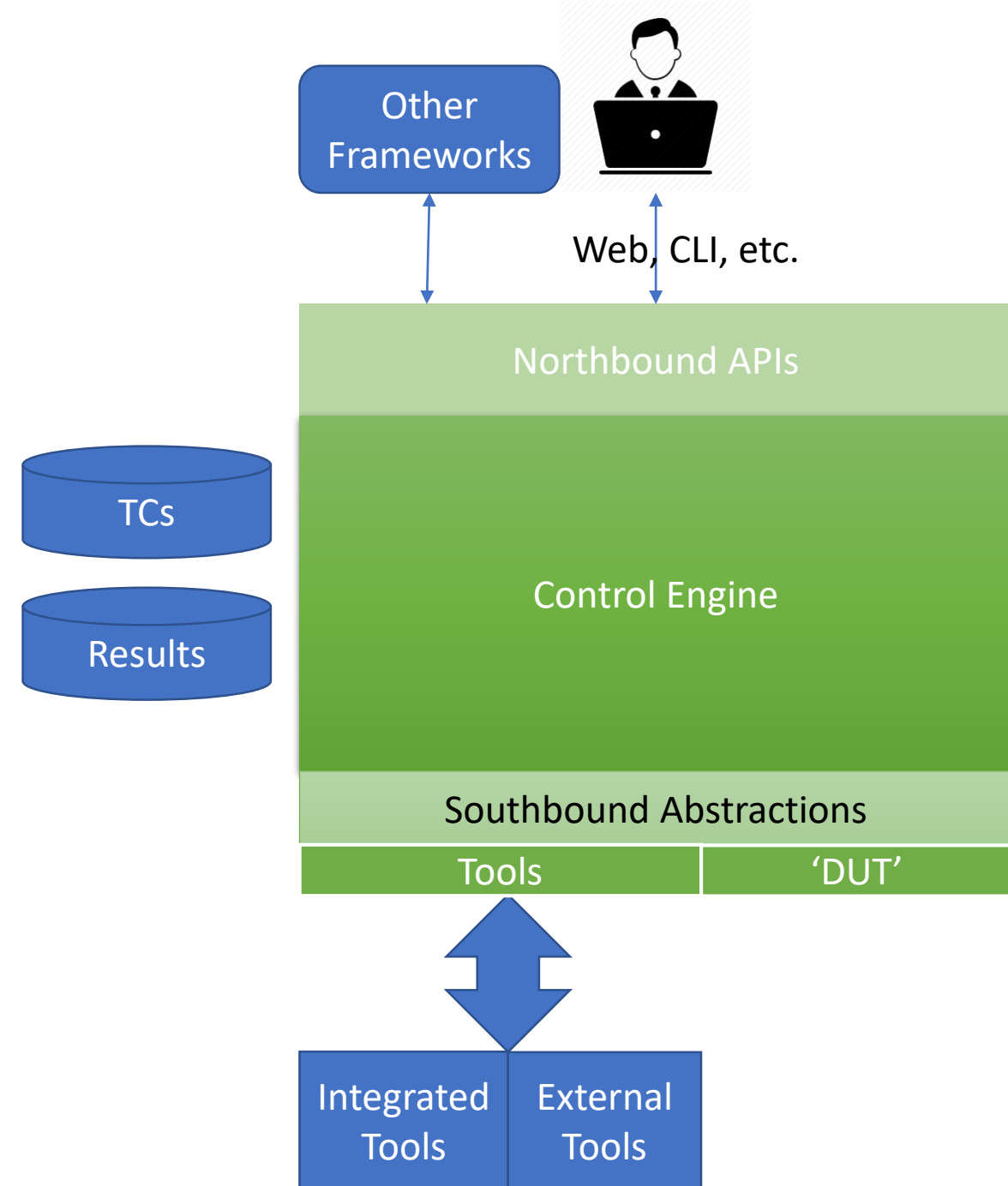




# Generalizing All testing frameworks....

- “Northbound” APIs
- Command and Control Engine
- “Southbound” Abstractions
  - Tools
  - DUT Environment

containerizing an automated testing framework can vary depending on what all components it has and what all



# Why Containerize VSPERF?

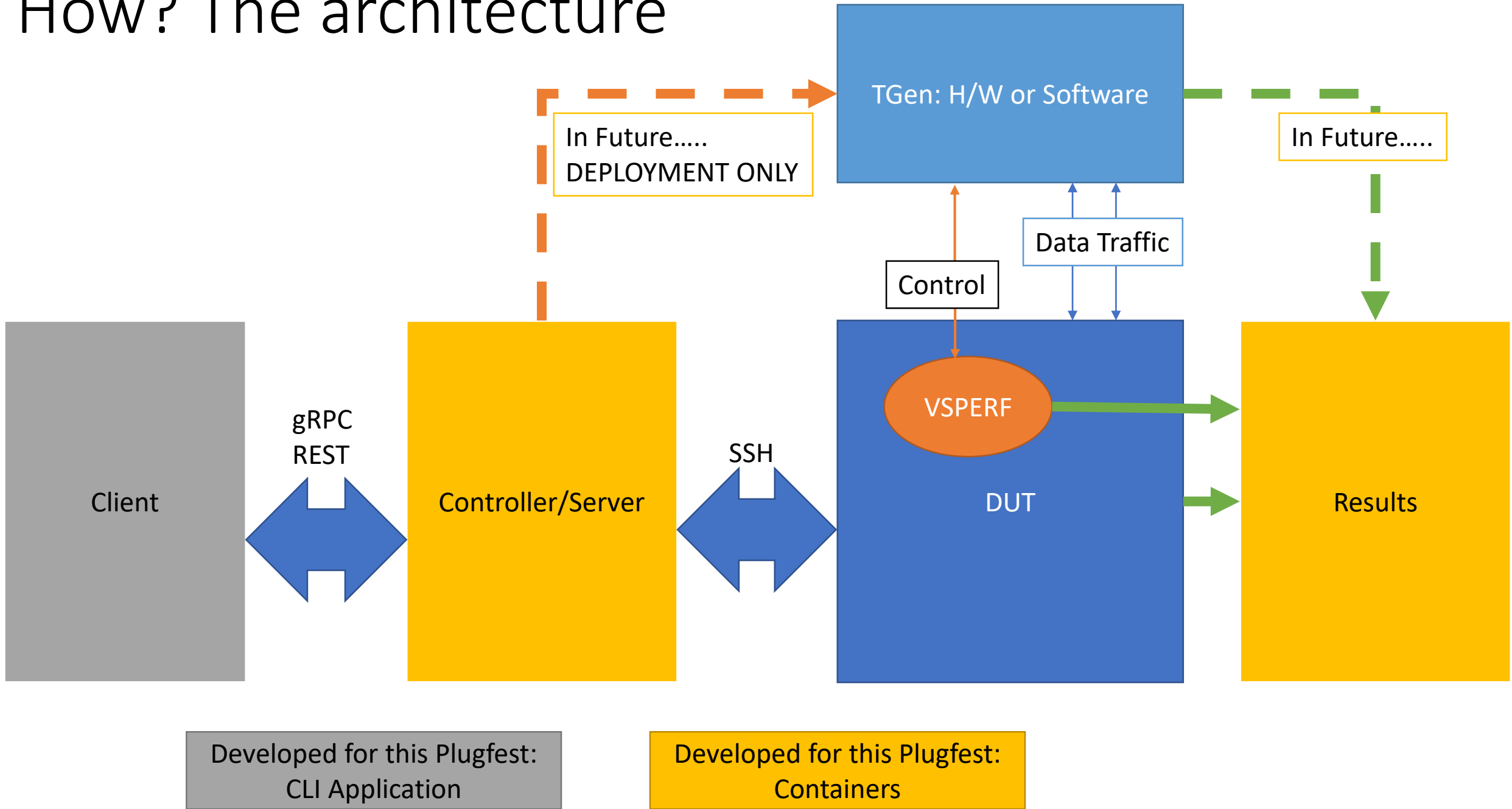
- Improves Usability, provides flexibility
- Cloud-Native Testing.
- Other Testing projects are already containerized.
- Support new use-cases
  - Include automated dataplane performance testing into larger frameworks such as Dovetail/OVP
  - Better analytics with results container.

# How? The Terms...

- Client
  - Talks to controller/server to install, configure and run tests.
  - End user will only use this client to manage tests.
- Controller/Server
  - Receives command and control from the client and perform actual action on the DUT-Node
- Vsperf
  - Runs on the DUT-Node – as usual.
- Results
  - Node that collects and manages the results. The results include
    - Environment
    - Test-Results
    - Infrastructure metrics - collectd
    - Events from vsperf, qemu, ovs, vnf, etc.
    - Live results from T-Gen\*\*\*\*\*



# How? The architecture



# Formats

- Client.
  - CLI based application
  - Webapp in future.
- Controller/Server
  - Container.
- Results
  - Container

# Client-Controller Communication

- gRPC
  - Easy to add rest support.
- Protobuf
- Operations.
  - First Version
    - Connect to Host
    - Install VSPERF
    - Upload Configuration
    - Run Test
    - Check Status
  - In Future
    - Setup TGen.
    - Download VNFs
    - ...

```
sridhar@dike:~/vsperf-docker/vsperf-client$ python vsperf-client.py
VSPERF CLIENT
VSPERF CLIENT
VSPERF CLIENT

Version 0.1

[0]Connect to Host
[1]Install VSPERF
[2]Upload Configuration File
[3]Start Test
[4]Exit
>> █
```

# Controller-DUT Communication

- SSH.
- Run commands through SSH.
- Single DUT at a time.

# Results

- Testapi – For End of the test results
  - MongoDB
- ELK -- For Infrastructure metrics, Events from vsperf, qemu, ovs, vnf, etc.
  - Elasticsearch
  - Logstash
  - Kibana