TeraFlow SDN by ETSI

# Hackfest #4: Introduction how to create new TFS component

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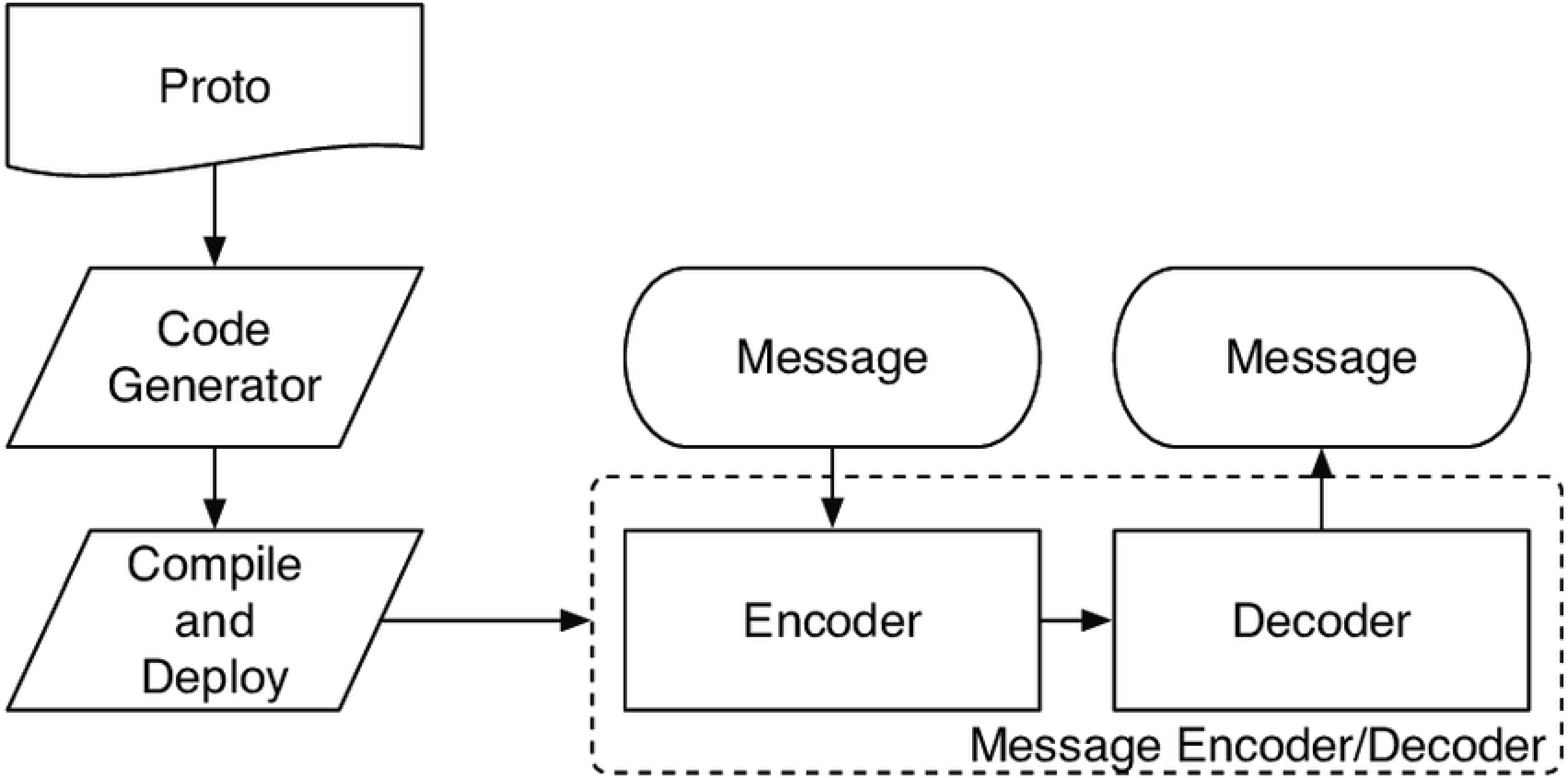
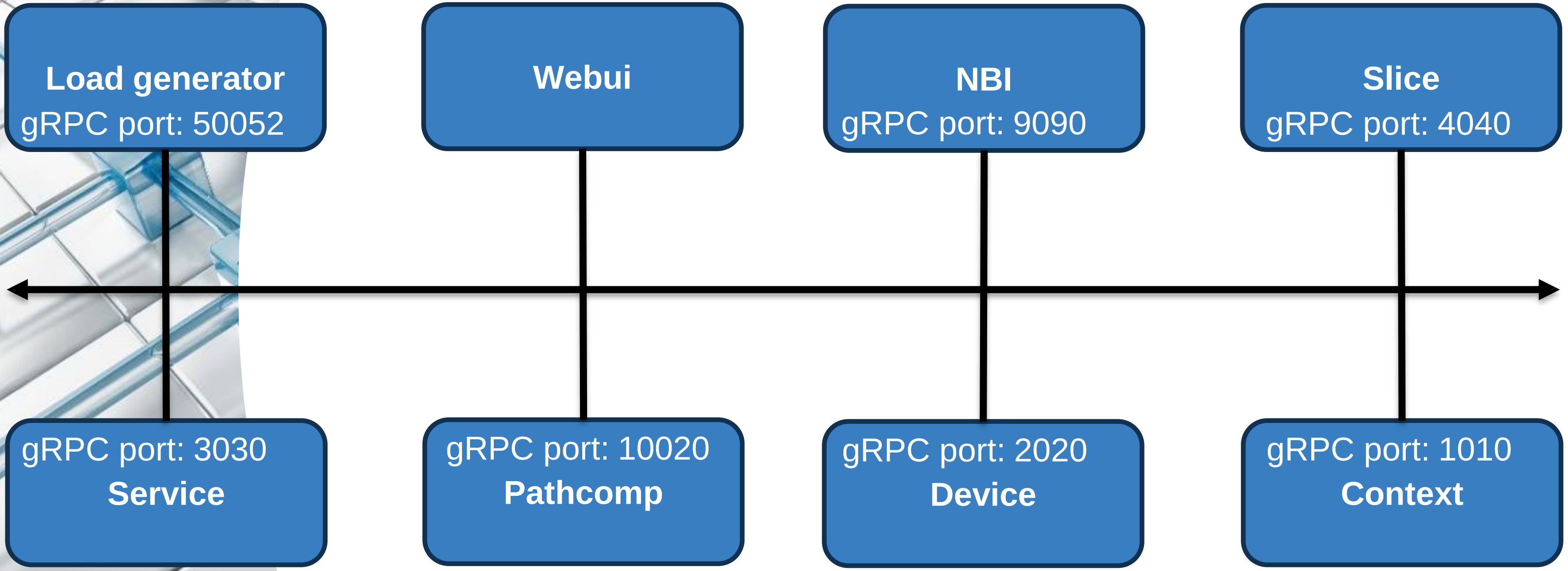
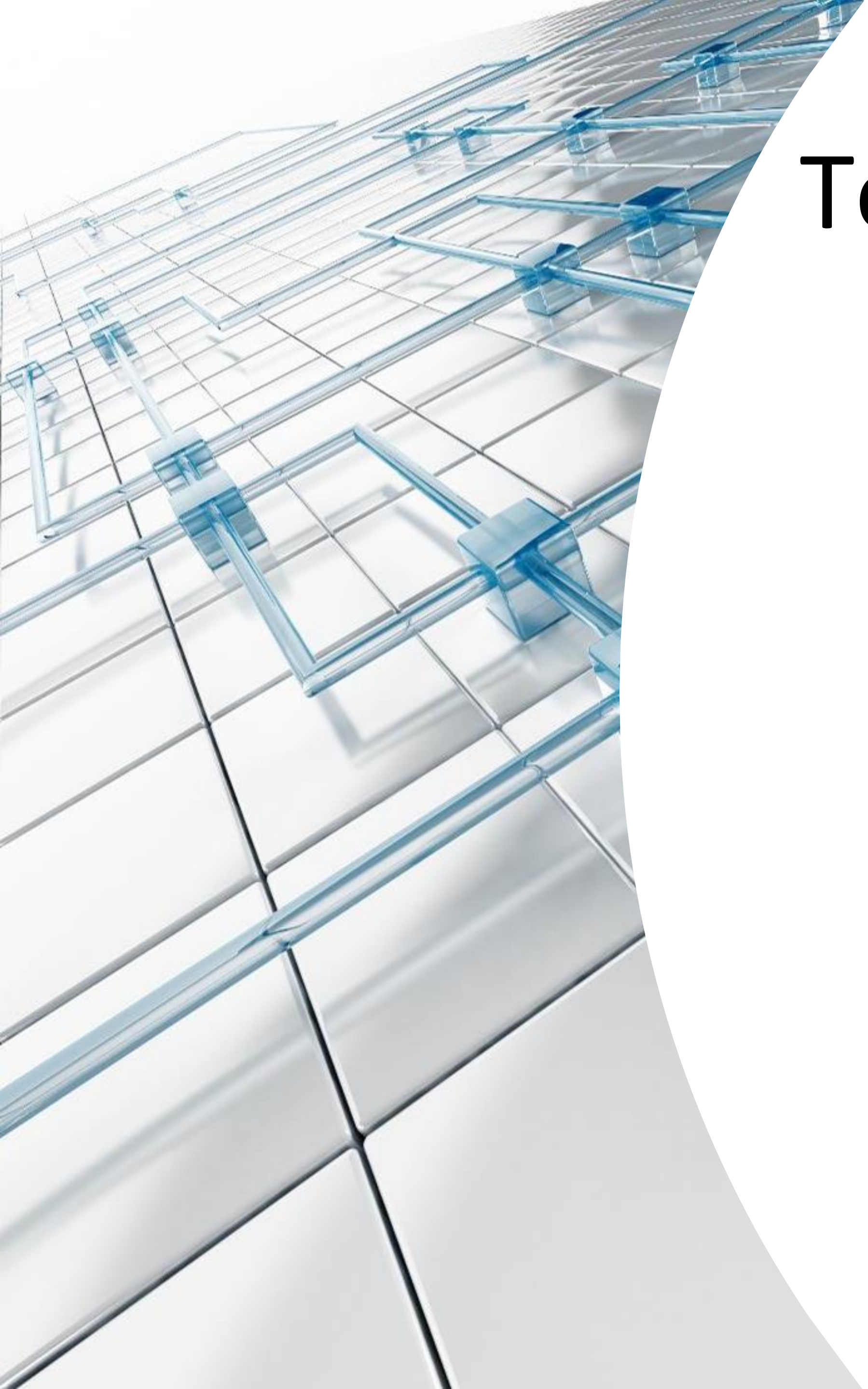
# Protocol Buffers introduction



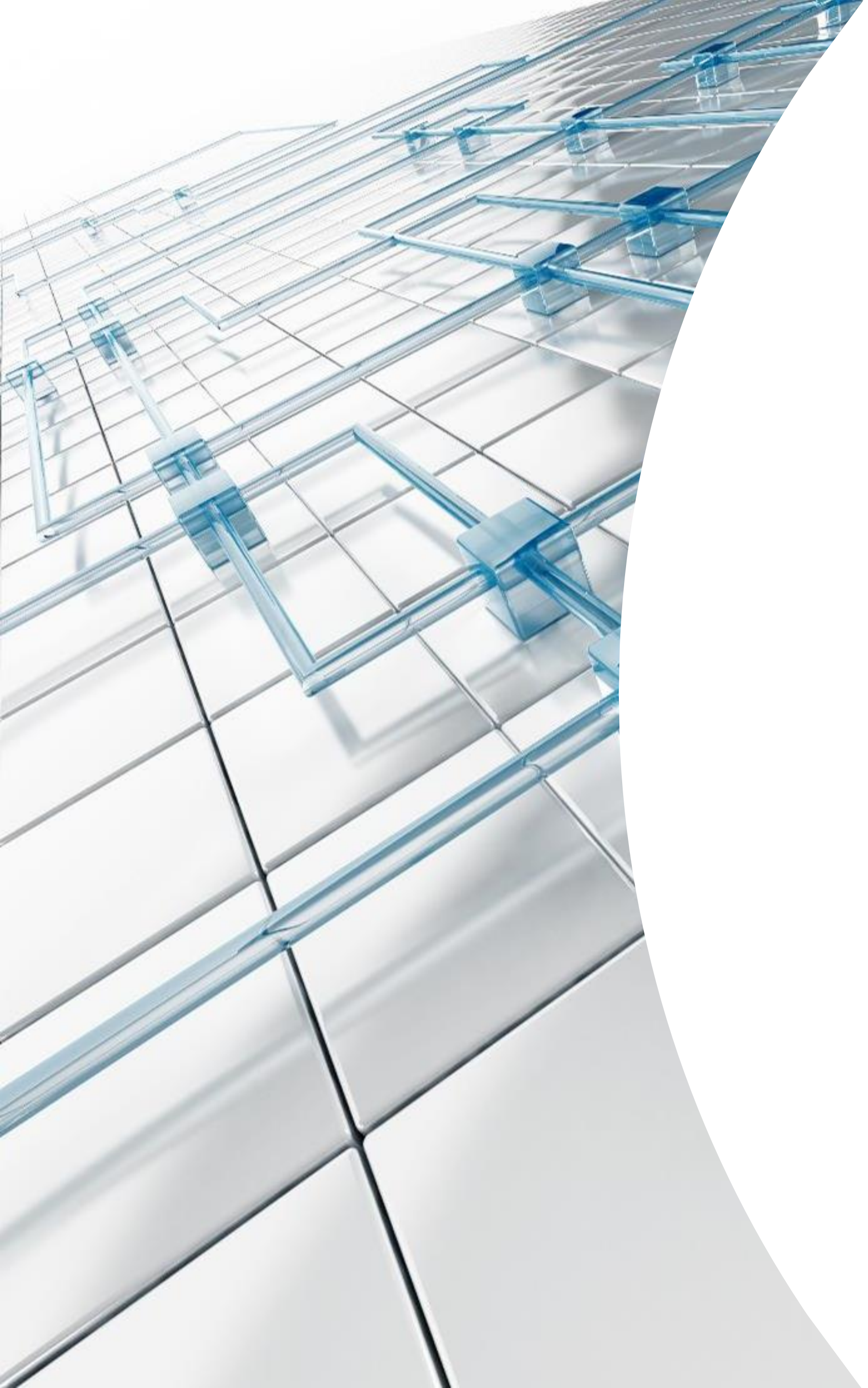
# Teraflow structure



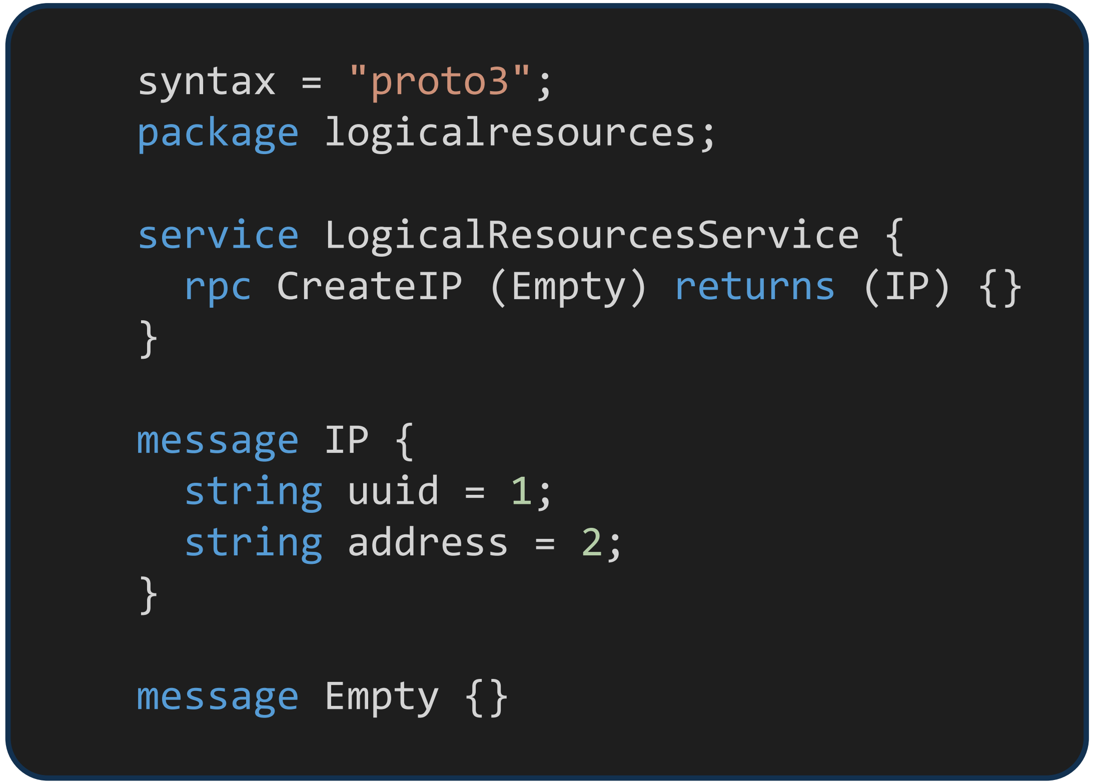


# Teraflow component key files

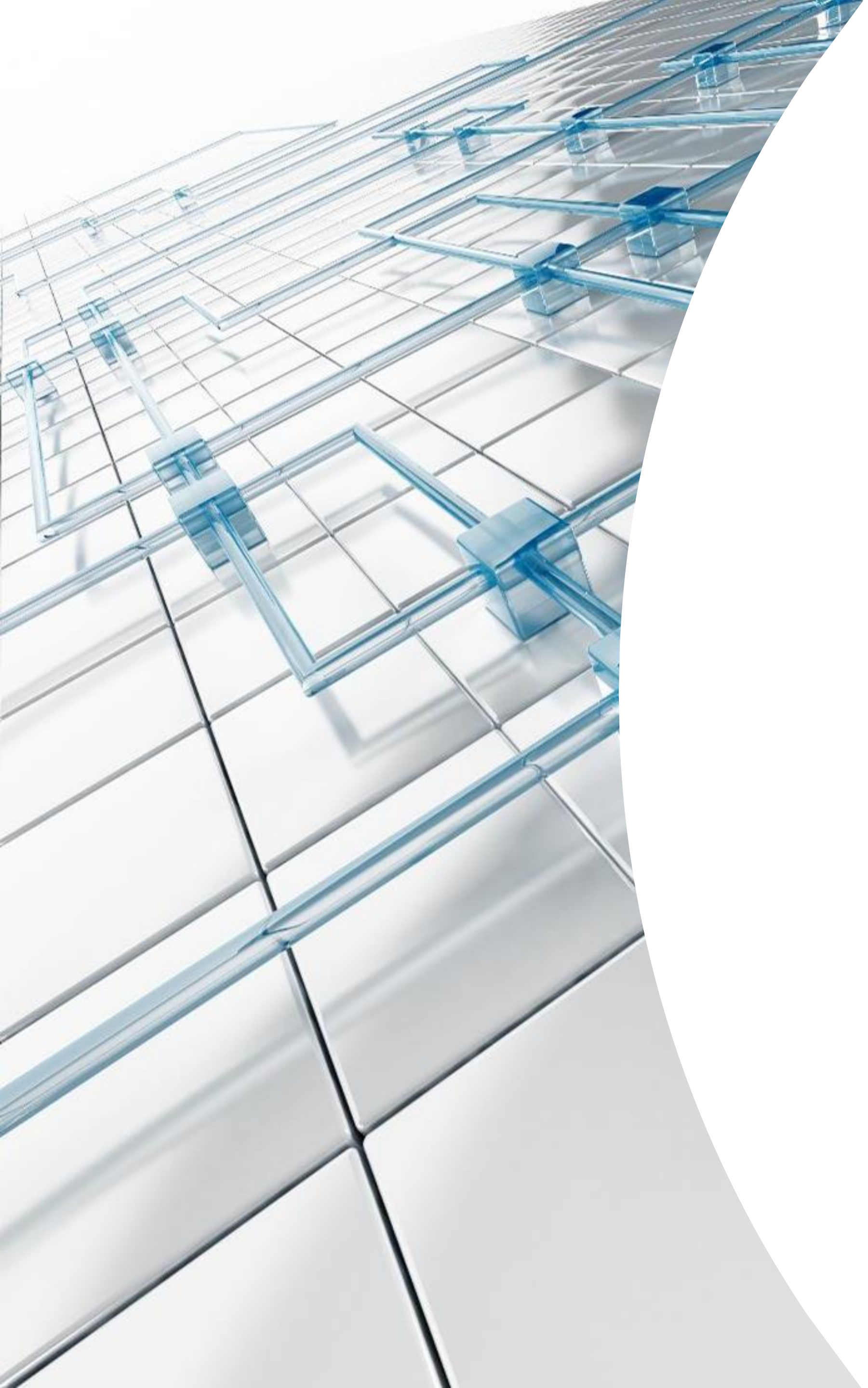
```
tfs-ctrl/src/yourcomponent/
├── client
│   ├── init.py
│   └── YourComponentClient.py
├── Config.py
├── Dockerfile
├── init.py
├── pycache
│   └── init.cpython-38.pyc
├── quick_deploy.sh
├── requirements.in
├── service
│   ├── init.py
│   ├── YourComponentService.py
│   ├── YourComponentServiceServicerImpl.py
│   └── main.py
└── tests
├── init.py
└── test_unitary.py
```



# Defining the .proto

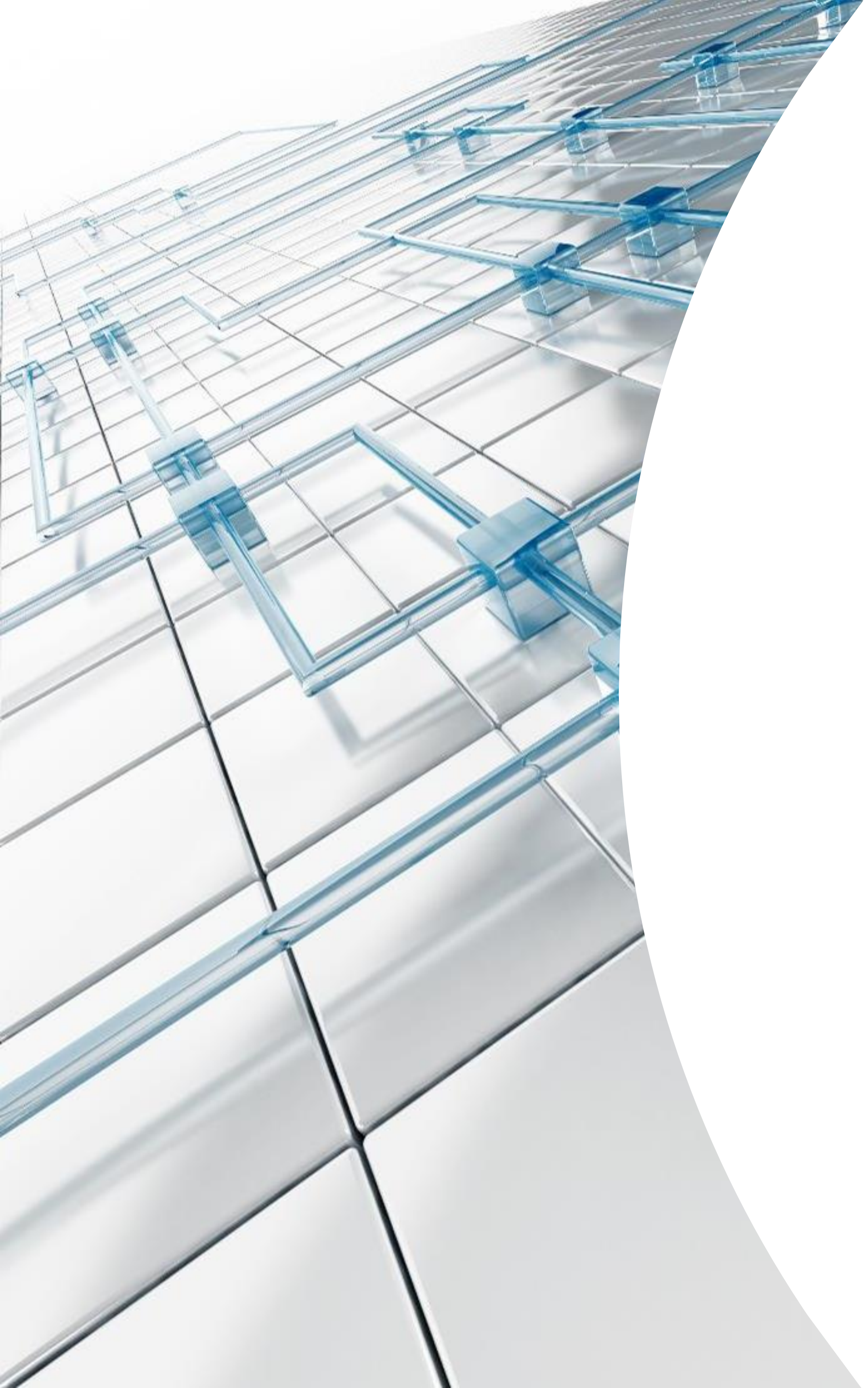


```
syntax = "proto3";
package logicalresources;

service LogicalResourcesService {
  rpc CreateIP (Empty) returns (IP) {}
}

message IP {
  string uuid = 1;
  string address = 2;
}

message Empty {}
```



# Component service

```
tfs-ctrl/src/yourcomponent/
├── client
│     ├── init.py
│     └── YourComponentClient.py
├── Config.py
├── Dockerfile
├── init.py
├── pycache
│     └── init.cpython-38.pyc
├── quick_deploy.sh
├── requirements.in
├── service
│     ├── init.py  ←
│     ├── YourComponentService.py  ←
│     ├── YourComponentServiceServicerImpl.py  ←
│     └── main.py
└── tests
├── init.py
└── test_unitary.py
```



# Component client

```
tfs-ctrl/src/yourcomponent/
├── client
│   ├── init.py
│   └── YourComponentClient.py
├── Config.py
├── Dockerfile
├── init.py
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│   └── init.cpython-38.pyc
├── quick_deploy.sh
├── requirements.in
├── service
│   ├── init.py
│   ├── YourComponentService.py
│   ├── YourComponentServiceServicerImpl.py
│   └── main.py
└── tests
├── init.py
└── test_unitary.py
```
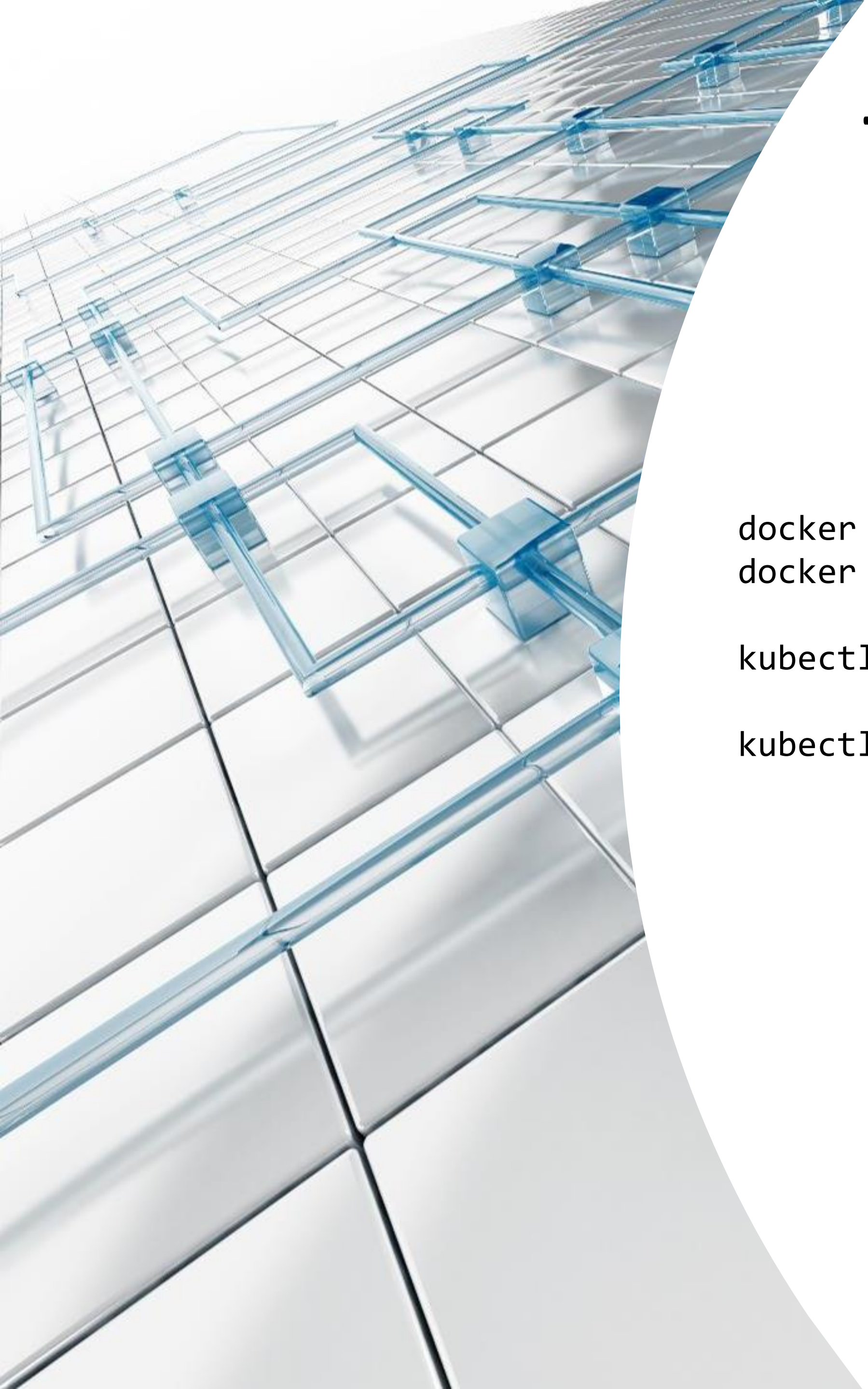
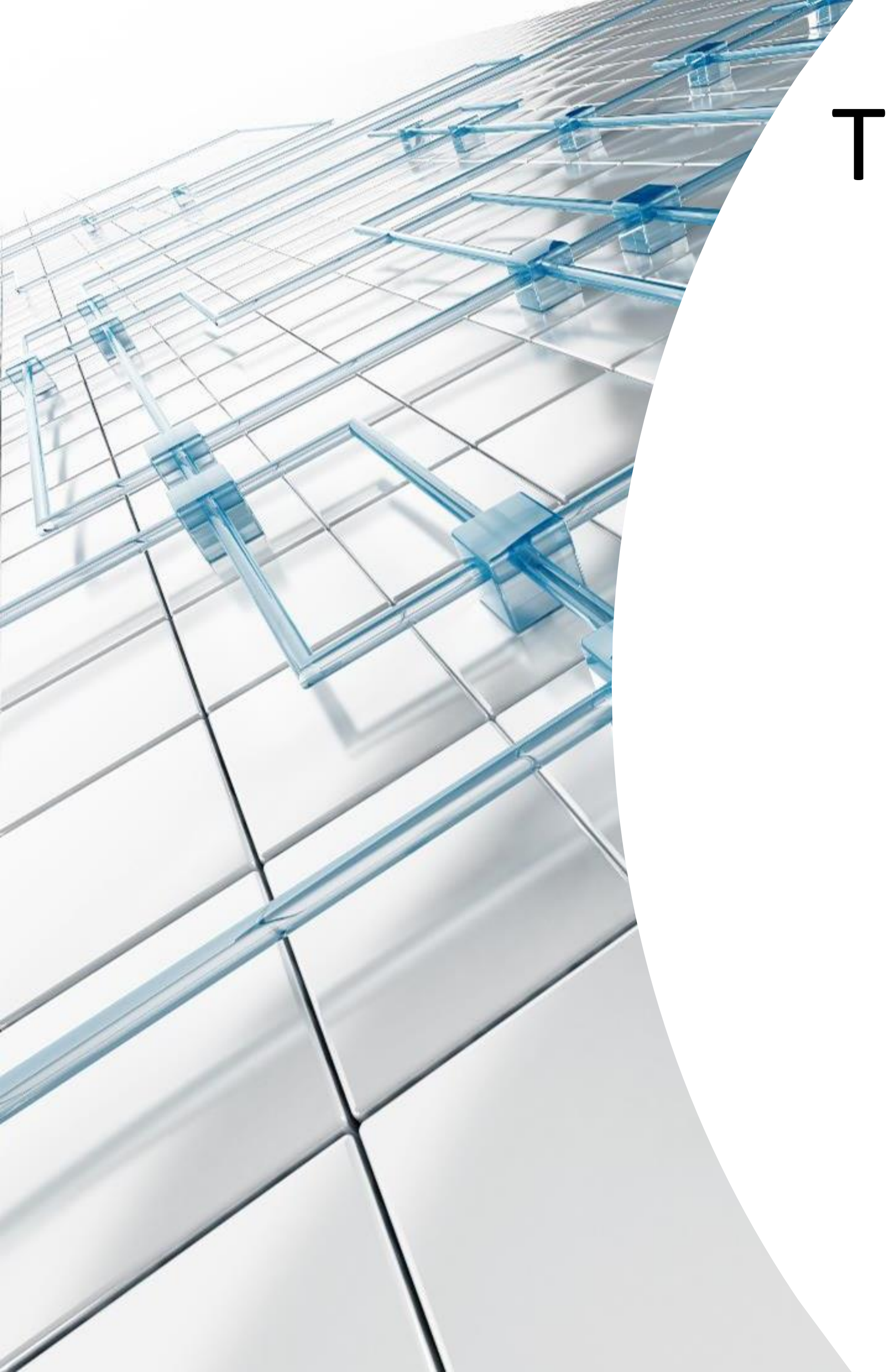



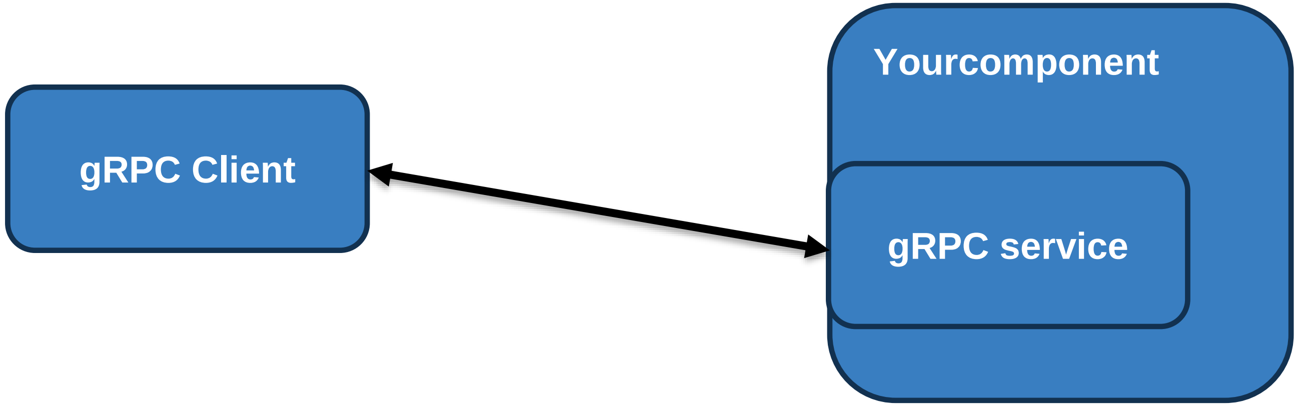
# Troubleshooting guide

```
docker buildx                                       -t yourcomponent:latest
docker run spe

kubectl exec -i                                      server -n tfs -- /bin/bash

kubectl describe                                      -n tfs
```

# Testing the gRPC service

(with python)





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# Thank You all for your participation!