# OpcUaServerWrapper

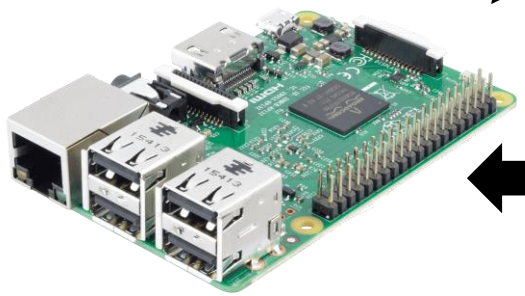
Client

Controller

OPC UA

Telnet

CN2



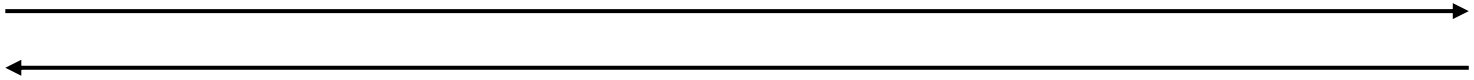
*runs our software*

Server

Robot

# Telnet example (ASCII encoding)

‘1;1;TIME’



response info

‘QoK04-02-0917:54:32’

response status

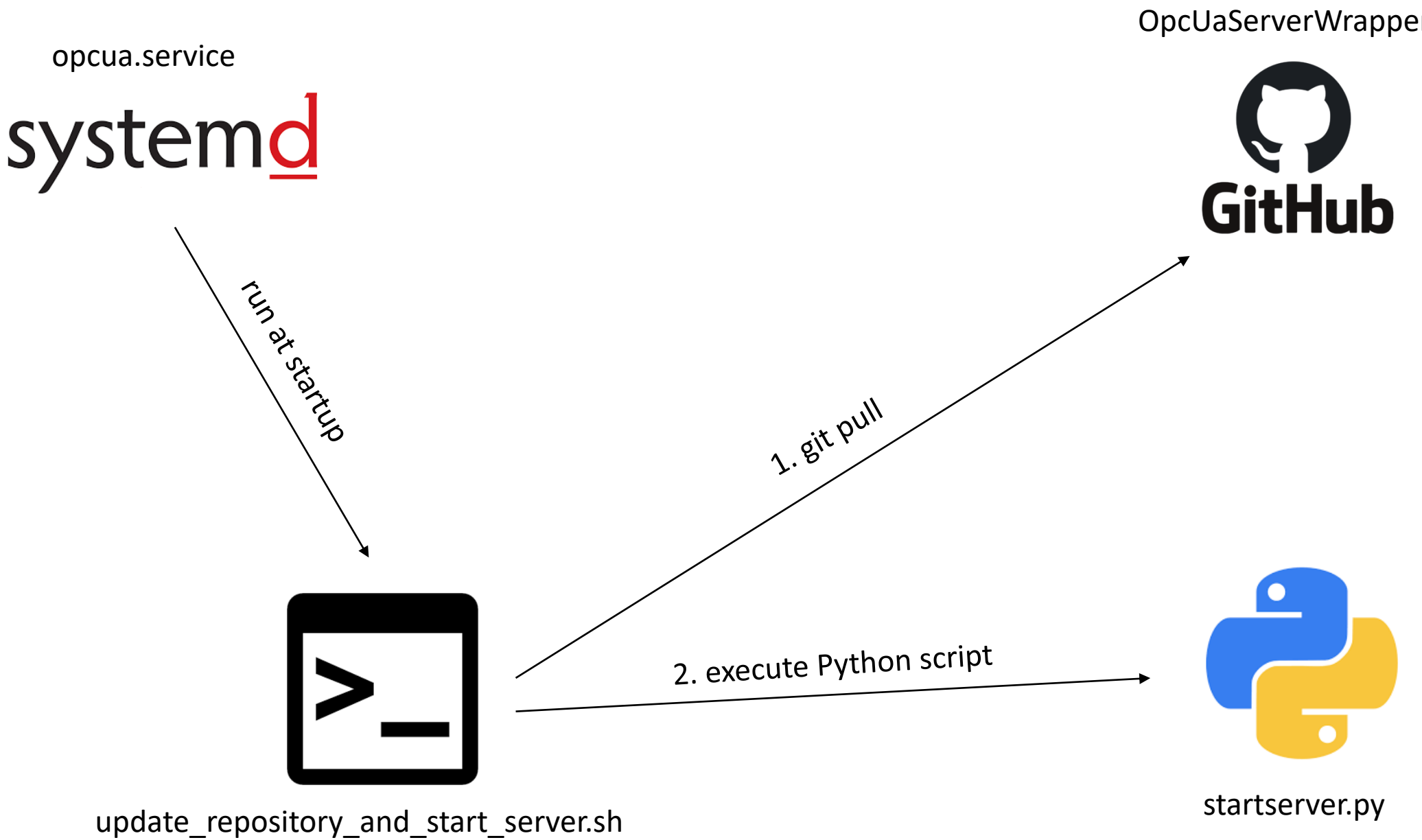
**OR**

‘QeR4220000’

error code

# our software is hosted on a public GitHub repo

git clone https://github.com/Oidlichtnwoada/OpcUaServerWrapper.git


opcua.service
systemd
OpcUaServerWrapper.git
GitHub
run at startup
1. git pull
2. execute Python script
update_repository_and_start_server.sh
startserver.py

telnetclient.py
… communicates with Controller …
… runs forever …
execute Python script
startserver.py
opcuaserver.py
Request
Response
generate Telnet command(s)
return processed controller response
receive res from controller
send cmds to controller
PC
robotcontrollerclient.py

# used open-source Python OPC UA library

git clone https://github.com/FreeOpcUa/python-opcua.git

| OPC UA method name | NodeId | Description |
|---|---|---|
| ReadInput(Index) | ns=4;i=1067 | reads the input sensor with the corresponding Index |
| WriteOutput(Index, Value) | ns=4;i=1111 | writes Value to the actuator with the corresponding Index |
| Move(X,Y,Z,A,B,C) | ns=4;i=1137 | move to position (X,Y,Z) with rotation (A,B,C) |
| OpenGripper() | ns=4;i=1131 | open the gripper attached to the robot |
| CloseGripper() | ns=4;i=1134 | close the gripper attached to the robot |
| GetErrorLog(NumErrorLogs) | ns=4;i=1140 | returns the most recent NumErrorLogs errors |
| ResetError() | ns=4;i=1108 | resets the current error present in the controller |

# Code Walkthrough

# Live Demo