

Mobilné technológie a aplikácie – Zadanie 1

**SIP Proxy (telefónna ústredňa)**  
**Dokumentácia**

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## Implementation

The solution was developed in python 3.9 in PyCharm IDE. The solution is based on free proxy available on <https://github.com/tirfil/PySipFullProxy> . The original file sipfullproxy.py was modified to fix all errors caused by old syntax of python version 2. Also implemented new logging system.

The solution has its own main file.

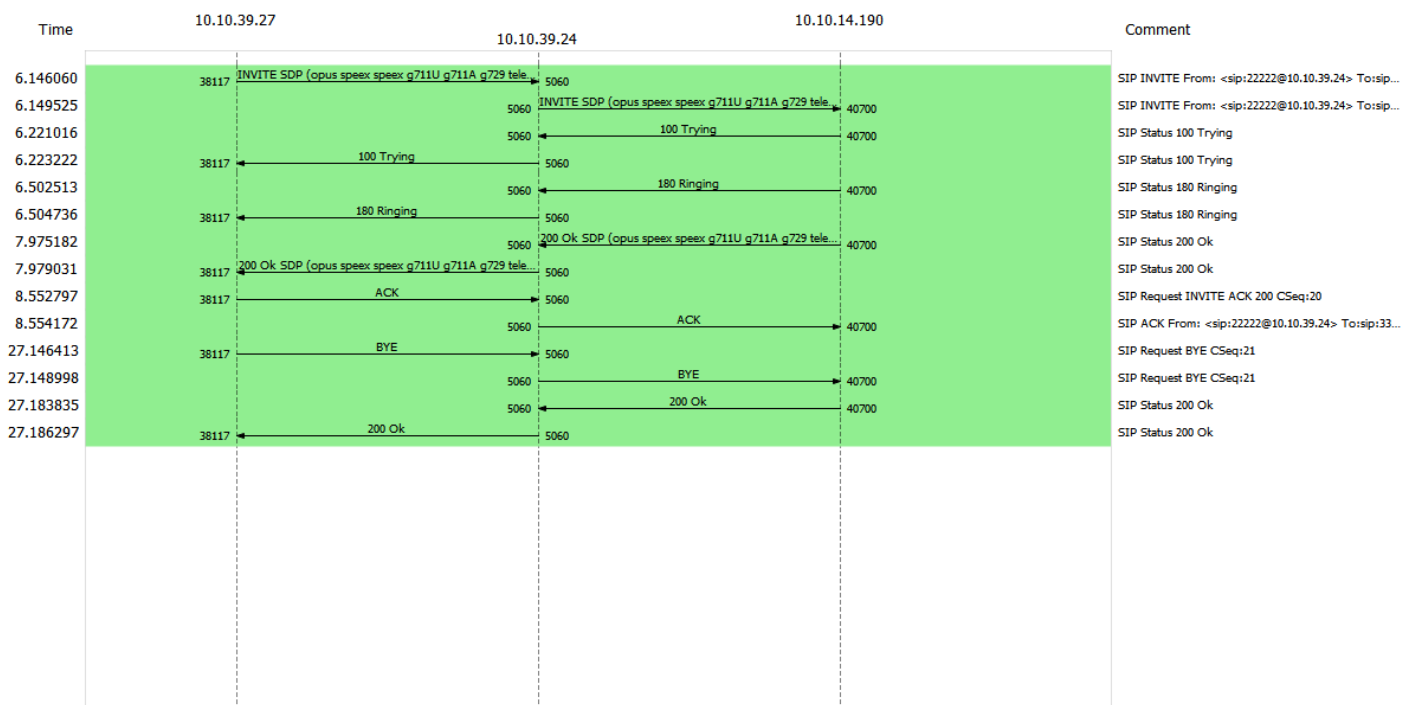
**LINK ON GITHUB:** <https://github.com/Kiligram/MTAA-zad1>

## Samples

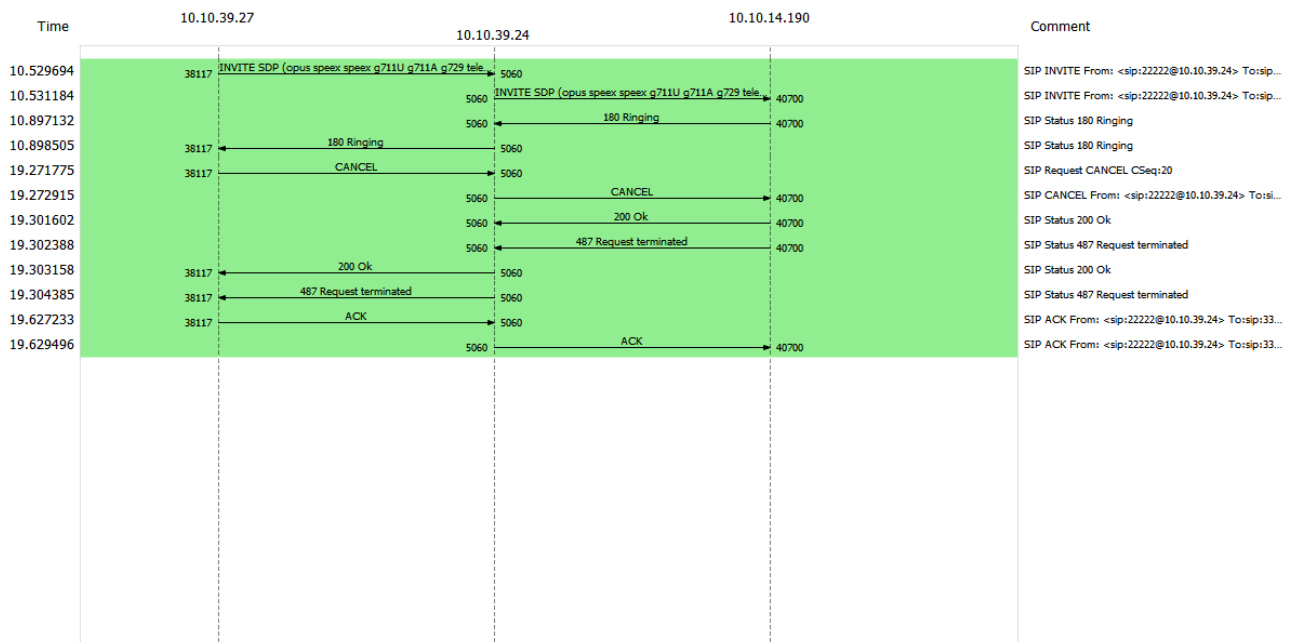
### 1. User registration

No.	Time	Source	Destination	Src port	Dst port	Protocol	Length	Info
1	0.000000	10.10.39.27	10.10.39.24	45941	5060	SIP	657	Request: REGISTER sip:10.10.39.24 (1 binding)
2	0.004297	10.10.39.24	10.10.39.27	5060	45941	SIP	683	Status: 200 VELMI OK (1 binding)

### 2. Making a call and ringing on the other side + acceptance + end of accepted call



### 3. End of unaccepted call

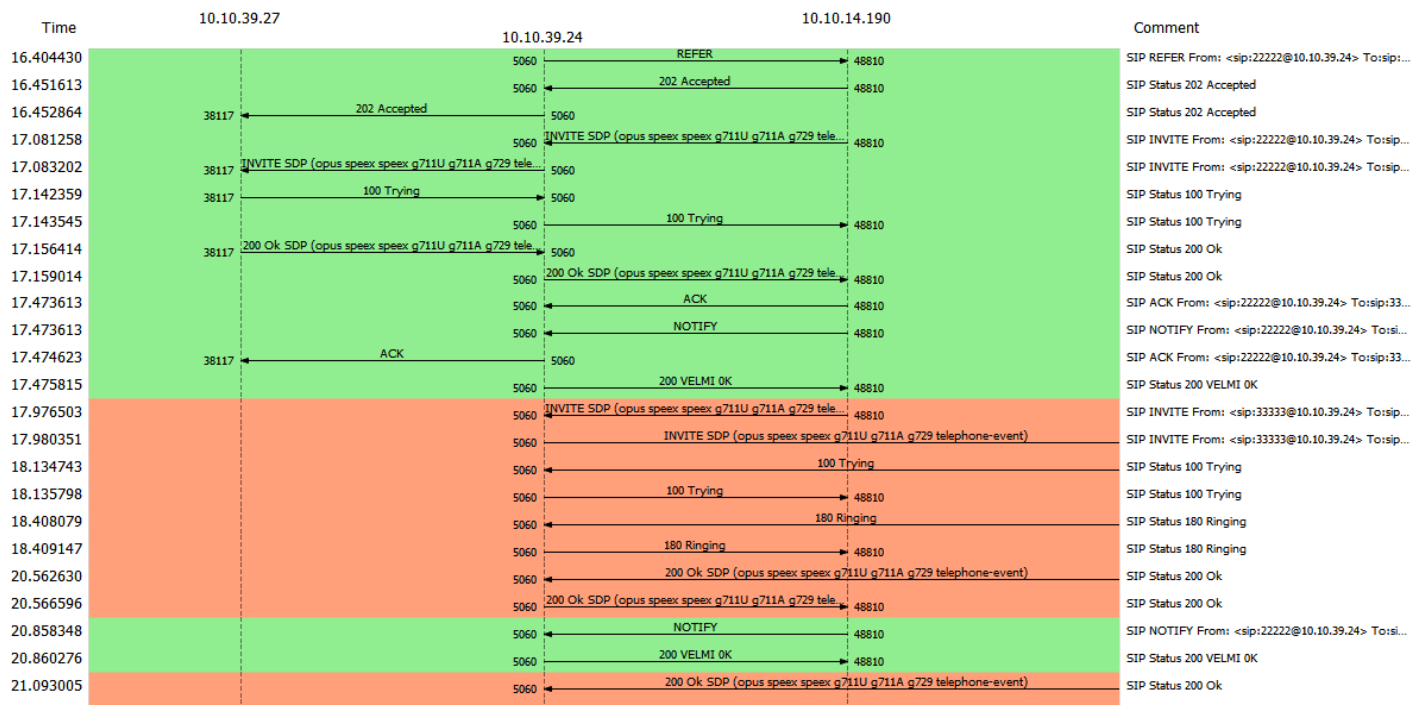


## Bonus

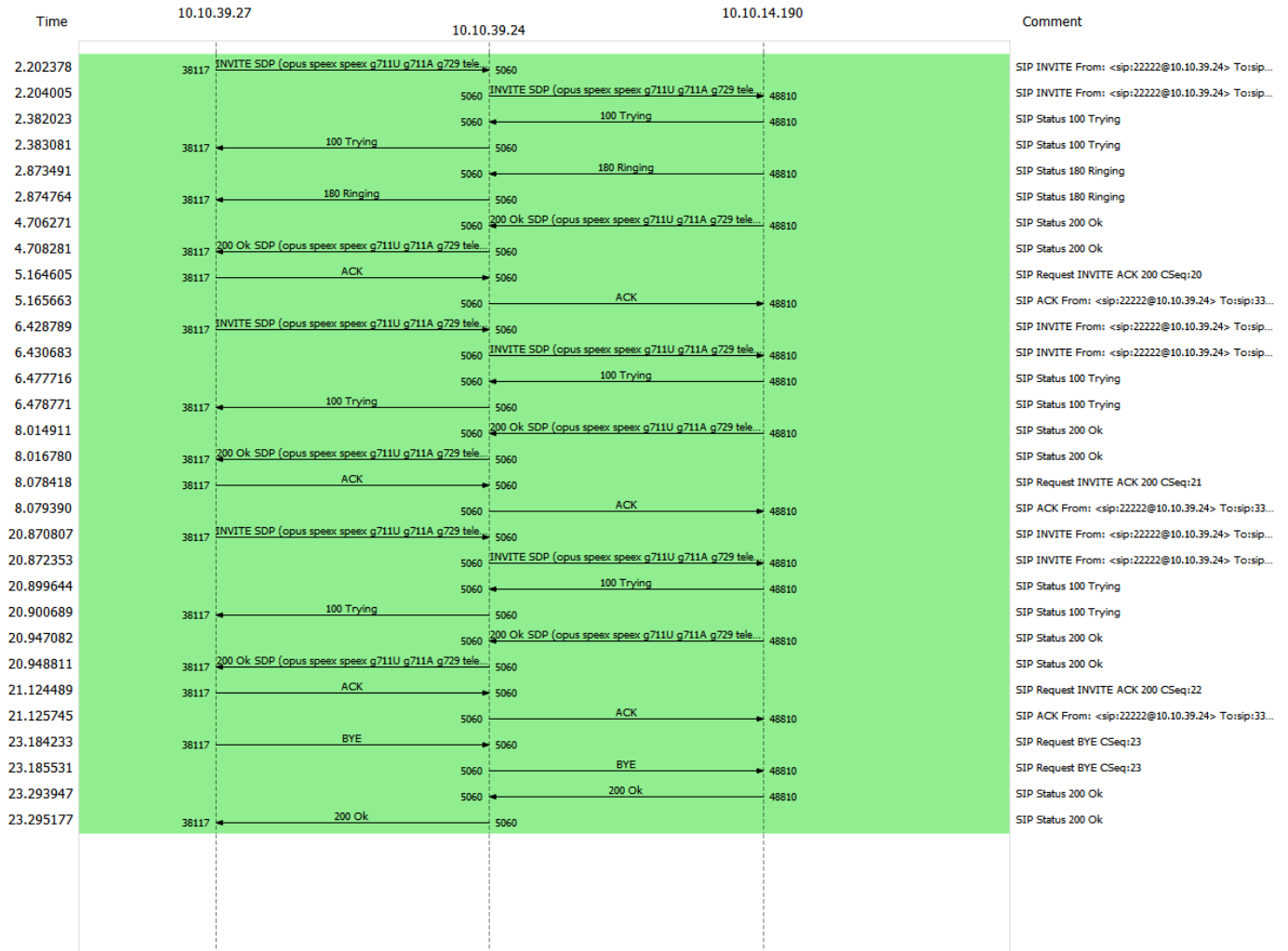
### 1. Conference call



### 2. Call redirection (The diagram is too big, see the *presmerovanie.pcapng* file)



### 3. Video call



### 4. Logging

Logging was implemented independently from original logging available in the solution. Logs are placed in file journal.txt

```
13:48:52: >>> 11111@147.175.179.30 is calling 22222@147.175.179.30
13:48:55: >>> Call 11111@147.175.179.30 <---> 22222@147.175.179.30 has been accepted
13:49:32: >>> Call 22222@147.175.179.30 <---> 11111@147.175.179.30 has ended
13:49:49: >>> 11111@147.175.179.30 is calling 22222@147.175.179.30
13:49:52: >>> Call 11111@147.175.179.30 <---> 22222@147.175.179.30 has been declined
13:49:56: >>> 11111@147.175.179.30 is calling 22222@147.175.179.30
13:49:58: >>> Call 11111@147.175.179.30 <---> 22222@147.175.179.30 has been canceled
```

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## 5. Custom state codes

No.	Time	Source	Destination	Src port	Dst port	Protocol	Length	Info
1	0.000000	10.10.39.27	10.10.39.24	45941	5060	SIP	657	Request: REGISTER sip:10.10.39.24 (1 binding)
2	0.004297	10.10.39.24	10.10.39.27	5060	45941	SIP	683	Status: 200 VELMI OK (1 binding)

No.	Time	Source	Destination	Src port	Dst port	Protocol	Length	Info
621	1.246056	10.10.39.27	10.10.39.24	40154	5060	SIP	657	Request: REGISTER sip:10.10.39.24 (1 binding)
622	1.250087	10.10.39.24	10.10.39.27	5060	40154	SIP	683	Status: 200 VELMI OK (1 binding)
1648	12.694754	10.10.39.27	10.10.39.24	40154	5060	SIP/SDP	1218	Request: INVITE sip:11111@10.10.39.24
1649	12.696224	10.10.39.24	10.10.39.27	5060	40154	SIP	733	Status: 480 Docasne nedostupne
1650	12.720892	10.10.39.27	10.10.39.24	40154	5060	SIP	429	Request: ACK sip:11111@10.10.39.24