

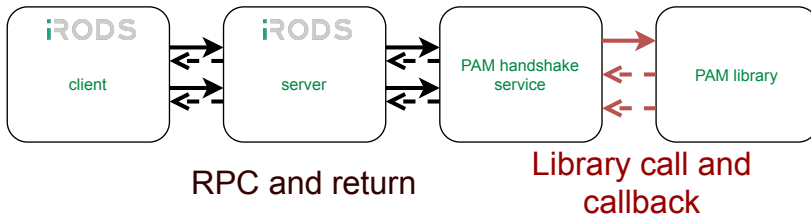
Flexible PAM support for iRODS

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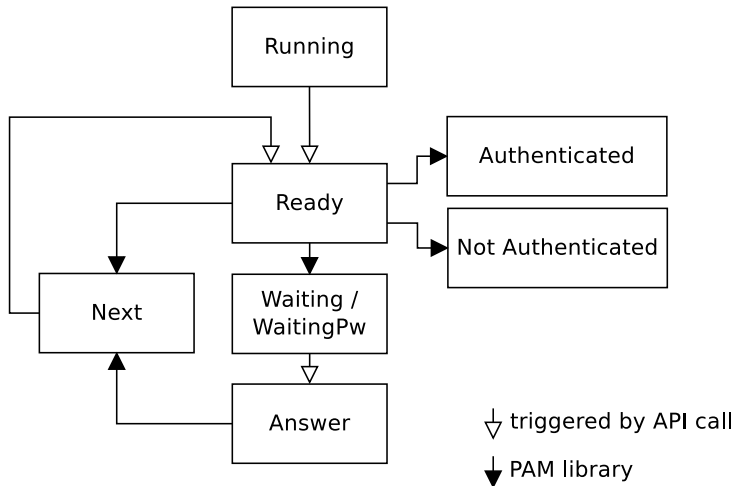
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- A PAM auth conversation may consist of an arbitrary number of steps
- 4 Message types: EchoOn, EchoOff, Msg, Error
- iRODS auth plugin:
 - simple messages between client and server (send message, return result)
 - arbitrary number of messages using one connection requires modification of auth plugin interface (?)

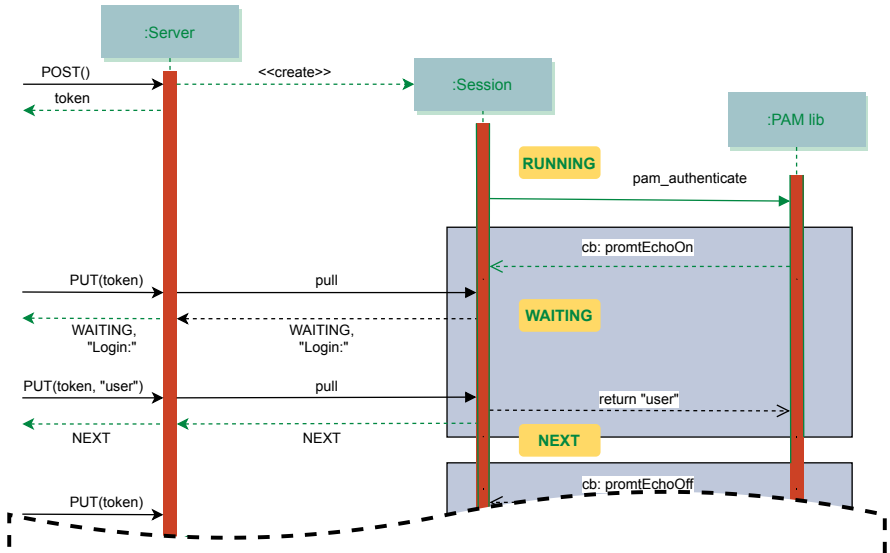


Solution: Server that handles stateful PAM conversations

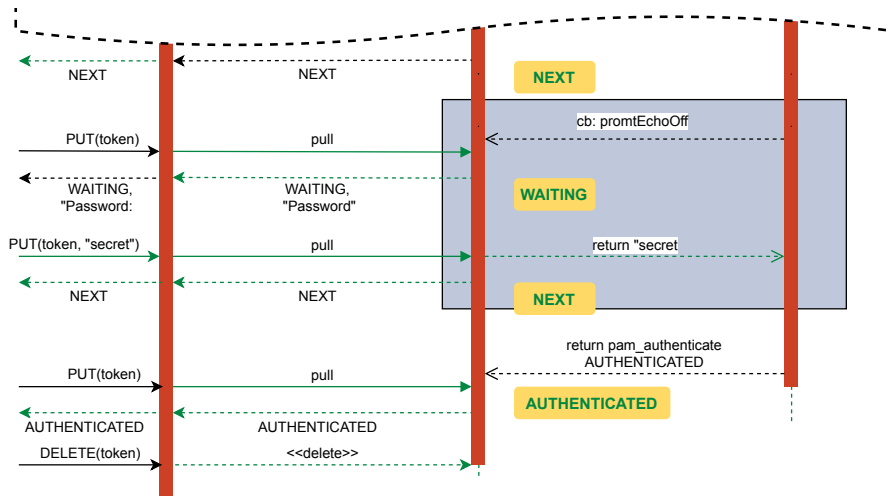
- Server accepts simple messages
- Create PAM conversation session on demand (one thread per session)
- Messages can wakeup thread
- Simple messages to poll next messages and sending answers from client to server
- Thread pool and timeouts to avoid infinite amount of open sessions



Authentication Sequence



Authentication Sequence



```
SESSION=$( curl --unix-socket server.socket -X POST http://local/ )
curl --unix-socket server.socket -X GET http://local/$SESSION
RUNNING
curl --unix-socket server.socket -X PUT http://local/$SESSION
WAITING
login:
curl --unix-socket server.socket -X PUT http://local/$SESSION -d 'mara'
NEXT
curl --unix-socket server.socket -X PUT http://local/$SESSION
WAITING_PW
password:
curl --unix-socket server.socket -X PUT http://local/$SESSION -d 'secret'
NEXT
curl --unix-socket server.socket -X PUT http://local/$SESSION
STATE_AUTHENTICATED
curl --unix-socket server.socket -X DELETE http://local/$SESSION
DELETED 7f6dda2c45cacd477fa48de35df7435f
```