

## Interoperability Testing with Group 14

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### Pre-testing:

1. Set up connection so that your server can connect to the target server
2. Run 2 servers
3. Run 2 clients (one on each server)

### Testing:

	Process	Expected behavior	Result (Pass / Fail / Unsure)	Comment
1	server_hello	The traffic is captured at the server	Pass	Shown in (figure 1) Server can be connected successfully
2	client_update_request	A client list is sent back to the server.	Pass	Shown In (figure 2) Client list is sent back to both servers
3	Sending message (chat or public_chat) from clients.	The message successfully appears in the correct format at target client (s).	Unsure	A message is sent, but nothing is received on both sides
4	Updated online users	When a new user connects or a user disconnect in the distant server, the clients list on left-hand side menu is updated.	Pass	Shown In Figure 3 On our app, they show up as a new user, meaning they're online

(Figure 1)

```
PS /Users/nathandang/Downloads/SecProg/server> python3 server.py
I am : 127.0.0.1
===== Running on http://0.0.0.0:8080 =====
(Press CTRL+C to quit)
WSMessage(type=<WSMsgType.TEXT: 1>, data='{"type": "signed_data", "data": {"type": "server_hello", "sender": "ws://127.0.0.1:8080"}, "counter": 1, "signature": "mRY0SSfuyw+6r10e4mJ7QI3+00acdjd5c7UoYLRfMyXu+9P/h1Snde3UmgQMZB1c6lhFuzbnHkUz4:9Uw8DEjmdG+RsRE4jv//Tj1LLKjF4Op4ky5GDE88cZPFon/MqhCS+Yn/hRzuVZqv8910U2hLWu059D0Vek01fL3LCDU1zHU+Lw/0bIBHAKGZtvFChANGZvHD240+s8029pm0CQo01oWqc5ntgh1K3wSjDkRoSptMj kqqgIuKRd9V2YucKFJHHT1pGXGm1kmXWge1ySAKS5m0SVUQTNDbnEvCLXUmE0S2ZsO45+Y2875SC4EqEnnJ5XpEUL62wscPIIg="}', extra='')
127.0.0.1
signed_data_server_hello
[2824-10-10 19:03:06.859661]: SERVER -1 CONNECTED
WSMessage(type=<WSMsgType.TEXT: 1>, data='{"type": "client_update_request"}', extra='')
127.0.0.1
client_update_request
1111
^
```

(Figure 2)

```
Public keys and fingerprints of other clients:
Fingerprint: 8734accleaf4031a8f8b289bfe11879f0f992ba89798b494cdd2aa7be20a6e5
Server: ws://127.0.0.1:8080
Public key: -----BEGIN PUBLIC KEY-----
MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCGKCAQEAo3+qydtbxfCQWnRt/do
Gvfl1zE7S3MaawK60wRE/V8Jdj0jmK1F4bGuTB7f0oF6gL+sFfh3AMyC1gxpQVZ4
K81XILDtwkjU08LXkrb75pCZVXC08g23UAKrNr755Q0MrKymjS05SD85HpK8a0+3
5GbFmShgFHFZGErBN94sXIKa1qmdKUVHvksbmFd9fss0VdjCQ51YA0e80mMLPQ9
I4myuaLgahruIjZ2EX4CT7fP2JmJorz+Jk/Y8LR0C09i0R0XiuscVJtPL/MvIWnRn
FFMba1kygx+Bg0kE8nTmagd1s7oVXcFrd6R0Bf/b4UwbyY5Dwa312tp4HHIxn2fk
8QIDAQAB
-----END PUBLIC KEY-----

Client list updated: {'type': 'client_list', 'servers': [{'clients': ['-----BEGIN PUBLIC KEY-----\nMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCGKCAQEAjoFb8GtXKp1
ZvCRx9r\nIge48dwj02BjNgAnrSjTprwzHC0bIdXUhwmdHp/LsNasNkIGWtB4m3BuPSDI9qX/\nhWjGmAvqu5zxkGzgFTkuYy8ZLTG1UhfV22Fdg8n41oEC/ScehCTXi/UyNbD024z\nI81XMi1YTT+rHzr
ih1AYvoke/0upXvGCBumhcyKpyiUCrs080UhdSJVJvMmSf8M\nP6U8GtZtn0PJ6j6oDr2hx07XB6L9ocILqjE6QDj5KNOal.fry30Ca60cCewGEDBKYYnyyKVQ2SIFvcd6wAvWit3UcXuaru56JaBwzeSseY
uCPUtnCVf1cWIEfj7WzotJxsj\n+QIDAQAB\n-----END PUBLIC KEY-----\n'], 'address': '127.0.0.1:8080'}, {'address': '127.0.0.1:53905', 'clients': ['-----BEGIN PUBL
IC KEY-----\nMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCGKCAQEAo3+qydtbxfCQWnRt/do\nGvfl1zE7S3MaawK60wRE/V8Jdj0jmK1F4bGuTB7f0oF6gL+sFfh3AMyC1gxpQVZ4\nK81XILDtwkjU08LXkrb75pCZVXC08g23UAKrNr755Q0MrKymjS05SD85HpK8a0+3\n5GbFmShgFHFZGErBN94sXIKa1qmdKUVHvksbmFd9fss0VdjCQ51YA0e80mMLPQ9\nI4myuaLgahruIjZ2EX4CT7fP2JmJorz+Jk/Y8LR0C09i0R0XiuscVJtPL/MvIWnRn
FFMba1kygx+Bg0kE8nTmagd1s7oVXcFrd6R0Bf/b4UwbyY5Dwa312tp4HHIxn2fk\n8QIDAQAB\n-----END PUBLIC KEY-----\n']}]}
```

(Figure 3)

```
Your fingerprint: 8734acc1eaf4031a8f8b289bfe11879f0f992ba89798b494cdde2aa7be20a6e5
Your public key: -----BEGIN PUBLIC KEY-----
MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAO3+qydtbxhfcQWnRt/do
Gvf1zE7S3MaawKC60wRE/V8Jdj0jmK1F4bGuTB770of6gl++sFfh3AMyC1gxpQVZ4
KB1XILDtwkju08LXkrb7SpCZVXC00g23UakrNr755Q0MrKYmjS0550B5HpK8a0+3
5GbFaShgFHFZGErBN94sXIKa1qndKUVHvksbmFd9fss0VdIC05iYA0e80mMLP09
I4myuaLgahruIjZZEX4CT7FP2JmJorz+Jk/Y81R0C0910R0XIuscVJtPl/Mv1WRn
FFMba1kygx+Bg0kE8nTMagd1s7oVXcFrd6R0Bf/b4UWbyY5Dwa312tp4HHIxn2fk
8QIDAQAB
-----END PUBLIC KEY-----

Public keys and fingerprints of other clients:
Fingerprint: 8734acc1eaf4031a8f8b289bfe11879f0f992ba89798b494cdde2aa7be20a6e5
Server: ws://127.0.0.1:8000
Public key: -----BEGIN PUBLIC KEY-----
MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAO3+qydtbxhfcQWnRt/do
Gvf1zE7S3MaawKC60wRE/V8Jdj0jmK1F4bGuTB770of6gl++sFfh3AMyC1gxpQVZ4
KB1XILDtwkju08LXkrb7SpCZVXC00g23UakrNr755Q0MrKYmjS0550B5HpK8a0+3
5GbFaShgFHFZGErBN94sXIKa1qndKUVHvksbmFd9fss0VdIC05iYA0e80mMLP09
I4myuaLgahruIjZZEX4CT7FP2JmJorz+Jk/Y81R0C0910R0XIuscVJtPl/Mv1WRn
FFMba1kygx+Bg0kE8nTMagd1s7oVXcFrd6R0Bf/b4UWbyY5Dwa312tp4HHIxn2fk
8QIDAQAB
-----END PUBLIC KEY-----
```

## Public Chat

Rebecca Rivera

Richard Zuniga