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# **WEforUS: A Community Platform**

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### **Private Messaging Feature**

### 

### **Women Engineers**

### **March 2025**

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### **Replacements for Lemmy**

Why are we not using Lemmy for private messaging?

* It is not secure(no encryption in place)
* It is not live and page needs to be reloaded in order to view the message

### **Final Comparison**

| **Feature** | **Socket.IO + Signal** | **Gorilla WebSockets + Signal** | **Phoenix Channels + Signal** |
| --- | --- | --- | --- |
| **Language** | Node.js (JavaScript) | Go | Elixir |
| **WebSocket Support** | Yes (via Engine.IO) | Yes (Native WebSocket) | Yes (Built-in) |
| **Performance** | Fast | Faster | Fastest |
| **Scalability** | Medium (Needs Redis for scaling) | Good (Go handles concurrency well) | **Best** (BEAM scales to millions of connections) |
| **Reconnection & Fallbacks** | Built-in | No built-in reconnection | Built-in |
| **Encryption (Signal Protocol)** | Works well | Works well | Works well |
| **Security** | Requires additional setup for security | More control, but must secure manually | Secure by design (OTP, BEAM) |
| **Best for** | **Small to medium apps, Node.js devs** | **Go backend users, moderate complexity** | **High-performance, large-scale apps** |

**What should we choose?**

* Socket.io and Phoenix channels are both great options
* If we already have node.js setup we should go with Socket.io, but if we don’t Phoenix channels are a better option

**We decided on phoenix channels + Signal due to it’s scalability  
  
References:-**[Phoenix channels](https://hexdocs.pm/phoenix/channels.html)

[Signal Protocol](https://www.npmjs.com/package/libsignal-protocol)

[Socket(.)IO](https://socket.io/docs/v4/)