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- An opportunity for a Denial of Service (DoS) attack: overwhelm the server with a flood of spurious signature packets.
- Randomised selective authentication: The case for the defence — exploit the mismatch in the needs of the attacker and the client.
  - The attacker's need: have the receiver examine the vast majority of the spurious packets. Defang the attack by having the receiver randomly rejects a fraction $1 - p$ of incoming packets. [Reject rate determined by the spare computational capacity at the receiver and the maximum attack rate. For example, if $p = 0.1$ then only ten percent of the attack gets through.]
  - The sender's need: have one signed packet validated by the receiver. Sender sends n copies of her cryptographically signed packet. The probability that at least one signed packet is verified is approximately $1 - \mathrm{Po}(0;\lambda) = 1 - e^{-\lambda}$ where $\lambda = np$ is the Poisson parameter. [If $p = 0.1$ and $n = 25$ there is a 92% chance that a signed packet makes it through the blockade; if $n = 40$ the chance jumps to 98%.]