

# Secure Integration

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## Using URIs

### 1. Write a tokenizer for RFC 8905 URIs

- The tokenizer must reject malformed URIs
- Output the payment method and target account
- Output standardized optional arguments (amount, message, instruction, receiver, sender)
- Validate target accounts in at least one registered schema (ach, bic, iban, etc., but not void)

Test vectors:

```
payto://iban/DE75512108001245126199?amount=EUR:200.0&message=hello
payto://iban/SANDB0XX/DE75512108001245126198?receiver-name=Dude
payto://bitcoin/12A1MyfXbW6RhdRAZEqofac5jCQQjwEPBu?amount=BTC:0,42
payto://bitcoin/tb1qxzjp3xmdk6ghyddpjlfmj06d9pwp9jptq5c6zt
```

Which one(s) of the above are valid?

### 2. `payto://` URIs are not always normalized!

For some applications (like duplicate detection) it is desirable for URIs to be normalized, that is byte-by-byte unique for the same target. Ignoring the optional arguments (which are obviously going to vary for different transactions), point out where `payto://` URIs are not normalized.