Mobile Application Security

Angriff von unterwegs

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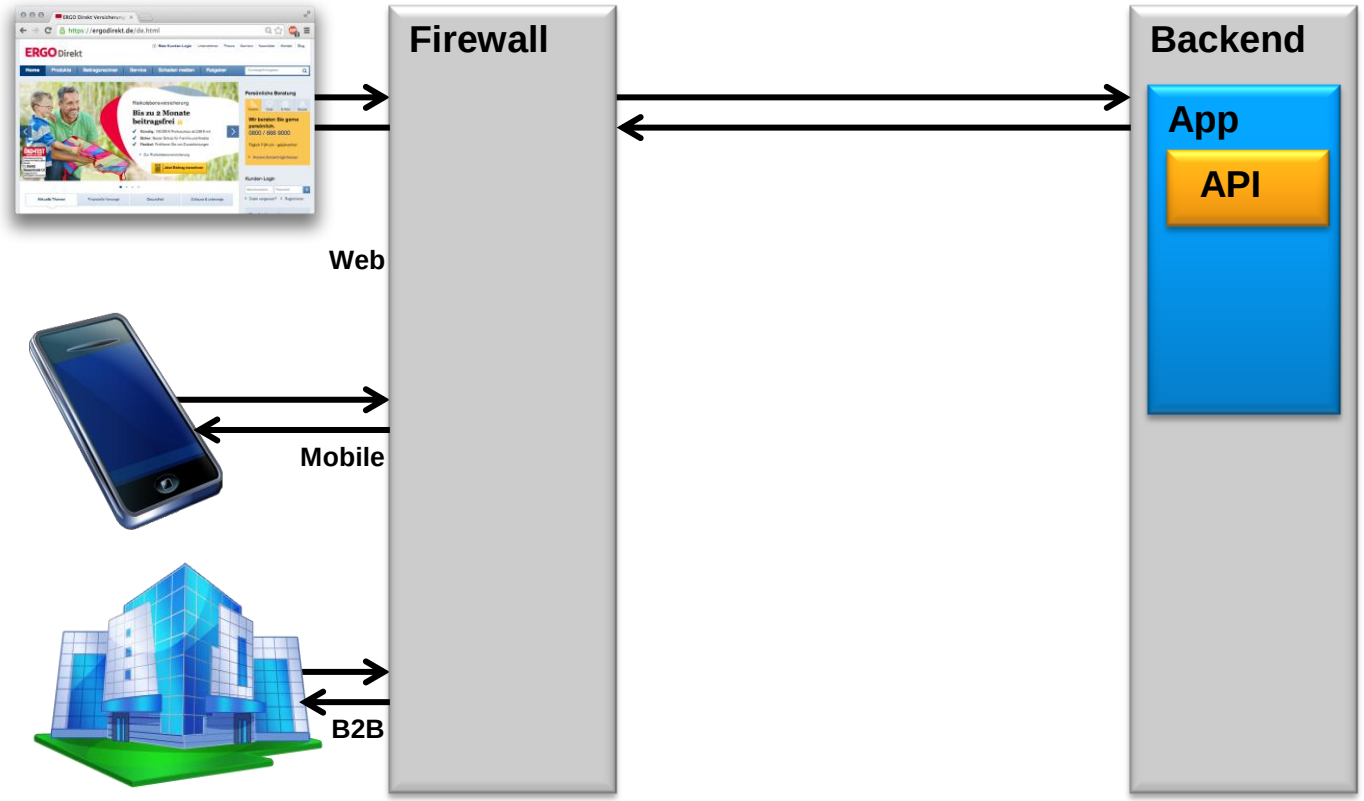
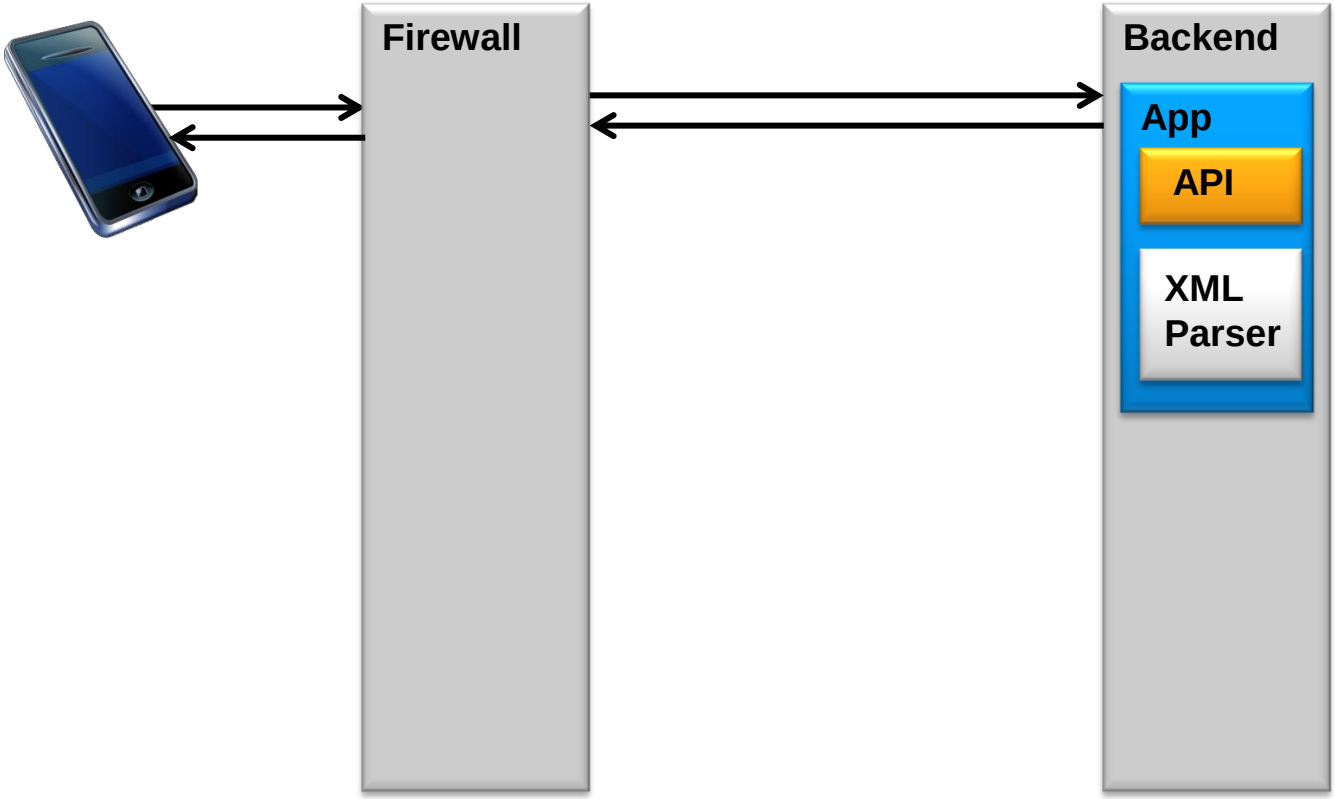
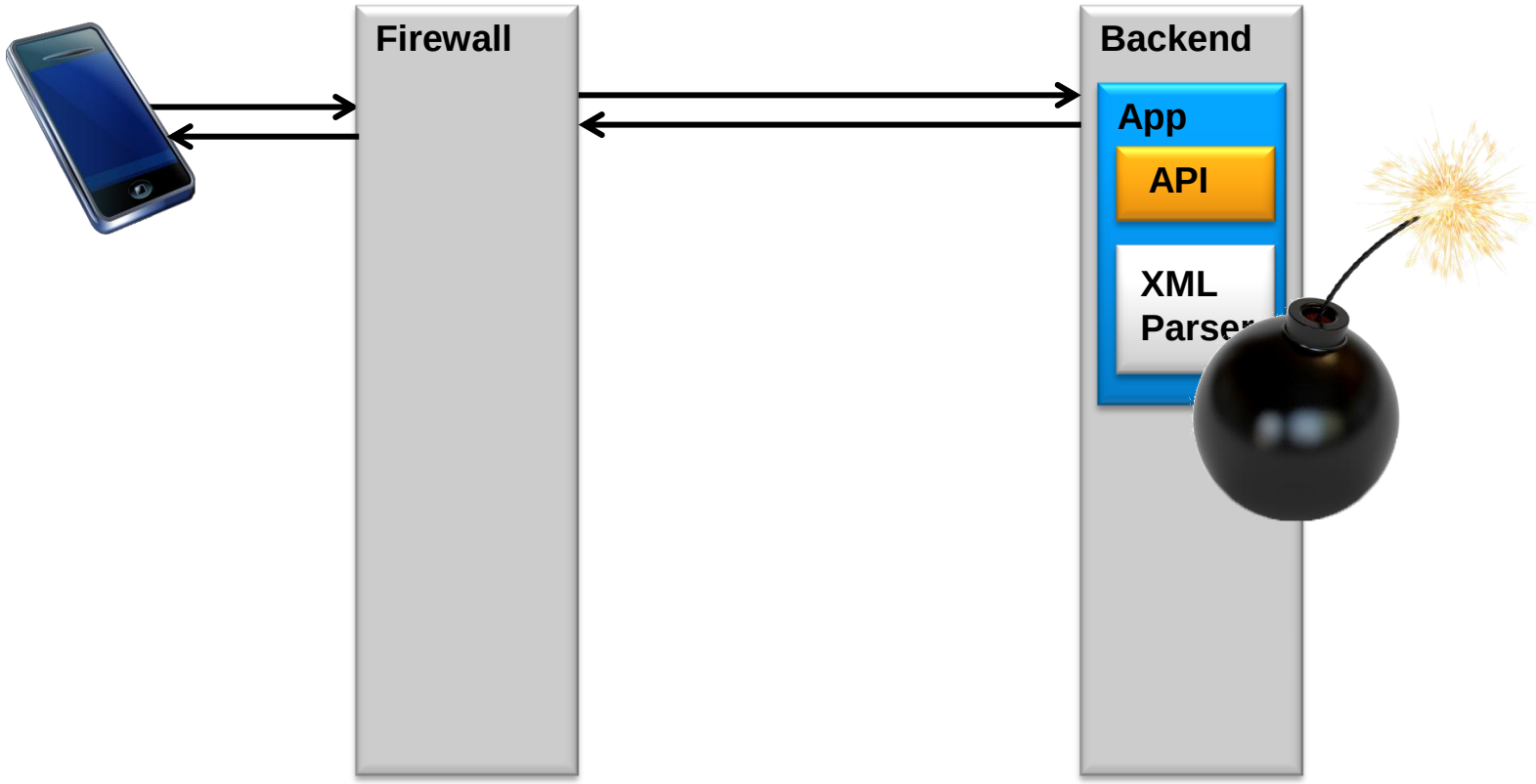
Agenda

- Ziele
- Angriff
- Schutz
- Case Study: Ergo Direkt Versicherungen

Web API




Firewall
Backend
App
API
XML
Parser


Firewall
Backend
App
API
XML

```
<?xml version="1.0"?>
<!DOCTYPE lolz [
 <!ENTITY lol "lol">
 <!ELEMENT lolz (#PCDATA)>
 <!ENTITY lol1 "&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;">
 <!ENTITY lol2 "&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;">
 <!ENTITY lol3 "&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;">
 <!ENTITY lol4 "&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;">
 <!ENTITY lol5 "&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;">
 <!ENTITY lol6 "&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;">
 <!ENTITY lol7 "&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;">
 <!ENTITY lol8 "&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;">
 <!ENTITY lol9 "&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;">
]>
<lolz>&lol9;</lolz>
```

```
<?xml version="1.0"?>
<!DOCTYPE lolz [
 <!ENTITY lol "lol">
 <!ELEMENT lolz (#PCDATA)>
 <!ENTITY lol1 "&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;">
 <!ENTITY lol2 "&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;&lol1;">
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 <!ENTITY lol8 "&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;">
 <!ENTITY lol9 "&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;">
]>
<lolz>&lol9;</lolz>
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<lolz>&lol9;</lolz>
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8;&lol8;&lol8;&lol8;&lol8;&lol8;
</lolz>
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<lolz>
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</lolz>
```
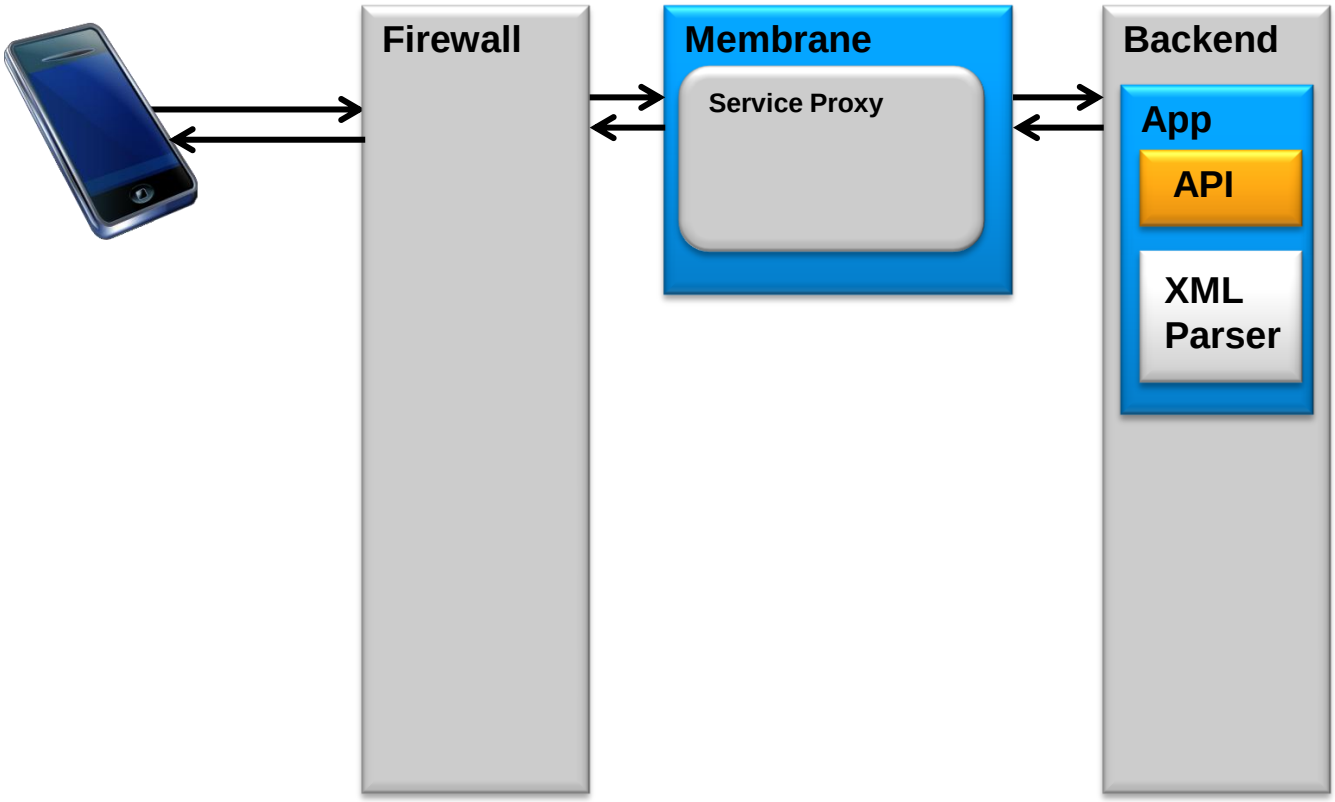
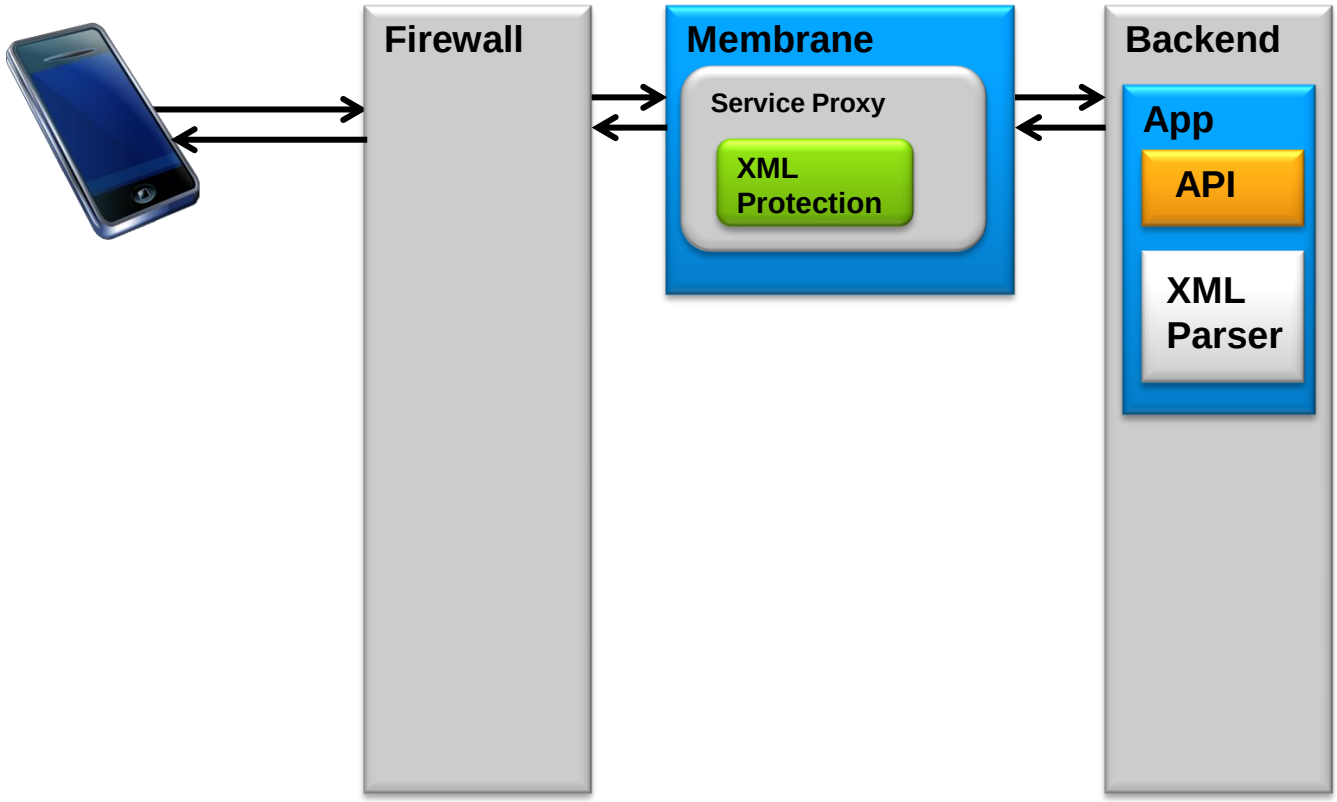


Firewall
Membrane
Service Proxy
Backend
App
API
XML
Parser


Firewall
Membrane
Service Proxy
XML Protection
Backend
App
API
XML Parser

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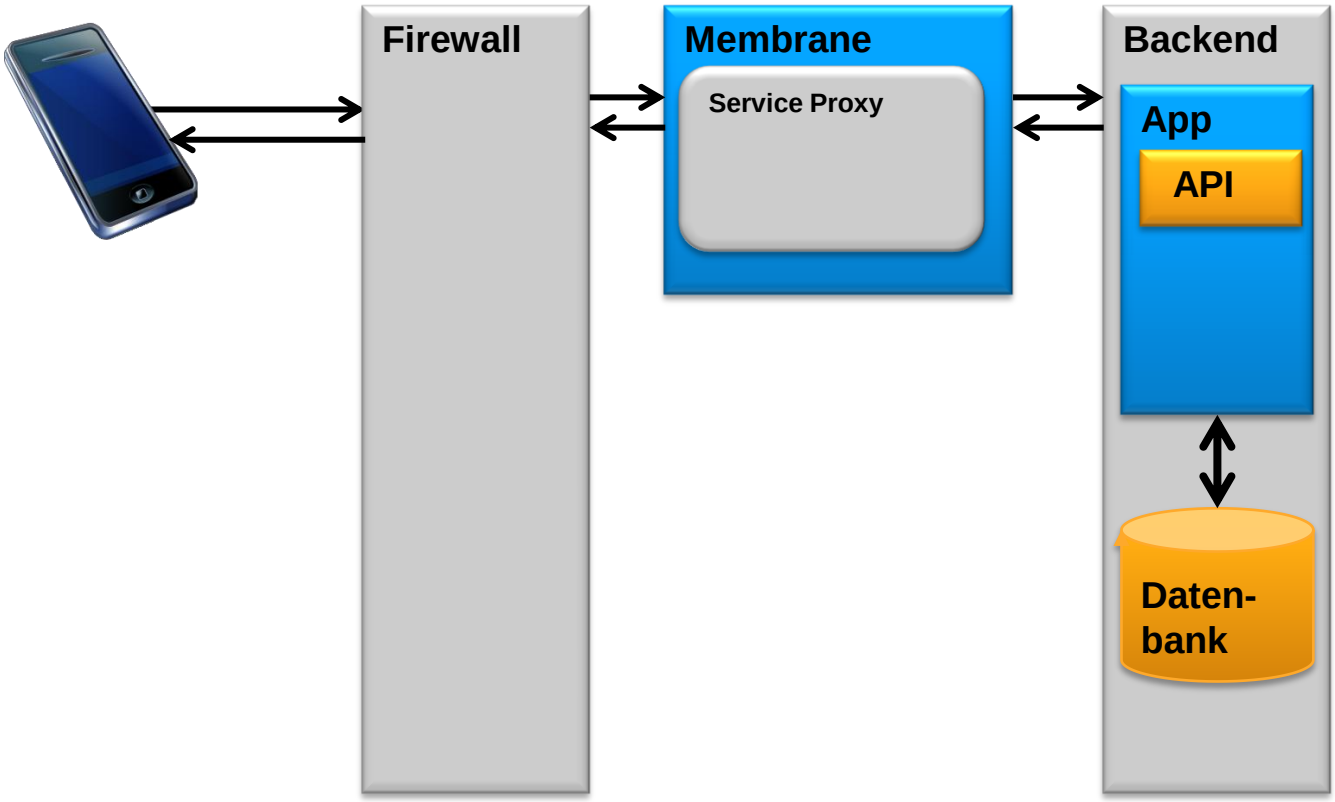
TDS


Firewall
Membrane
Service Proxy
Backend
App
API
Daten-
bank

```
"SELECT id FROM usernames
WHERE name = '" + user +
"' and password = '" + password +
"';"
```

```
“SELECT id FROM usernames
WHERE name = ‘peter' and
password = ’pan';”
```

Demo

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```
“SELECT id FROM usernames
WHERE name = 'peter' and
password = '' or '1' = '1';”
```

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Vertraue keiner Eingabe!

Ablauf einer Attacke?

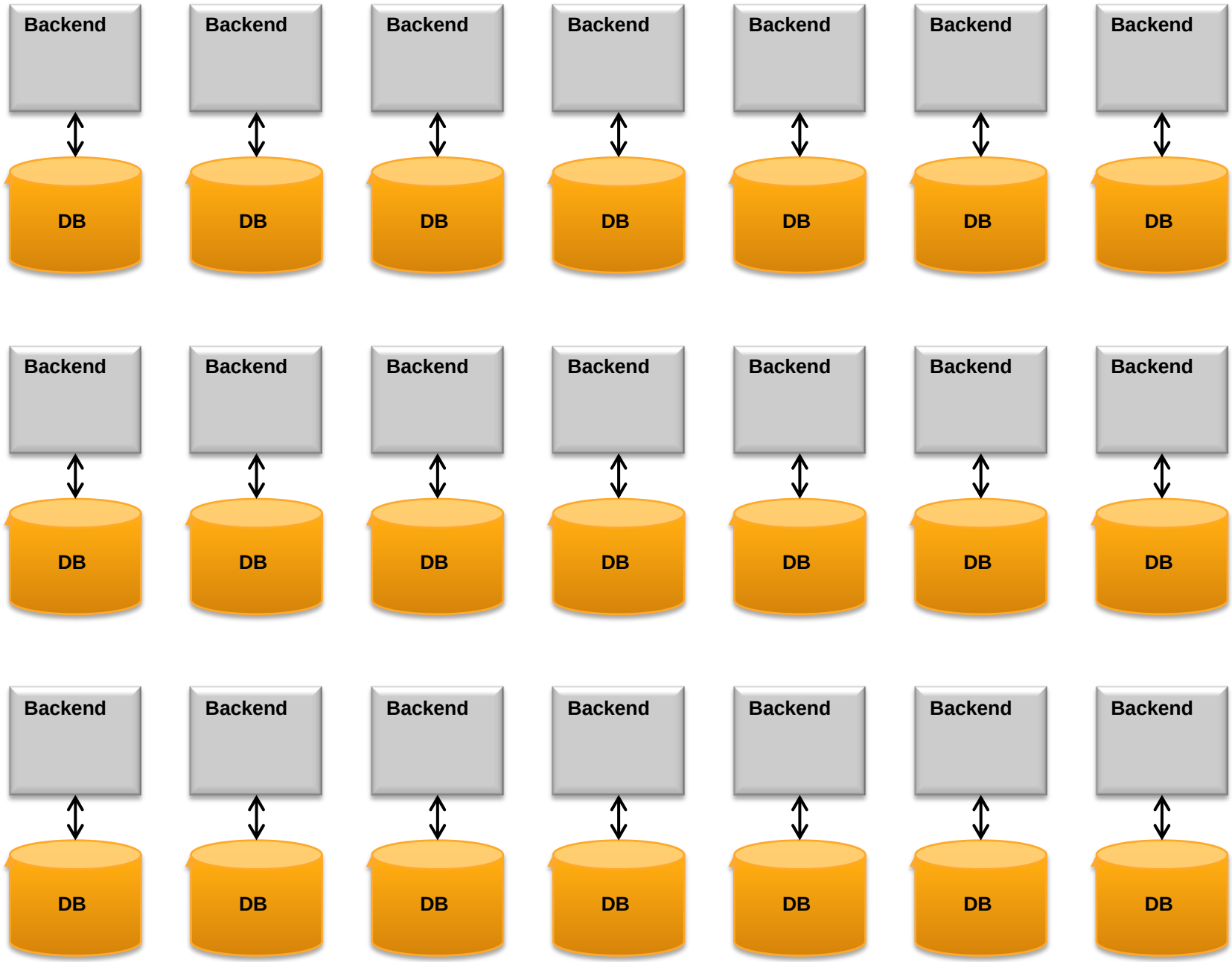
1. Intelligence
2. Zugang
3. Angriff
4. Einfluss

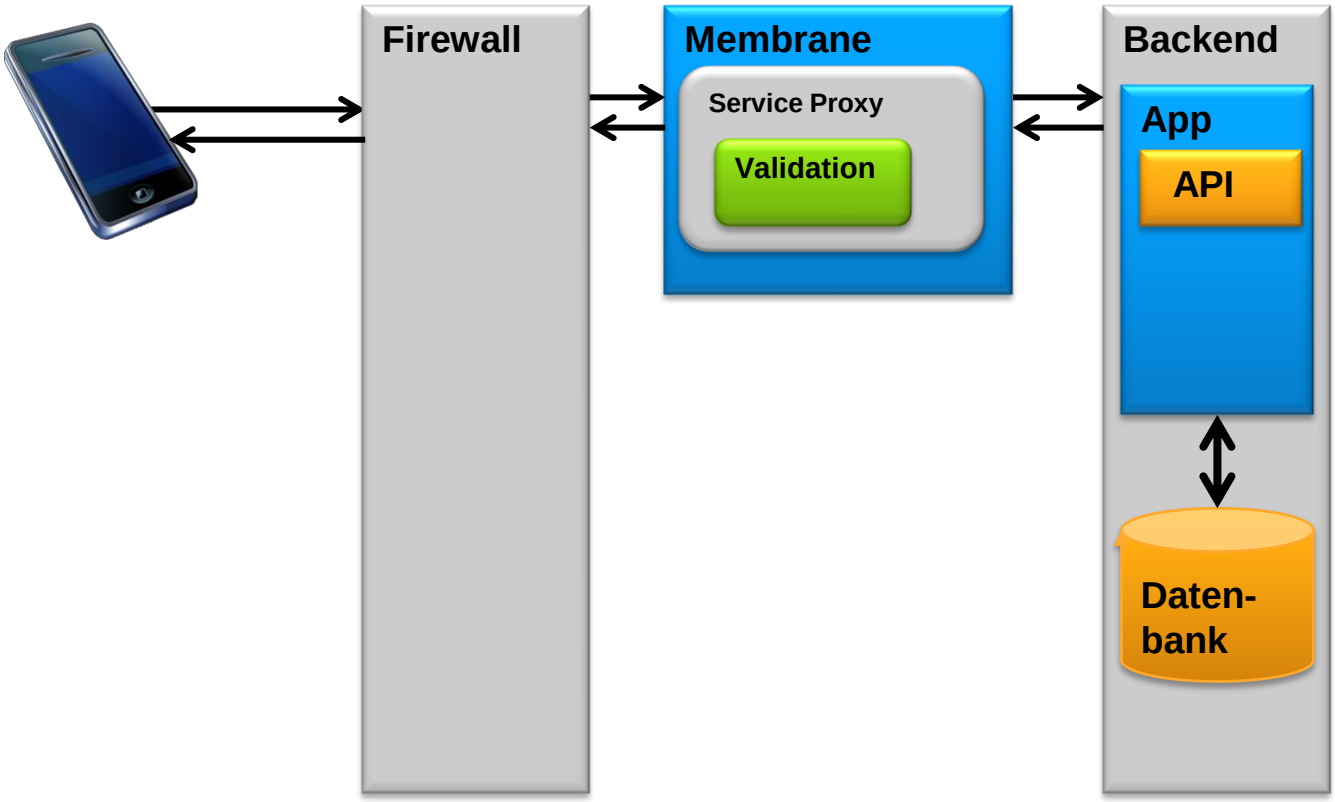
Was kann ein Angreifer tun?

- Informationen auslesen
- Löschen
- User anlegen
- Passwörter ändern
- Daten manipulieren
- Rechenzeit stehlen

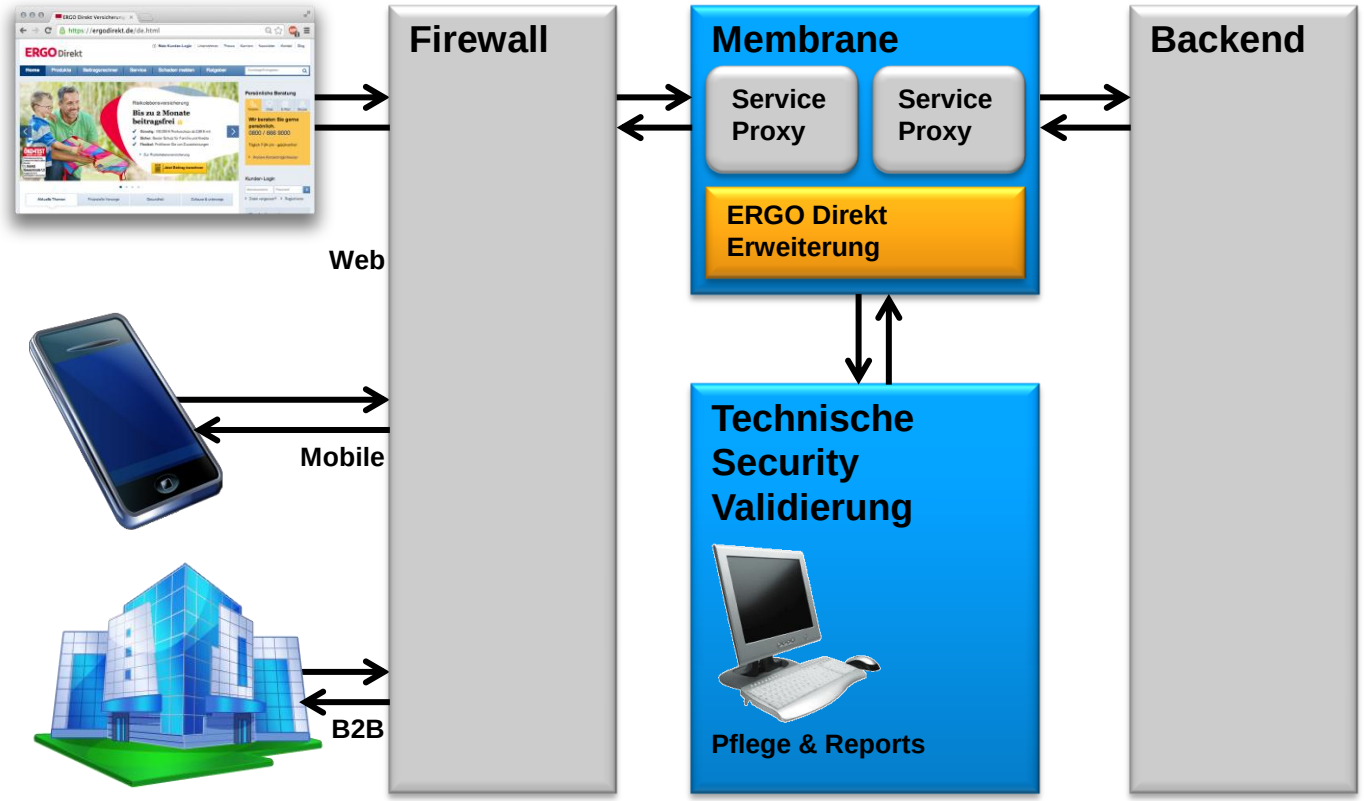
Vorkompiliertes SQL

```
"SELECT id FROM usernames
WHERE name = ? and password = ?;"
```


Backend
DB


Firewall
Membrane
Service Proxy
Validation
Backend
App
API
Daten-
bank

Demo


Firewall
Membrane
Service Proxy
Service Proxy
ERGO Direkt Erweiterung
Backend
Web
Mobile
B2B
Technische Security Validierung
Pflege & Reports

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Apps brauchen Zugang zum Backend

Backends brauchen Schutz

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Bildnachweise

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