NLS GmbH

NLS web interceptor

The fourth generation web recorder for SPECTO®

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Basics

The NLS interceptor for SPECTO®

- is an add-on for common web browsers and
- relies on the new WebExtensions framework
- which had initially been developed by Google and in the meantime is supported by most browsers
- Features recording of web sessions executed manually in a browser
- Supports HTTPS connections
- Records direct and indirect accesses
- Records authentication requests

Installation:

Installation Firefox

1. Select in URL Line: `about:debugging`
2. Button ‚Add-on temporär laden'
3. Navigate to the directory with the interceptor extension files, and select file `manifest.json`.

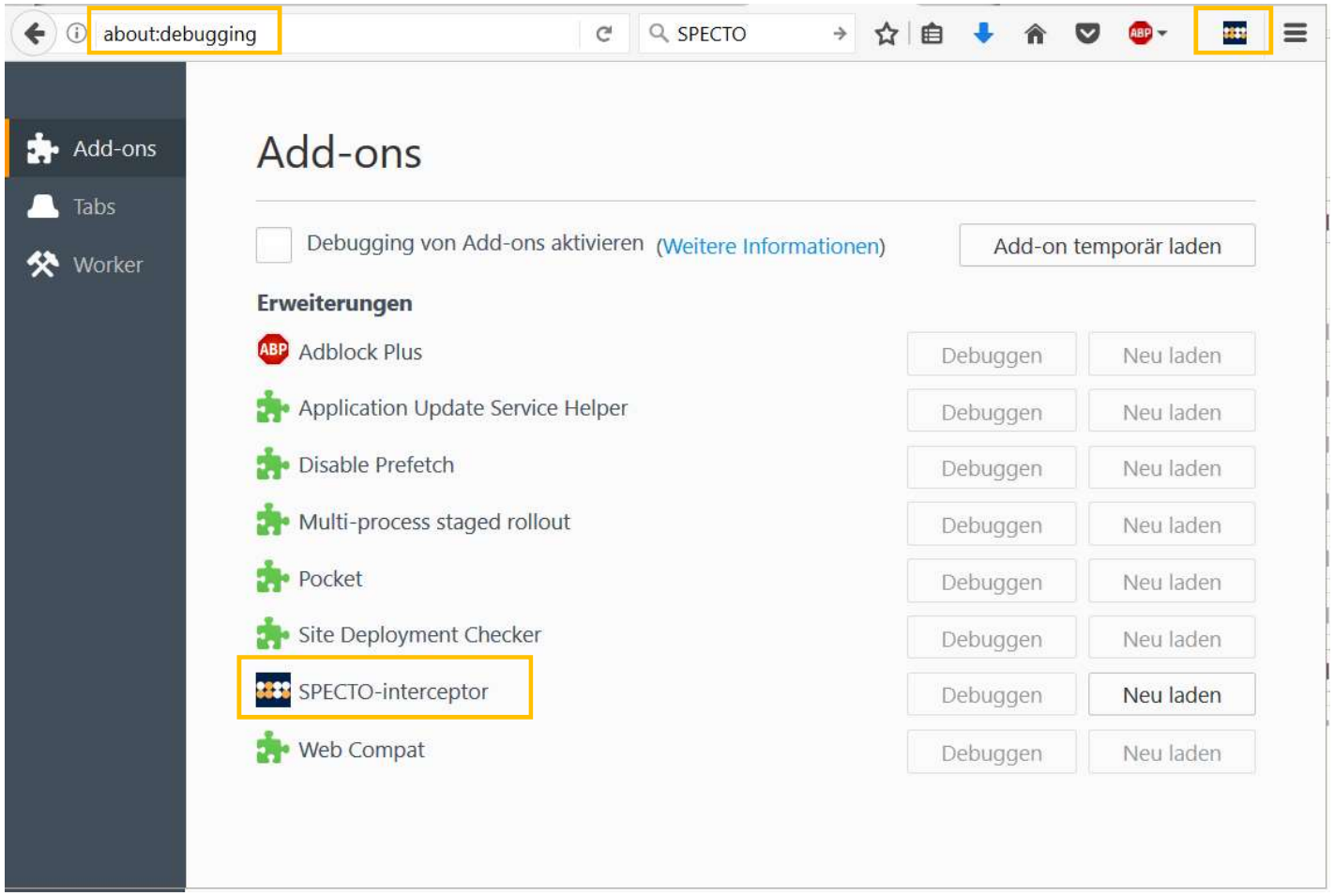
Installation Chrome

1. Select in URL Lne: `chrome://extensions` (or open up the Chrome menu by clicking the icon with the three horizontal bars and select Extensions under the Tools menu).
2. Ensure that the Developer mode checkbox in the top right-hand corner is checked.
3. Click Load unpacked extension… to pop up a file-selection dialog.
4. Navigate to the directory with the interceptor extension files, and select it.

Installation Edge

1. Select in URL Line: `about:flags`
2. Select the **Enable extension developer features** checkbox.
3. Go to menu ‚More' (…)
4. Load extension

Final appearance of a successful sample installation in Mozilla Firefox:



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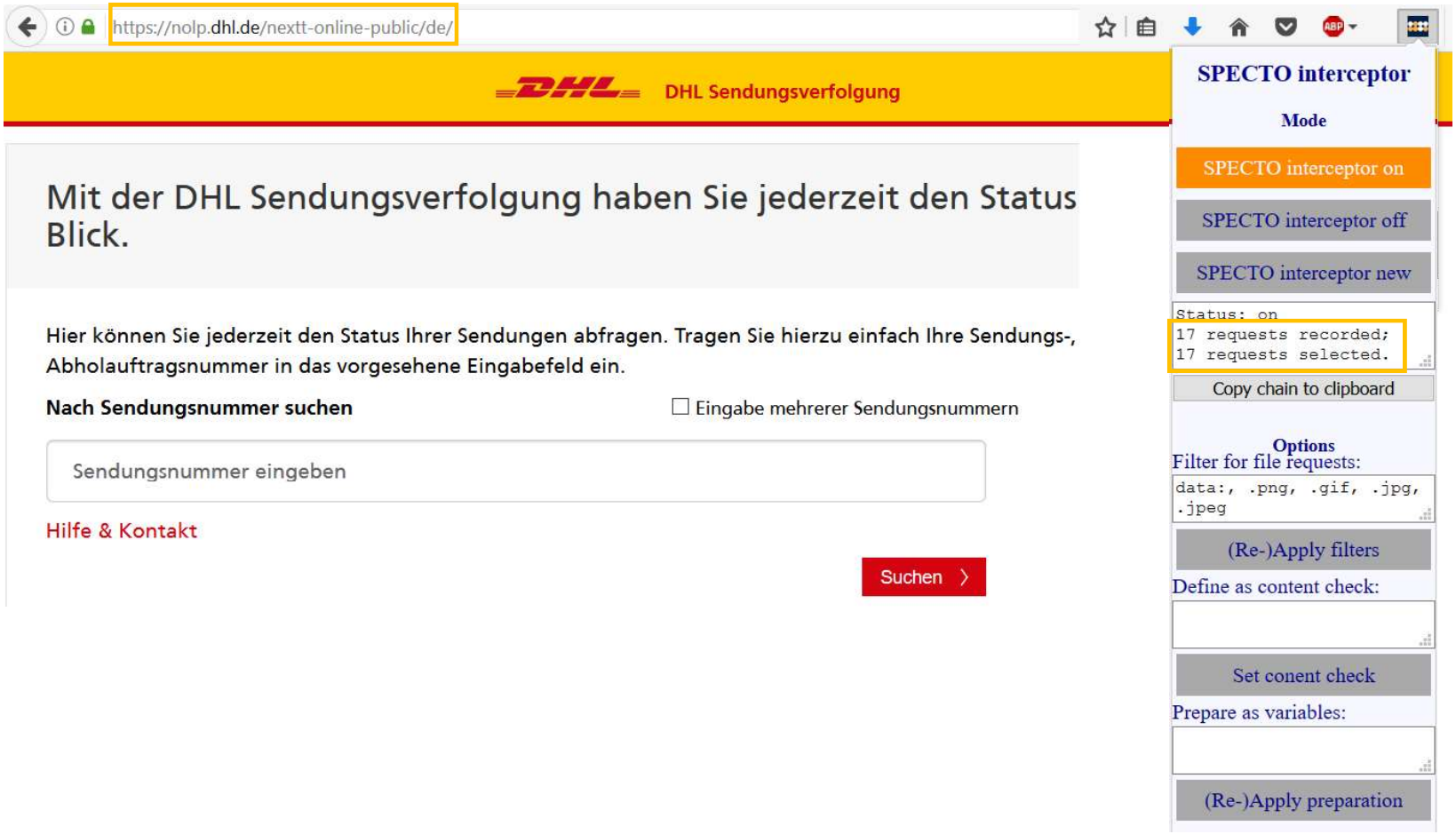
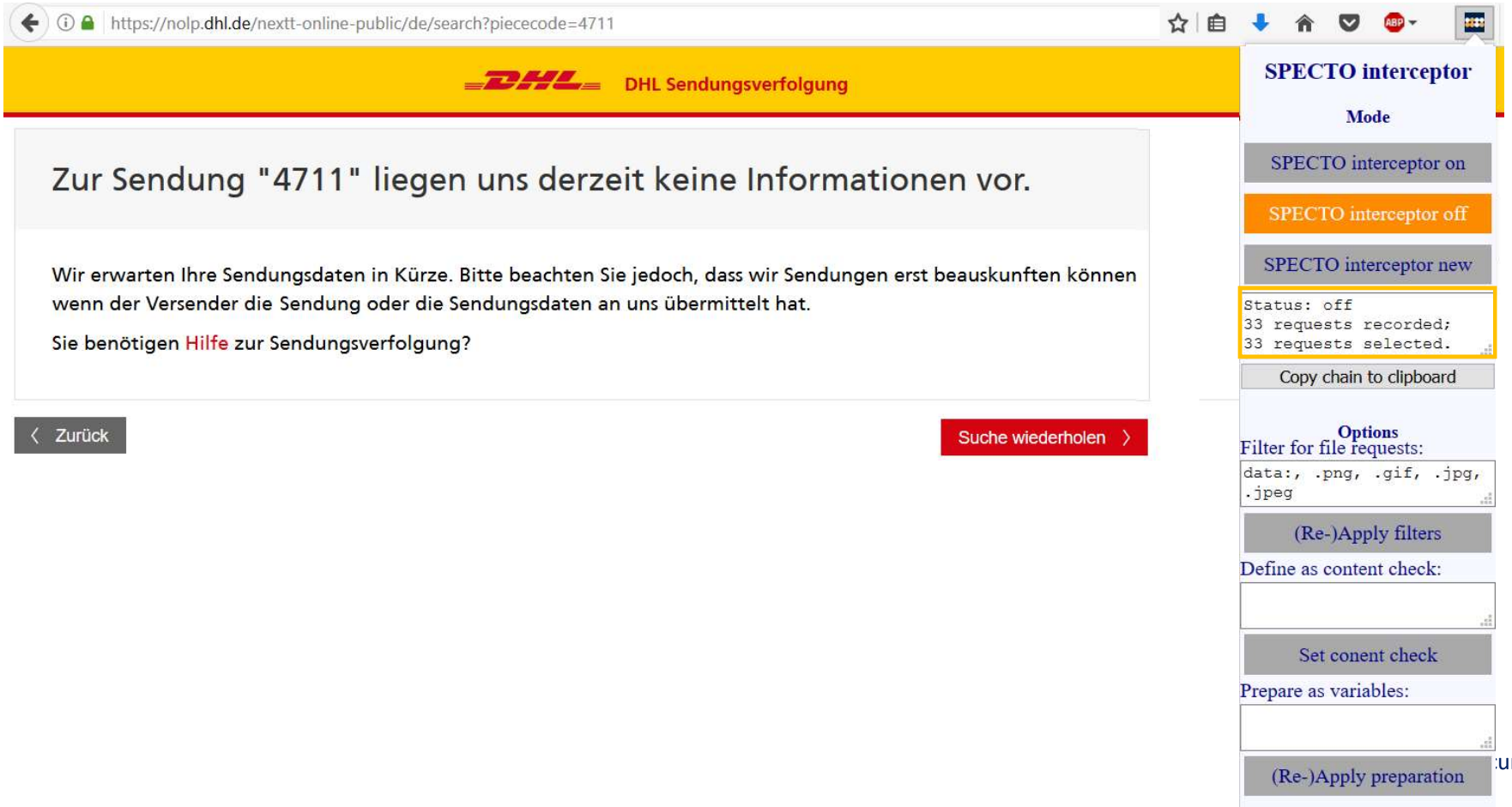
Sample Session

- In the browser, by clicking on the interceptor icon, open the interceptor main menu.
- The status should display as ‘off’
- Select the ‘SPECTO interceptor on’ menu item
- The status should change to ‘on’ with 0 recorded items.

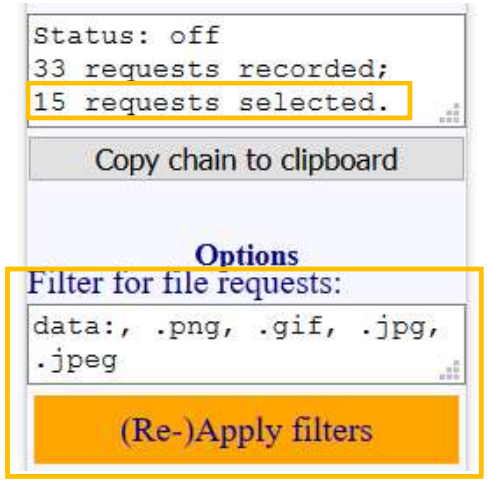
In the browser, enter URL ‘`https://nolp.dhl.de/nextt-online-public/de/`’
The german post order tracking web site should open .
Open the ‘SPECTO interceptor’ menu and verify that the status shows a number of recorded requests



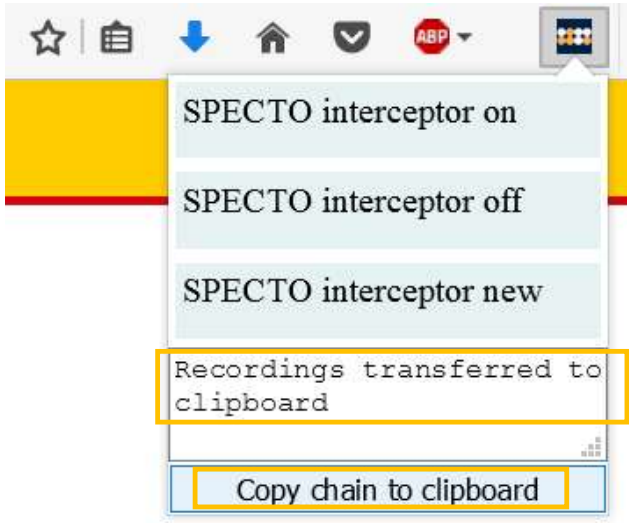
On the german post order tracking web site enter any number and click on the ‘Suche’ button.
Open the ‘SPECTO interceptor’ menu and verify that the status shows an increased number of recorded requests.
The switch the Interceptor off



You may filter out certain URL types.
Note that filtering is non-destructive. You may reapply r remove any previous filters and reapply.



Open the ‘SPECTO interceptor’ menu and select the ‘Copy chain to clipboard’ item.
Verify that the transfer to the clipboard is acknowledged



It is recommended to turn the SPECTO interceptor off using the associated menu entry now in order to prevent recording of superfluous entries.
Or, using ‘SPECTO interceptor new’, a new recording can be started immediately.

Open any text editor or XML viewer and paste the clipboard content:

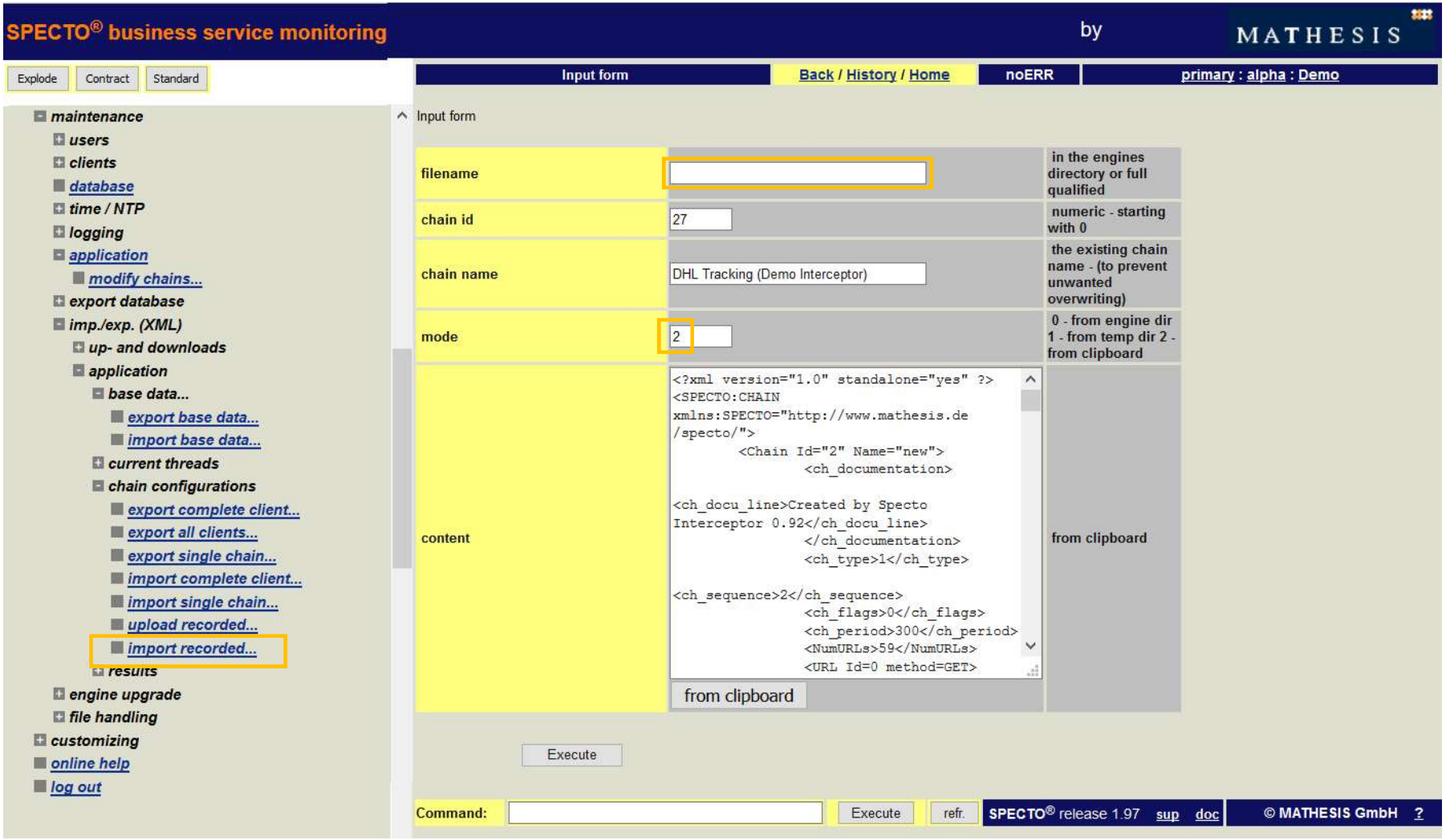
As an option you may remove non-essential URL requests here.

```
<?xml version="1.0" standalone="yes" ?>
<SPECTO:CHAIN xmlns:SPECTO="http://www.mathesis.de/specto/">
  <Chain Id="2" Name="new">
    <ch_documentation>
      <ch_docu_line>Created by Specto Interceptor 0.92</ch_docu_line>
    </ch_documentation>
    <ch_type>1</ch_type>
    <ch_sequence>2</ch_sequence>
    <ch_flags>0</ch_flags>
    <ch_period>300</ch_period>
    <NumURLs>59</NumURLs>
    <URL Id=0 method=GET>
      <url_id>0</url_id>
      <url_symbolic_name></url_symbolic_name>
      <url_flags>1</url_flags>
      <url_sequence>0</url_sequence>
      <url_wait_between>5000</url_wait_between>
      <url_type>0</url_type>
      <url_url>http://de.reuters.com/assets/jsonWireNews?startTime=1491902389000</url_url>
      <url_sessionid></url_sessionid>
      <url_timeout>3500</url_timeout>
      <url_toolong>2000</url_toolong>
      <numPars>1</numPars>
      <Parameter>
        <par_name>param.name</par_name>
        <par_value>param.value</par_value>
        <par_type>d</par_type>
      </Parameter>
</URL>
    <URL Id=1 method=GET>
      <url_id>0</url_id>
      <url_symbolic_name></url_symbolic_name>
      <url_flags>1</url_flags>
      <url_sequence>1</url_sequence>
      <url_wait_between>5000</url_wait_between>
      <url_type>0</url_type>
      <url_url>http://de.reuters.com/assets/jsonWireNews?startTime=1491902389000</url_url>
      <url_sessionid></url_sessionid>
      <url_timeout>3500</url_timeout>
      <url_toolong>2000</url_toolong>
      <numPars>1</numPars>
      <Parameter>
        <par_name>param.name</par_name>
        <par_value>param.value</par_value>
        <par_type>d</par_type>
      </Parameter>
</URL>
    <URL Id=2 method=GET>
      <url_id>0</url_id>
```

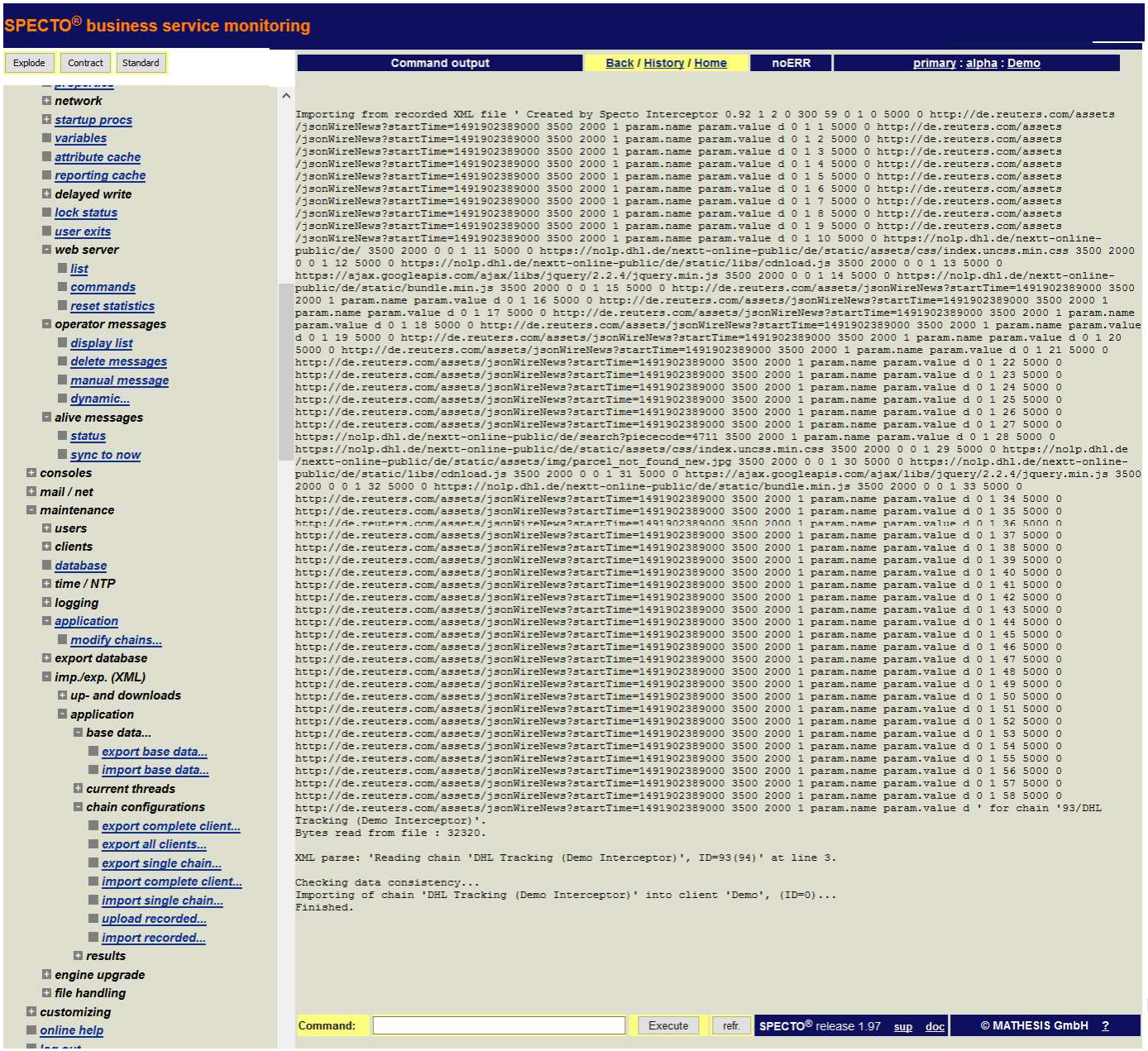
Import the recorded chain via menu entry ‘import recorded’:

- Without specifying a filename,
- In mode ‘2’
- And the recorded content pasted from the clipboard into the ‘content’ field.

(The equivalent ‘`xcr`’ command may be used instead of the menu driven approach).



Log of an
Successful import:



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Advanced 1 : chains

The NLS interceptor for SPECTO® allows for filtering of unimportant accesses to be discarded.

- Filters may be specified on basis of wildcards (*.css) or regular expressions
- Filters may be saved in named local files on project and global levels

The NLS interceptor for SPECTO® supports detection of session identifiers.

- Auto-detection based on parameter postings during the chain
- Detection via multiple recordings (auto playback as a further option)

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Advanced 2 : URLs

- Content Checks can be added to the actual URL
- HTTP/S headers are recognized and may be included noted in the URL documentation
- HTTP/S redirects are recognized and resolved (recorded as individual non-redirected request)
- HTTP/S authentication requests are recognized and (currently) are noted in the URL documentation

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Forecast for next release

- Re-runs of a session with highlighting of changes (to detect session-identifiers)

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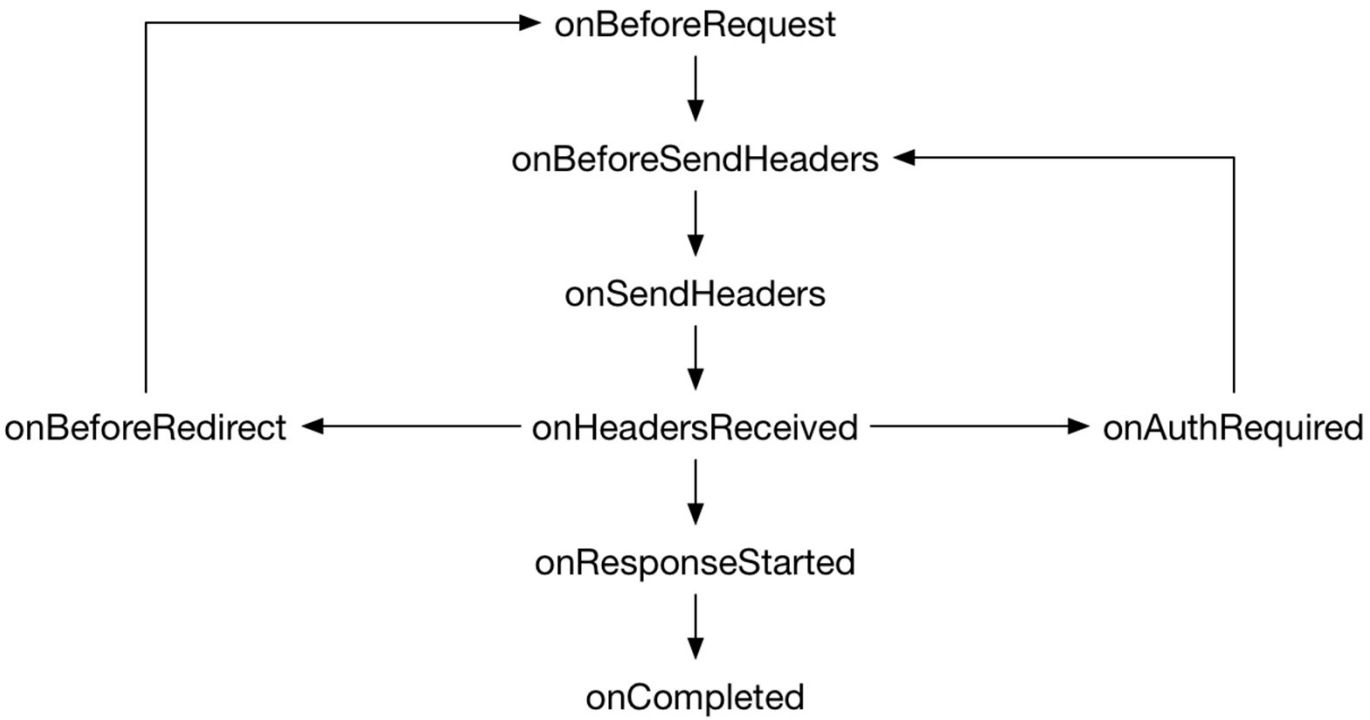
Internal event model



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Non-Disclosure

Due to :

1. the current state of the several browser suppliers support of signing of add-ons based on the WebExtension framework
2. the possibility to recompile signed add-ons
3. the ongoing development of interceptor for SPECTO

this application has to be delivered in source code.

In order to protect the efforts MATHESIS has put into the development of Interceptor for SPECTO; participants of the current beta program have to sign a non-disclosure agreement committing them to:

1. Not use interceptor outside of the SPECTO environment
2. Actively prevent distribution of interceptor outside the agreed upon users
3. Not share technical knowledge of interceptor with third parties

The NLS web interceptor

Thank you !