## The Tracker protocol V3.2

When a user clicks on a link to a file (i.e. requests a download) from a Repository with the tracker protocol in operation, if the HTTP Status code is 200 or 304, an OpenURL log entry is sent to a remote server for further processing.

### Constructing the OpenURL log entry Generation

The OpenURL log entry should be based on a subset of the NISO OpenURL 1.0 standard *KEV ContextObject Format.* The OpenURL string values must be URL encoded, with key-value pairs separated by &.

|  |  |  |  |
| --- | --- | --- | --- |
| **Element** | **OpenURL Key** | **OpenURL Value (example)** | **Notes** |
| OpenURL version | url\_ver | Z39.88-2004 | Identifies data as OpenURL 1.0. String constant: Z39.88-2004  (Mandatory) |
| Usage event datestamp | url\_tim | 2010-10-17T03%3A04%3A42Z | Date/time of usage event  (Mandatory) |
| Client IP address | req\_id | urn:ip:138.250.13.161 | IP Address of the client requesting the article  (Mandatory) |
| UserAgent | req\_dat | Mozilla%2F4.0+%28compatible%3B+MSIE+7.0%3B+Windows+NT+5.1%3B+Trident%2F4.0%3B+GoogleT5%3B+.NET+CLR+1.0.3705%3B+.NET+CLR+1.1.4322%3B+Media+Center+PC+4.0%3B+IEMB3%3B+InfoPath.1%3B+.NET+CLR+2.0.50727%3B+IEMB3%29 | The UserAgent is used to identify and eliminate, by applying COUNTER rules, accesses by robots/spiders  (Mandatory) |
| Session ID | svc.session | DD88AE8B72DE6B6F676943E891515C96 | Permits explicit identification of a user session offering greater accuracy over inferred sessions based on IP & UserAgent (Optional) |
| Item OAI identifier | rft.artnum | oai:dspace.lib.cranfield.ac.uk:1826/936 | (Mandatory) |
| FileURL | svc\_dat | https://dspace.lib.cranfield.ac.uk/bitstream/1826/936/4/Artificial\_compressibility\_Pt2-2005.pdf | (Mandatory) |
| HTTP Referer | rfr\_dat | https://scholar.google.com/ | (Mandatory)  The HTTP header field that identifies the address of the webpage (i.e. the URI) that linked to the resource being requested, which is used to help identify and eliminate accesses by robots/spiders. |
| Source repository | rfr\_id | dspace.lib.cranfield.ac.uk | (Mandatory) |

### Eliminating robots

Information about Robot downloads need not be transmitted to the remote server. Before attempting to transmit the OpenURL, a check may be carried out to eliminate robots as defined in the COUNTER official list, updated in Oct 2016, available as a series of user-agent regexes in a text file at:

* [Appendix J: List of internet robots, crawlers and spiders](https://www.projectcounter.org/wp-content/uploads/2016/10/COUNTER_Robots_list_Oct-2016.txt)

Checking against these regexes should be case insensitive.

### OpenURL Transmission

Once the OpenURL has been constructed, it will need to be transmitted to a remote server where it will be stored and processed.

If the transmission is successful the remote server will return a 200 OK code.

If the transmission is *not* successful, e.g. a 4xx or 5xx code is returned, the OpenURL string should be queued for processing later, e.g. appended to a file held on the local server. A script, that can be scheduled to run periodically, should check if there are queued entries and, if there are, re-transmit them.