# FTICKS for NPS

**NOTE: This is untested.**

**This only applies to Federation Operators and not to individual sites**

The syslog server configuration below is for NXLog which is only capable of sending us a form of the Windows Event logs, not FTICKS unfortunately. Recommendations for free Windows syslog servers start and stop with NXLog and, in it's Community from, is simply unable to generate FTICKS.

However, if you have existing software which can accept Windows Eventlogs (or otherwise access NPS logs) and change the format into FTICKS then feel free to do so. The criteria for FTICKS are:

- Uses the FTICKS format
- Proxies to utilities.govroam.uk on port 514/UDP with Facility local5
- Includes in the FTICKS '#FEDID=0X000#' where 0X000 is replaced by the Federation ID supplied by Jisc.
- Filters down the proxied log to just those for
    - Successful authentications
    - Only authentications between member sites (i.e. NOT those to or from the Jisc NRPS, or within an organisation)

## Installation

Download NXLog Community Edition from here:

https://nxlog.co/products/nxlog-community-edition/download

and install it. Make of note of where the nxlog.conf file is.

## Configuration

Edit the *nxlog.conf* file to read, making sure that the ROOT points to the directory it's installed in:

```
Panic Soft
#NoFreeOnExit TRUE

define ROOT     C:\Program Files (x86)\nxlog
define CERTDIR  %ROOT%\cert
define CONFDIR  %ROOT%\conf
define LOGDIR   %ROOT%\data
define LOGFILE  %LOGDIR%\nxlog.log
LogFile %LOGFILE%

Moduledir %ROOT%\modules
CacheDir  %ROOT%\data
```

```
Pidfile   %ROOT%\data\nxlog.pid
SpoolDir  %ROOT%\data

<Extension _syslog>
    Module      xm_syslog
</Extension>

<Extension _exec>
    Module      xm_exec
</Extension>

<Output syslog_tls>
    Module      om_ssl
    Host        212.219.243.132
    Port        6514
#   CAFile      c:/Program Files (x86)/nxlog/data/cacert.pem
#    CertFile    c:/Program Files (x86)/nxlog/data/clientreq.pem
#    CertKeyFile c:/Program Files (x86)/nxlog/data/clientkey.pem
    AllowUntrusted 1
    OutputType  Syslog_TLS
    Exec        to_syslog_ietf();
</Output>

<Output syslog_tcp>
    Module      om_tcp
    Host        212.219.243.132
    Port        601
    OutputType  Syslog_TLS
    Exec        to_syslog_ietf();
</Output>

<Input eventlog>
    Module  im_msvistalog
    <QueryXML>
      <QueryList>
        <Query Id="0" Path="System">
          <Select Path="System">*[System[Provider[@Name='NPS']]]</Select>
          <Select Path="Security">*[System[Provider[@Name='Microsoft-
Windows-Security-Auditing'] and Task = 12552]]</Select>
        </Query>
      </QueryList>
    </QueryXML>
    <Exec>
# Don't send log if going to or coming from a NRPS
# Change to math the ClientName and ProxyPolicyName as appropriate
      if $ClientName =~ /NRPS/i drop();
      if $ProxyPolicyName =~ /NRPS/i drop();

# Replace with the provided Federation ID
      $FederationID = "XXXXX";
```

```
# Send Client Name as the Operator Name if present, otherwise use a default.
# Replace 1something.here with the Federation's Operator Name
      if $ClientName == ''
      {
        $OperatorName = "1something.here";
      }
      else
      {
        $OperatorName = $ClientName;
      }
    </Exec>
</Input>

<Route 1>
    Path        eventlog => syslog_tcp
</Route>
```

Replace *XXXXX* with the Federation ID supplied by Jisc.

Replace *1something.here* with your realm, prefixed by '1'.

The Client Name and the Proxy Policy Name for receiving from/sending to the Jisc NRPS would have to contain 'NRPS' for the above to work. Otherwise change the above so that requests to/from the NRPS are excluded from the logging.

Save the file and restart the service.

To make this work properly, the Client Name has to be in the form of a realm e.g. 1holby.nhs.uk for each of the Clients.

The stanza, syslog_tls, is just there for information. It's not actually used in this configuration. At a later date we'll be looking at encryption but there's a PKI to build.

This is all fairly self-explanatory. **OutputType Syslog_TLS** is needed to enforce the RFC5424 standards along with **Exec to_syslog_ietf()**. Not sure why both are needed but they really are.

In the Eventlog config the QueryXML is extracted from Windows Event Log (**Event Viewer → Custom View →**. **Server Roles**. Right click on **Network Policy…**. Choose **Properties**, **Edit Filter**, **XML** and copy the XML into the NXLog config).

Some customisation might be needed to filter only for traffic between sites, rather than traffic to/from Jisc NRPS.

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