

Terapaths Monitoring Front End Developers Manual

Introduction

The front end of the terapaths netflow monitoring software is based upon a set of perl cgi 'backend' scripts with a javascript/ajax 'frontend'.

This document details the scripts and functionality of this frontend.

Files

Files can be retrieved from the SLAC SVN at:

```
/afs/slac.stanford.edu/g/scs/net/netmon/repo/svn/netflow
```

There are also various dependencies on external perl modules which can be found at

```
/afs/slac.stanford.edu/g/scs/net/netmon/repo/svn/
```

Overview

The following tree shows all the related files to the terapaths netflow frontend.

```

[ytl@iepmw:/opt/netflow]$ tree
.
|-- lib
|   |-- IEPM
|   |   |-- Netflow
|   |   |   |-- Display
|   |   |   |   |-- PieChart.pm
|   |   |   |   |-- SpiderChart.pm
|   |   |   |   |-- Table
|   |   |   |   |   |-- CSV.pm
|   |   |   |   |   |-- HTML.pm
|   |   |   |   |-- Table.pm
|   |   |   |   |-- TimeSeriesGraph.pm
|   |   |   |   |-- spider.pm
|   |   |-- Display.pm
|   |   |-- List.pm
|   |   |-- Parameters.pm
|   |   |-- RRDGraph
|   |   |   |-- Group.pm
|   |   |   |-- Hybrid.pm
|   |   |   |-- Single.pm
|   |   |-- RRDGraph.pm
|-- www
|   |-- cgi
|   |   |-- netflow-graph.cgi
|   |   |-- netflow-piechart.cgi
|   |   |-- netflow-protocols.cgi
|   |   |-- netflow-show.cgi
|   |   |-- netflow-spiderchart.cgi
|   |   |-- netflow-table.cgi
|   |   |-- netflow-targets.cgi
|   |-- html
|   |   |-- calendar-setup.js
|   |   |-- calendar.js
|   |   |-- graph.html
|   |   |-- images
|   |   |   |-- arrow.png
|   |   |   |-- minus-last.gif
|   |   |   |-- minus.gif
|   |   |   |-- node-last.gif
|   |   |   |-- node.gif
|   |   |   |-- plus-last.gif
|   |   |   |-- plus.gif
|   |   |-- index.html
|   |   |-- netflow.css
|   |   |-- netflow.js
|   |   |-- protocols.html
|   |   |-- prototype-1.4.0.js
|   |   |-- targets.html

```

The code is based upon a set of perl modules under the `lib` directory from which the perl cgi scripts under `www/cgi` rely upon. It is therefore important to put the `lib` path under your apache configuration.

The files under `www/html` are the files for the frontend of this package. They are files which will be downloaded by web clients wishing to visualise the netflow monitoring.

In particular, `netflow.js` contains all the fat-client code for the ajax calls to the various cgi scripts which will be run on the apache server.

Apache Configuration

```
# terapaths monitoring netflow html files and scripts
AddType application/xhtml+xml .xhtml
AddType application/xml .xml
AddType text/xml .xml
AddType image/svg+xml .svg
AliasMatch /netflow/(.*)\.html "/opt/terapaths-monitoring/www/html/$1.html"
AliasMatch /netflow/(.*)\.xhtml "/opt/terapaths-monitoring/www/html/$1.xhtml"
AliasMatch /netflow/(.*)\.js "/opt/terapaths-monitoring/www/html/$1.js"
AliasMatch /netflow/(.*)\.css "/opt/terapaths-monitoring/www/html/$1.css"
AliasMatch /netflow/images/(.*) "/opt/terapaths-monitoring/www/html/images/$1"
ScriptAliasMatch /netflow/(.*)\.cgi "/opt/terapaths-monitoring/www/cgi/$1.cgi"
# set up paths for IEPM modules
SetEnv PERL5LIB /opt/netflow/lib:/opt/iepm/lib/
```

CGI Scripts

Script	Description
netflow-show.cgi	Returns code for the right hand main pane of the webpage, in particular it contains the layout code for the tables and graphs to be displayed.
netflow-graph.cgi	Displays a timeseries graph of the supplied information through POST/GET/command line using RRDGraph
netflow-table.cgi	Displays a HTML table of statistics given the supplied information through POST/GET/command line
netflow-targets.cgi	Supplies a HTML list (of treeview class) of all hosts found in the XML configuration file
netflow-protocols.cgi	Supplies a HTML list (of treeview class) of the services, protocols or type of servies

Libaries

Module	Description	Inherits From
IEPM::Netflow::Parameters	Bean class of specific parameters to be passed between teh client and server to determine what to display	IEPM::CGI
IEPM::Netflow::List	Determines the mapping of supplied Parameter information to the physical location of RRD data on the system	
IEPM::Netflow::RRDGraph	Base class to handle the generation of graphs using the RRDGraph/RRDTools package	
IEPM::Netflow::RRDGraph::Single	Inherited class to deal with the plotting of simple single RRD files	IEPM::Netflow::RRDGraph
IEPM::Netflow::RRDGraph::Group	Inherited class to deal with the plotting of multiple groupings of RRD files as a single entity	IEPM::Netflow::RRDGraph
IEPM::Netflow::RRDGraph::Hybrid	Composite pattern for the management of both the Single and Group Classes	IEPM::Netflow::RRDGraph
IEPM::Netflow::Display	Class to handle the display of RRDGraph information	
IEPM::Netflow::Display::TimeSeriesGraph	Displays timeseries information from RRD data	IEPM::Netflow::Display
IEPM::Netflow::Display::Table	Displays tabular information from RRD data	IEPM::Netflow::Display
IEPM::Netflow::Display::Table::HTML	Displays tabular information from RRD data in HTML format	IEPM::Netflow::Display::Table