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How to use Web Interface?

Web interface of IronCurtain is almost always used by the Administrators, thus we also use "Admin Panel" to describe it. Users in the "admin" group can access the Admin Panel to change settings and view logs. Users in all the other groups may use the web interface only for logging in to the proxy.

For normal users

When a user tries to access any web page over the proxy, IronCurtain will try to get authentication for the connected ip adress. If the user has logged in before, this will be retrieved, and rules that match the user will be applied. If the authentication information cannot be found, the user will be asked to login. After a successful login, the user will be allowed to access the web in accordance with the rules defined on the proxy. Also the user will be presented with the URL of the page that they should visit to log out of the system. Logout page shows the current user name and the logout button will remove the connection between user's name and ip.

The login and logout pages are the only times that users out of "admin" group see the web interface.

For users in "admin" group

Users in the admin group have the privilege to access and change settings of the proxy. Accessing the web interface is described in the installation manual. Repeating here, to access the web interface, it is sufficient to type a URL like "http://inek57.ceng.metu.edu.tr:8080" to a browser's location box. After logging in with username and password, the admin user will be able to access main parts of the IronCurtain Admin Panel. These parts are described in the following parts.

Plugin/Rule Management

IronCurtain operates using plugins and rules. A plugin defines a general template for a rule and provides mechanisms for the rules' application. A plugin is a python file which contains definition of the plugins actions and its user interface. After a plugin is installed into IronCurtain, admin users can add new rules that take advantage of the functionalities provided by the newly added plugin. List of plugins that are bundled with IronCurtain is as follows:

- BandwidthLimiter.py :it enables to set quotas to each user. It blocks the user access if quota is exceeded.
- ChangeHeader.py : inspects Http Headers and acts according to the defined rules (i.e. changing/removing a header)
- ContentBlocker.py : inspects pages' content and classifies its content according to topics. It is the main classification plugin that we are using. It is first trained with more than 400 sites. It has the following categories (developer may add new categories)Arts & Humanities, Business & Economy, Computers & Internet,

Education, Entertainment, Government, Health, News & Media, Recreation & Sports, Science, Social Science, Society & Culture.

- GifDeanimate.py : takes the first frames of the animated gif images and displays only the first frame. Effectively it disables the animation
- ImageBlocker : blocks all the images in webpages. Replaces them with transparent gifs of the same size, thus it keeps the layout of the webpage.
- ImageSize.py : Blocks image files according to the user defined width and height of the image and also according to the format of the image
- ModifyContent.py : modifies the content of the webpage. It may directly block the page, or remove or replace keywords. It may affect on user defined tags.
- ModifyJavascript.py : modifies the dynamic content generated by javascript on the browser. After using Java Script Engine ,spider monkey. , the plugin acts on the final content that the user will see.
- UrlBlocker.py : Blocks the access to a site with given URL completely.

The Plugin/Rule Management page in the Admin Panel is used to add new plugins and rules. Left part of the page contains three tabs. These three tabs are as follows.

- Browse: Contains the list of the current plugins. Clicking on a plugin's name causes the right part of the screen show the rules that were created using that plugin.
- Add: This tab contains the necessary interface for uploading a new plugin file on the file system. IronCurtain's default plugins reside in the IC-Plugins directory of the program distribution, the user has the freedom to choose which bundled plugins will be used, so he/she must upload the desired plugins from the Admin Panel.
- Delete: This tab lists the currently loaded plugins. Clicking on the plugin will remove that plugin from the IronCurtain, along with the rules created using that plugin.

Right part of the Plugin/Rule Management page contains two tabs, they are displayed when a plugin is selected from the left:

- Browse: This tab lists the previously created rules associated with the current plugin. There are edit and remove buttons next to each plugin. Clicking on the edit button opens a new page showing details of a rule. There are several options in this view. It can be selected which users and groups this rule applies to. Web pages are categorized and tagged by core proxy, and from this screen it can be selected which categories this rule applies to. Also the user can select on which URLs this rule applies, and it is possible to state some URLs that the rule does not apply to. Also the plugin itself may add new fields to this screen.
- Add: This tab is used to add a new rule using the plugin. There are some default fields like rule name and description. In addition a plugin may add its own fields. After filling in the fields, the plugin checks them for correctness, for example you cannot enter a word in a field that expects integers.

User/Group Management

This page is used to apply add, edit or remove operations on users and groups. It has two subpages for Users and Groups.

User page has two tabs:

- Browse: lists the current users, along with edit and remove buttons for each of them. From edit screen; users' name, password, realname, e-mail address and group can be changed.
- Add: used for adding a new user. name, password, realname, e-mail address are entered. Groups are assigned after the user is created.

Group page also has two tabs:

- Browse: lists the current groups, along with edit and remove buttons for each of them. From edit screen; groups' name, display name and users in the group can be changed.
- Add: used for adding a new group. name and display name are entered. Users are added to the group after the group is created.

Log Analysis

This page is used to analyse and query the logs that are kept by IronCurtain. The query can be done by User, Group, Domain, URL or time interval. If two or more fields are entered, logs that match all of the criteria are displayed. The list of logs is divided into pages. Long URL's are truncated to keep the display clean, hovering on them using the mouse pointer will display whole URL as tooltip. The data that is displayed can be sorted using any of the columns, ascending or descending. The columns that are present in the results are: User, Location, Bytes Received, Bytes Sent, Mime Type, Request Time

Monitoring

This page provides real time monitoring on the traffic occurring over the proxy. It is similar to the log analysis page but it does not have query function, and it is updated automatically to display the current traffic. It displays a limited number of items to prevent flooding of the page over time. Similar to Log Analysis screen this screen has the following columns; User, Location, Bytes Received, Bytes Sent, Mime Type, Request Time