

Internet Control

Version 1.0

Contents

3	Abstract
3	Introduction
3	Staff Application (Controller)
4	IP Updater
4	Controller
5	INI File
5	IP Updater
5	File changes
6	Problems

Abstract

This manual outlines the procedures that should be taken to get the provided AutoIt scripts working in your chosen network environment.

The target audience is Network Managers and IT Technicians, due to the nature of technical information and guidance that is given.

It is assumed that you have a working IPCop (or Smoothwall) box with root and SSH access, and a workstation with the AutoIt package installed with the ability to compile scripts to executables.

Introduction

Internet Control is a set of two applications scripted in AutoIt, which enhance the functionality of Classroom Extensions (CRE) - part of an unofficial addon to the IPCop linux firewall distribution.

CRE gives the ability to turn internet access on and off on a per-room basis. Rooms are officially defined within the web-based administration interface by grouping workstation IP addresses.

There are two limitations in the way this works. Firstly; the web page that contains the on/off buttons for internet access allows *any* supervisor to control *any* room.

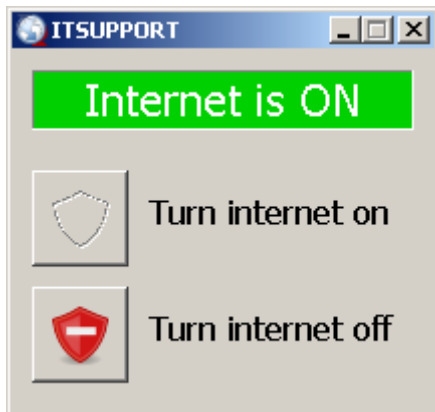
Secondly; in a DHCP environment, client IP addresses change periodically, which means that CRE's list of rooms becomes outdated. This becomes a problem when workstations eventually get a different IP address and can end up in a different CRE room.

Staff Application (Controller)

The first application gives staff the ability to turn the internet on or off for their own room at the click of a button. It is designed to be launched from a central location, for example - a network share. The room that the workstation is allowed to control is determined by an INI file stored in the same directory as the executable.

It communicates with the CRE access web page by sending HTTP requests, and parsing the result when required.

When launched, it determines the current on or off status of the workstation's room, and enables the appropriate control button.



When a button is clicked, the message is sent via HTTP to the CRE web access page. The internet is then turned on or off as normal. The internet status is updated within the application and displayed.

IP Updater

This script alleviates the problem of workstation IPs becoming outdated. Designed to run on a schedule as often as necessary, it retrieves workstation IP addresses and sends the collected data to the IPCop box.

It parses defined Active Directory locations for workstations, gets their IP addresses, saves the information to a file, transfers the file to IPCop via SCP, and then restarts the Squid service via SSH so it knows about the updated IPs.

It also allows the specification of supervisor workstations - machines that are a) excluded from the room so are not subject to the set status; and b) allowed to control the internet for the room.

Extra requirements for this are pscp.exe and plink.exe, freely available from the PuTTY website.

Controller

The controller script needs very little modification before it is compiled to an executable. At the bare minimum, the URL to the CRE web access page has to be changed - this variable is on [line 10](#) of [crectl.au3](#).

If there is a desire to change colours, fonts or icons, then modify the references in the file as needed - most are appropriately commented. Two sets of icons are included in the package. Once it has been compiled, place the executable and INI file on a network share, and give desired users a shortcut to it using your usual method.

INI File

The INI file is an essential part of the controller. Consider this example:

```
[computers]
ict1-teacher=ict1
sdyc-teacher=sdyc
ict2-teacher=ict2
ict3-teacher=ict3
ict4-teacher=ict4
```

There is a single section to the file - 'computers'. Each key is a workstation name, and its value is the CRE room that the controller is permitted to control. In the example, the workstation [ict1-teacher](#) is permitted to control only the [ict1](#) room.

This file should be manually edited to suit your network. It is also advisable that, once copied to a network share with the application, the INI file has NTFS permissions applied to it that prevent the editing by non-administrator users to prevent malicious changes.

IP Updater

There are several changes that need to be made to the IP Updater script, [cre-rooms.au3](#), before it will work.

It will also be necessary to enable the IPCop box for passwordless logins, and have a copy of the key file (key.ppk) in the same directory as the AU3 script. Instructions on how to do this are beyond the scope of this manual.

File changes

AD Locations

Beginning around [line 56](#) is an array of locations in Active Directory that are 'rooms' of computers, in this format:

```
$rooms[0]="BBS/Main Site/ICT/ICT1"
```

Once all rooms have been added, it is important to change the number in the array definition on [line 55](#) (beginning with 'Global ...') with the actual number of elements in the array.

Supervisors

Specify the supervisor workstation names on [line 68](#). This is a simple comma-separated list.

LDAP Query

On [line 86](#) is the LDAP search query. Change the LDAP:// part of this to match your domain setup.

```
$adcmd_m.CommandText = "SELECT Name, Location FROM 'LDAP://  
DC=BBARRINGTON,DC=internal' WHERE ..."
```

To assist with the exact naming of Active Directory locations, the *Active Directory Users and Computers* and *ADSI Edit* MMC snap-ins might be useful.

IPCop Address

Presently, the IP address of the IPCop server is listed in three locations - lines [164](#), [168](#) and [176](#). Replace the IP address instances with the IP address of your IPCop server.

Problems

Workstation and supervisor IP addresses are stored in the files [rooms.ini](#) and [admins.ini](#) respectively. Check these files to ensure they contain the correct information.

The results of SCP transfers are logged to [pscp.log](#) in the script/executable directory. Using something like WinSCP, it is possible to check the contents of uploaded files are as expected. The path to these files on the IPCop box is: [/var/ipcop/proxy/advanced/cre/](#).