Quick Note 026

Using the firewall of a Digi TransPort to redirect HTTP Traffic to a proxy server

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Contents

1 INTRODUCTION

1.1 Outline

This Quick Note will show how to use the firewall of a Digi TransPort to redirect all internet traffic from Wi-Fi clients to a content filtering service.

1.2 Assumptions

This guide has been written for use by technically competent personnel with a good understanding of the communications technologies used in the product and of the requirements for their specific application. It also assumes a basic ability to access and navigate a Digi Transport router and configure it with basic routing functions.

This Quick Note applies only to:

Model: Digi Transport WR41

Other Compatible Models: Digi Transport VC7400 VPN Concentrator, WR, SR or DR.

Firmware versions: 5.140 and later

Configuration: This Quick Note assumes the devices are set to their factory default configurations. Most configuration commands are only shown if they differ from the factory default. It assumes that the cellular connection is up and running and using PPP 1. It also assumes that the Web Services account has been licensed from the provider and configured.

1.3 Corrections

Requests for corrections or amendments to this Quick Note are welcome and should be addressed to: support@digi.com

Requests for new Quick Notes can be sent to the same address.

1.4 Version

Version Number	Status
1.0	Published

2 TRANSPORT CONFIGURATION

2.1 Editing the Firewall

Browse to Configuration → Security → Firewall

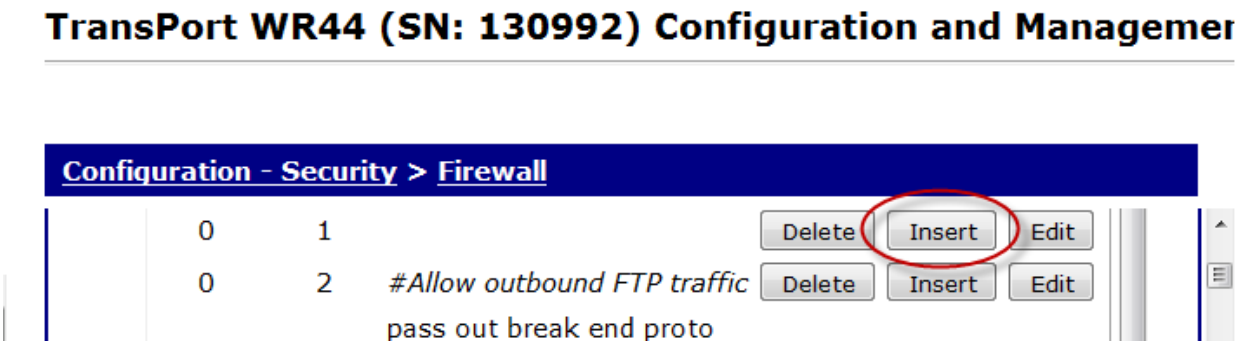
The current firewall rules will be displayed, the HTTP redirection rule should be inserted above any existing firewall rules.

If the router does not have the default list of firewall rules, the rules can be downloaded from http://transport.digi.com/digi/firmware/standard_configs/fw.txt

FTP the fw.txt file onto the router, click the "Restore" button on the Firewall configuration page, then continue with this Quick Note.

This example uses 1.2.3.4. as the IP address of the proxy server, replace 1.2.3.4 with the IP address of the proxy server you wish to use. This example only redirects HTTP (port 80) traffic, HTTPS (port 443) will not be redirected.

Click "Insert" at the top of the rule set. This will display a text box that is used to enter a new rule.



This first rule will be a comment to describe the firewall rule that will be added next. Comment lines start with a '#' (hash) symbol.

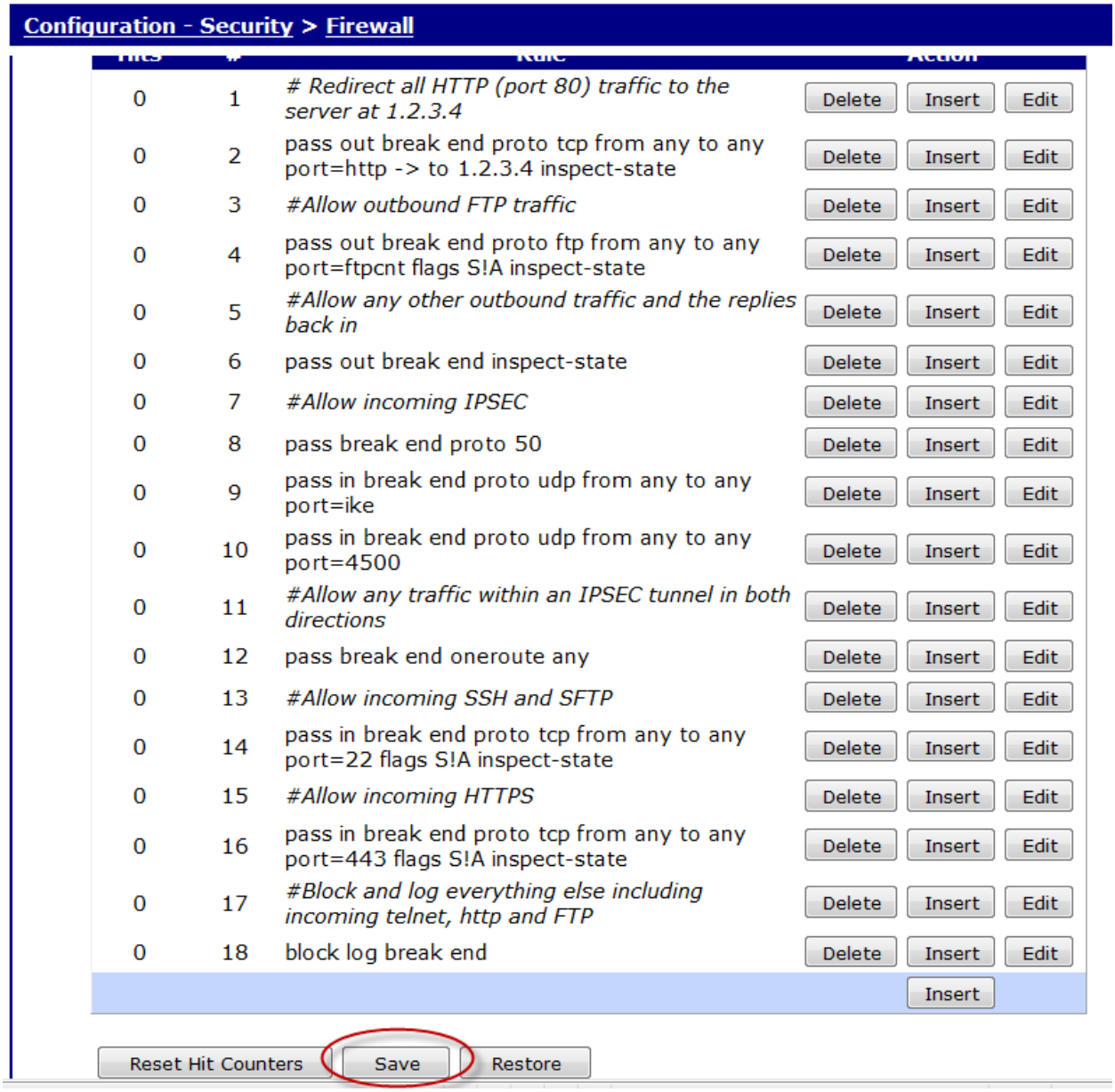
Type in the following text:

Redirect all HTTP (port 80) traffic to the proxy server at 1.2.3.4 Click OK

The second rule is the HTTP redirection rule.
Click on the second from top 'Insert' button. This will display a firewall text entry box below the comment line.
Type in the following text:

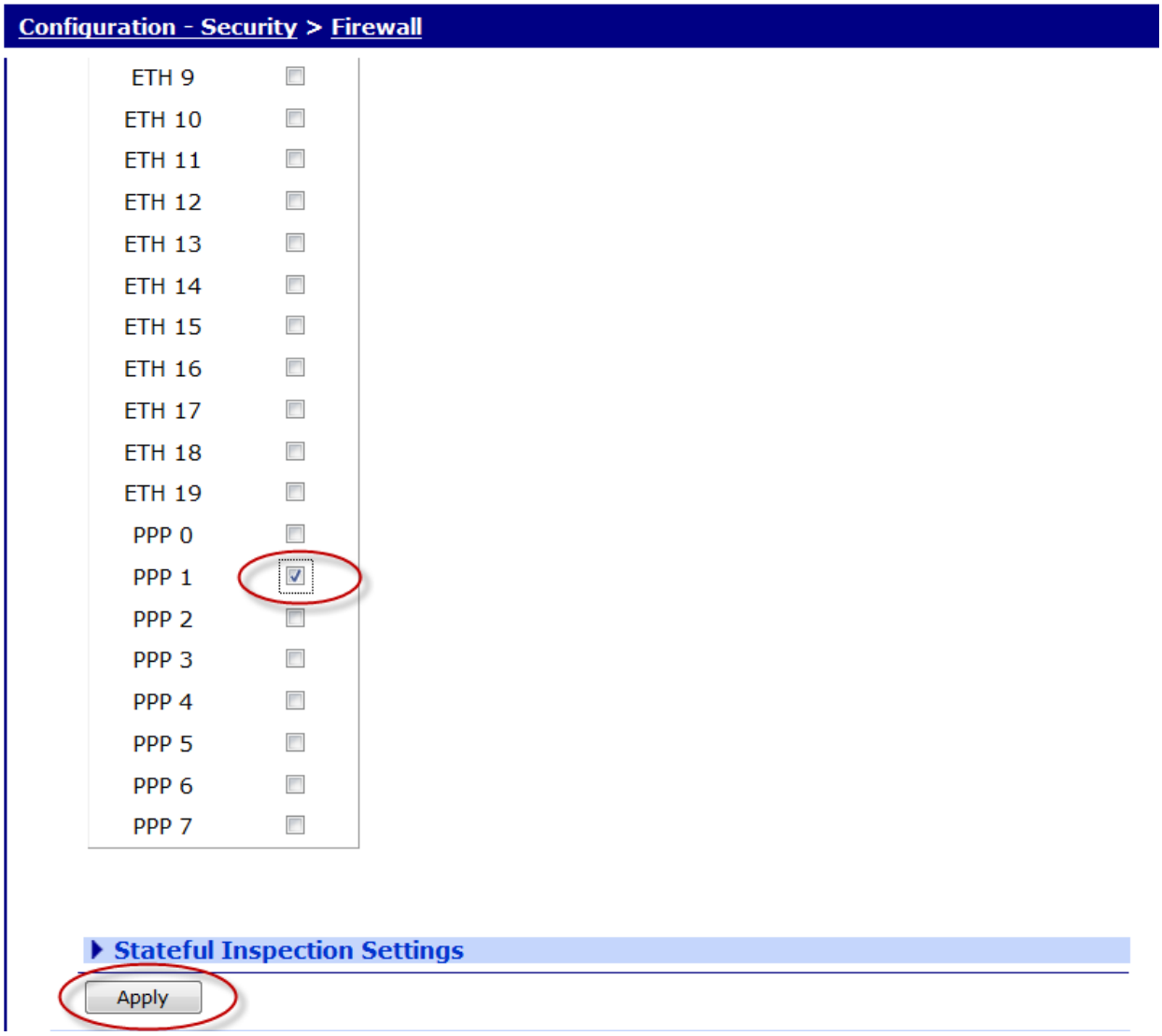
pass out break end proto tcp from any to any port=http -> to 1.2.3.4 inspect-state

Click OK, then click Save.

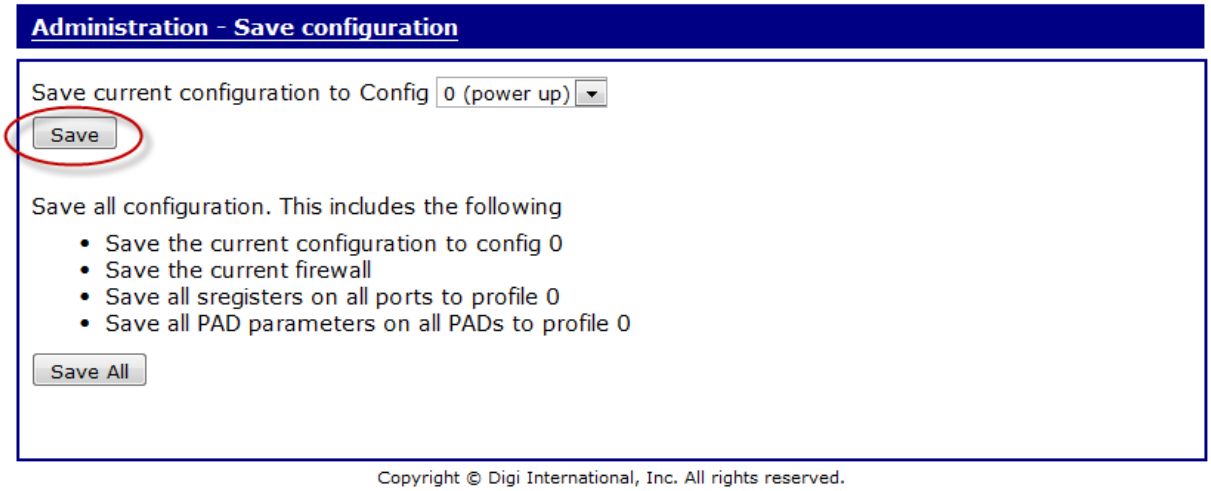


Note:
Proxy servers often listen on a port number other than 80. For example, a common proxy server listens on port 3128. If the proxy server to be used listens on a port other than 80, the following rules should be used instead:
Redirect all HTTP (port 80) traffic to the proxy server at 1.2.3.4 listening on port 3128
pass out break end proto tcp from any to any port=http -> to 1.2.3.4 port=3128 inspect-state

The firewall now needs to be activated on the WAN interface, scroll down and tick/check the box for the WAN interfaces in use. This will most likely be PPP 1 but can vary depending on the model of the router and the WAN interfaces configured (DSL, Cellular or Ethernet).



Browse to Administration - Save configuration Click Save



3 CONFIRM HTTP TRAFFIC IS BEING REDIRECTED TO THE PROXY SERVER

Using a PC with the TransPort router as its default gateway, open the web browser and try to access any website.
As long as the web site requested passes the content filtering rules of the proxy server, the page will be displayed. If a restricted site is attempted to be accessed, a content filtering information message is usually returned by the proxy server and displayed in the web browser.

To confirm the HTTP traffic is being redirected to the proxy server, open the TransPort router web GUI and browse to:
Configuration - Security > Firewall
The hit counter for redirection rule should be a number other than zero, to indicate the rule has been hit. Every time a web page is accessed via the proxy server, this hit counter number will increase.