



# Advanced Configuration for the ATI Rapier Series

# Revision History

Author	Revision	Date	Modifications
TW	0.0.1	12th August 2002	Ex 1 Operations – Configurations, Filing, Reboots, and Feature Licences, Command Actions, Upgrade Process, Generating an Encryption Key Ex 2 Rapier Hardware Filters Ex 3 Prioritisation using 802.1p and TOS Queues Ex 4 Firewall and Hardware filters

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[www.alliedtelesyn.co.nz](http://www.alliedtelesyn.co.nz)

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# 1. Quick Command Reference

## 1.1. Configurations

Task	Command
Sho the log	Sho log
View the current release and patch	Sho install
Sho the system Information	Sho sys
Save the current configuration	Create config=<config>.cfg
Change the boot configuration file	Set conf=<config>.cfg
What is the current configuration file	Sho conf
Sho the current RAM configuration	Sho conf dyn Sho conf dyn=<sub section>

## 1.2. Filing, Reboots, and Feature Licences

Task	Command
Sho file contents in FLASH or NVS	Sho fi=<file.ext>
Sho files	Sho fi
To Edit a file	Edit <file.ext>
Warm boot the router	Restart reboot
Quick boot (for applying new configurations)	Restart router
Enable a new feature licence	Enable feature=<feature> pass=<password>

## 1.3. Command Actions

To config	To Remove from Configuration	To view and modify
Add	Delete	Sho
Create	Destroy	Set
Activate	Deactivate	Reset
Enable	Disable	Purge

## 1.4. Upgrade Process

To load the file on the router you need a trivial ftp server software. A windows version is available here [Allied Telesyn tftp server](#)

Upgrade process	Commands
Make space, delete the old files	Del fi=<oldfile.ext>
Load files	Load fi=<file.rez> dest=flash serv=<server ip> Load fi=<file.paz> dest=flash serv=<server ip> Load fi=<file.hlp> dest=flash serv=<server ip>
Apply a Help file	Set help=<help>.hlp
Save the config	Create conf=<current config>
Enable the release licence	Enable rel=<release.rez> num=<release> pass=<password>
Set the current release and patch file	Set inst=pref rel=<release.rez> pat=<patch.paz>
Warm boot the router	Restart reboot

## 1.5. Generating an Encryption Key

Check List for Encryption

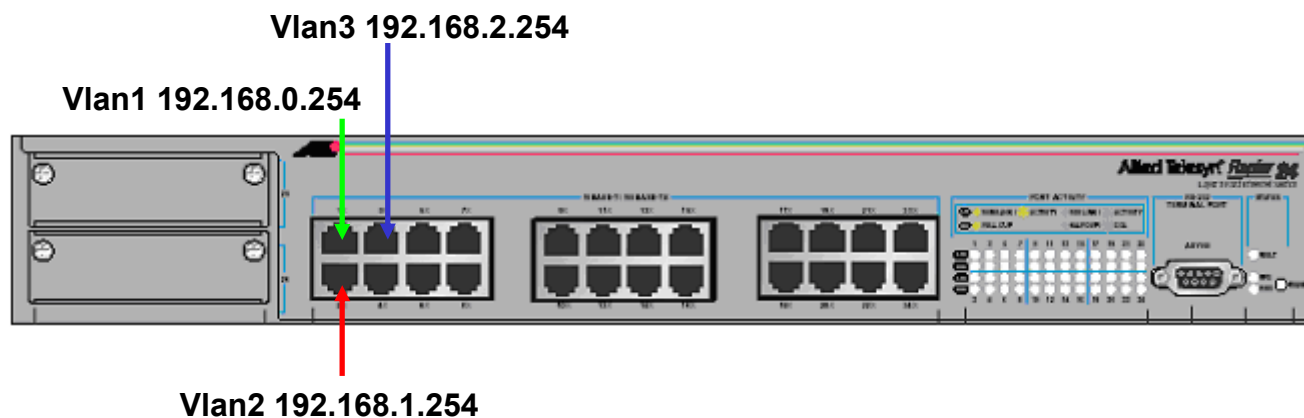
- 1) Do you have full client licences to generate keys?
- 2) 3DES licence (export permit)
- 3) EMAC/EPAC Encryption Card?

Task	Command
Add security level user	Add user=secoff pass=secoff priv=security
Keep security officer access for 10 Minutes	Set user securedelay=600
Turn on Security	Enable system security
Create the ISAKMP key	At router 'A'>Create enco key=1 type=gen random
View the key and	At router 'A'>Sho enco key=1 (tip: copy and paste this key to router B)
Enter the ISAKMP key at the other end	At router 'B'>Create enco key=1 type=gen val=<router 'A' key>
Allow remote Security officer access and	Enable user rso
Specify remote IP address ranges	Add user rso ip=<remote access ip> mask=<mask>

## 2. Hardware Filters

### 2.1. IP filtering between VLANS

This example uses hardware filters to stop traffic from from 192.168.1.0 to 192.168.2.0 and vice versa. Both Vlans can still route to Vlan1(192.168.0.254). Port 2 is vlan2 and Port 3 is vlan3 Ports 1, 3-24 are vlan1.



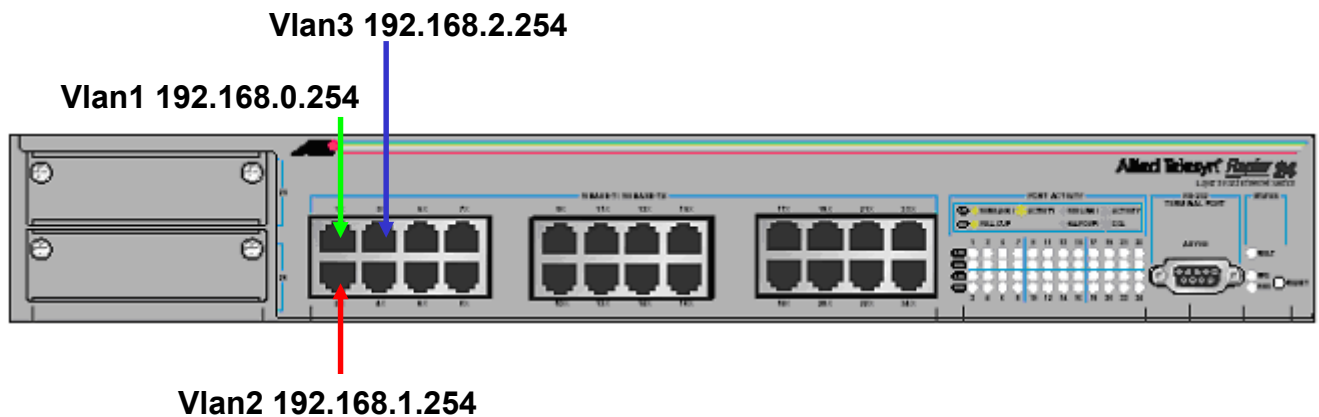
#### Rapier

```
#
# VLAN general configuration
#
create vlan="two" vid=2
create vlan="three" vid=3
#
# VLAN port configuration
#
add vlan="two" port=2
add vlan="three" port=3
#
# CLASSIFIER general configuration
#
create class=1 ip sa=192.168.1.0/24 ipda=192.168.2.0/24
create class=2 ip sa=192.168.2.0/24 ipda=192.168.1.0/24
#
# IP configuration
#
enable ip
add ip int=vlan2 ip=192.168.1.254
add ip int=vlan3 ip=192.168.2.254
add ip int=vlan1 ip=192.168.0.254
#
# SWITCH configuration
#
ena swi 13f
add switch hwf class=1 ac=dis
add switch hwf class=2 ac=dis
```

## 3. Traffic Prioritisation

### 3.1. Setting TOS for one ip between VLANS

Setting the IP TOS section to five for the ip address (192.168.1.1) as the traffic is routed through the Rapier.

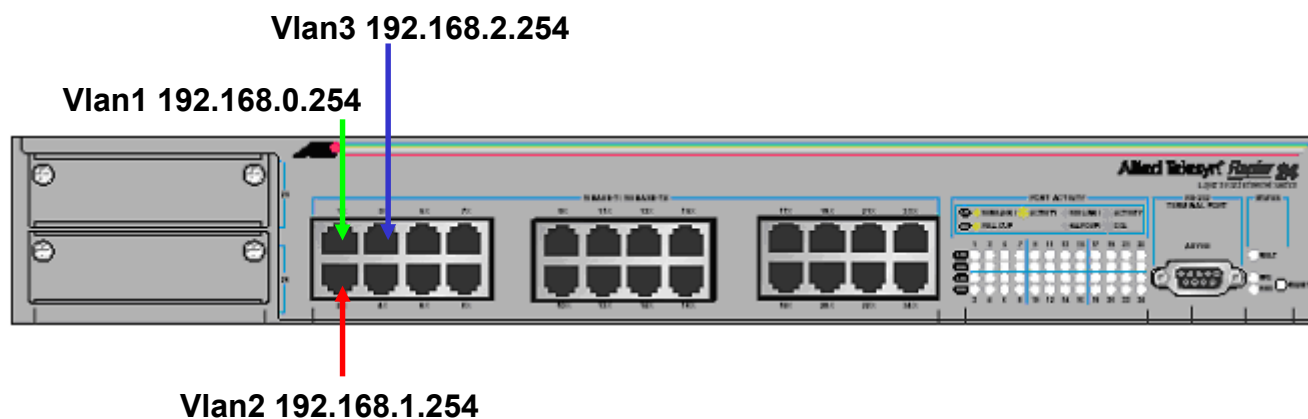


#### Rapier

```
#
# VLAN general configuration
#
create vlan="two" vid=2
create vlan="three" vid=3
#
# VLAN port configuration
#
add vlan="two" port=2
add vlan="three" port=3
#
# CLASSIFIER general configuration
#
create class=1 ipsa=192.168.1.1/32
create class=2 ipda=192.168.1.1/32
#
# IP configuration
#
enable ip
add ip int=vlan2 ip=192.168.1.254
add ip int=vlan3 ip=192.168.2.254
add ip int=vlan1 ip=192.168.0.254
#
# SWITCH configuration
#
ena swi 13f
add switch hwf class=1 ac=for,sett newt=5
add switch hwf class=2 ac=for,sett newt=5
```

## 3.2. Setting 802.1p bits of Ethernet frames for a certain ips

The IP address 192.168.1.1 has its 802.1p bits set to 5 as it is routed through the switch.

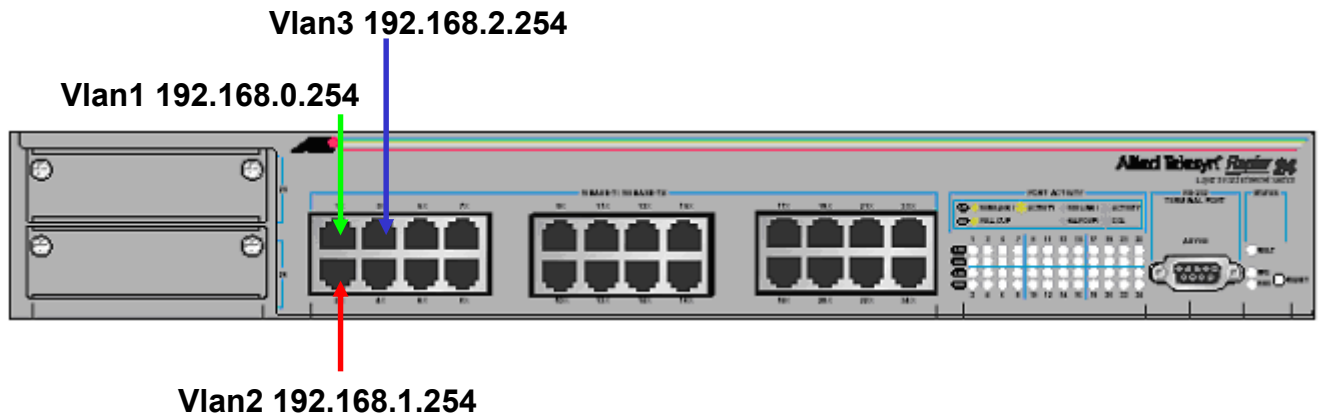


### Rapier

```
#
# VLAN general configuration
#
create vlan="two" vid=2
create vlan="three" vid=3
#
# VLAN port configuration
#
add vlan="two" port=2
add vlan="three" port=3
#
# CLASSIFIER general configuration
#
create class=1 ipsa=192.168.1.1/32
create class=2 ipda=192.168.1.1/32
#
# IP configuration
#
enable ip
add ip int=vlan2 ip=192.168.1.254
add ip int=vlan3 ip=192.168.2.254
add ip int=vlan1 ip=192.168.0.254
#
# SWITCH configuration
#
ena swi 13f
add switch hwf class=1 ac=for,setp prio=5
add switch hwf class=2 ac=for,setp prio=5
```

### 3.3. Sending packets to a ethernet queue depending on its ip address

The IP address 192.168.1.1 has its ethernet frames set to 5 as it is routed through the switch.

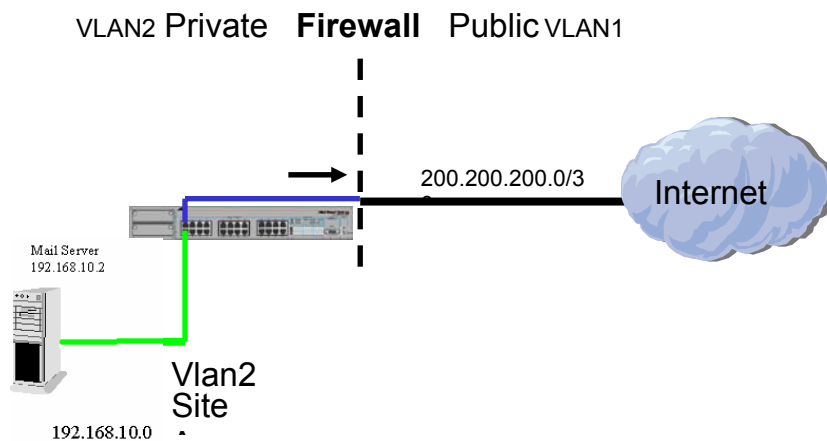


#### Rapier

```
#
# VLAN general configuration
#
create vlan="two" vid=2
create vlan="three" vid=3
#
# VLAN port configuration
#
add vlan="two" port=2
add vlan="three" port=3
#
# CLASSIFIER general configuration
#
create class=1 ipsa=192.168.1.1/32
create class=2 ipda=192.168.1.1/32
#
# IP configuration
#
enable ip
add ip int=vlan2 ip=192.168.1.254
add ip int=vlan3 ip=192.168.2.254
add ip int=vlan1 ip=192.168.0.254
#
# SWITCH configuration
#
ena swi 13f
add switch hwf class=1 ac=for,sendc prio=5
add switch hwf class=2 ac=for,sendc prio=5
```

## 4. Firewall Configs

### 4.1. Simple Firewall with internal mail server



#### Rapier A

```
#
# VLAN general configuration
#
create vlan="two" vid=2
add vlan="two" port=3-24
create vlan="two" vid=3
add vlan="two" port=2

#
# IP configuration
#
enable ip
add ip int=vlan3 ip=200.200.1.1 mask=255.255.255.252
add ip int=vlan2 ip=192.168.10.1
add ip int=vlan1 ip=200.200.200.1 mask=255.255.255.252
add ip route=0.0.0.0 next=200.200.200.2 mask=0.0.0.0 int=vlan1
#
# Firewall Configuration
enable firewall
create firewall policy="LAN"
enable firewall policy="LAN" icmp_f=ping
add firewall policy="LAN" int=vlan2 type=private
add firewall policy="LAN" int=vlan1 type=public
add firewall policy="LAN" int=vlan3 type=public
add firewall poli="LAN" nat=enhanced int=vlan2 gblin=vlan1 gblip=200.200.200.1

create firewall policy="DMZ"
enable firewall policy="DMZ" icmp_f=ping
add firewall policy="DMZ" int=vlan3 type=private
add firewall policy="DMZ" int=vlan1 type=public
add firewall policy="DMZ" int=vlan2 type=public
# Allow access from Internet to Web server (domain registered 200.200.1.2)
add firewall poli="DMZ" ru=1 ac=allo int=vlan1 prot=tcp po=80 ip=200.200.1.2
# Allow any access to DMZ from LAN
add firewall poli="DMZ" ru=2 ac=allo int=vlan2 prot=ALL
```

### 4.1.1. PINGING, Email notification, accounting, and logging

#### Rapier A

```
set mail host=mydomain.mail.com
set ip nameserve=100.100.100.100
#
# Firewall Configuration
#
# Ping is blocked by default, to enable outgoing ping responses back in
enable firewall policy="main" accounting
enable firewall policy="main" log=indeny
enable firewall notify=port,manager,mail port=0 to=it\_manager@support.co.ju
# Or if no Name server defined
enable firewall notify=port,manager,mail port=0 to=it\_manager@\[192.168.10.2
```

### 4.1.2. Internet Access to Firewall Router

#### Rapier A:

```
#
#Firewall
# Note. Always include a remote user ip address to maintain relatively secure access
add firewall poli="LAN" ru=2 ac=allo int=ppp0 prot=tcp po=23 ip=192.168.10.1
gblip=200.200.200.1 gblport=23 rem=<remote manager ip address>
```

### 4.1.3. UDP Video link through firewall preformance tweak

If you're having problems with a UDP based Video conferencing or UDP based encrypted link throughput? If you have a firewall setup it could be detecting the packets as part of a UDP attack and throttling the bandwidth causing jitter, no voice and generally slow performance.

#### Rapier A:

```
#
#Firewall
#
set firewall poli="main" attack=udpattack det=100
```