

Application Note

Policy Configuration with Exinda Optimizer

Network traffic optimization reduces the reliance of business upon costly capacity bandwidth upgrades. Optimization is delivered either by prioritization of critical traffic flows or by blocking non-essential transfers. Once an optimization plan has been developed, it must be implemented using a simple, easy to understand management interface. Exinda Optimizer provides these capabilities – emphasizing ease of use through a simple, graphical and web accessible interface. Through this interface, Exinda Optimizer has successfully reduced the difficult task of network management to a step-by-step process.

In this report we describe how you can optimize your network with Exinda Optimizer.

Question: How can I view my current Exinda Optimizer configuration?

A key component of any traffic optimization system is the user management interface. This interface must allow you to view and modify your current optimization policies in a simple and easily understood manner.

Rule #	Schedule	Client	Direction	Server	Traffic Type	Edit	Delete
Filter Rules Add New Policy Tip 1: Client --> Server : determines 'Traffic Flow Direction' Traffic Type : determines the 'type' of traffic (service/application)							
Tip 2: Order of the Optimization Rules is important. Most specific rules should appear at the top of the list (Sorted by rule number).							
100	ALWAYS	Blocker (DISCARD)				Edit	Delete
		ALL	◀ ▶	ALL	KaZaA		
200	ALWAYS	General (1500 kbps)				Edit	Delete
		ALL	◀ ▶	ALL	All traffic		
300	ALWAYS	Slow (100 kbps)				Edit	Delete
		ALL	◀ ▶	ALL	time (tcp, port 37)		
Maximum Link Bandwidth: 2000 (kbps) Allocated Bandwidth in Queues: 1601 (kbps)							
Add New Policy							

Figure 1. The Exinda Optimizer configuration management interface.

Exinda Networks Pty. Ltd.
 Level 1, 35 King St,
 Melbourne, Vic 3000
 Australia

PH: +61 (0) 3 9614 2199
 FAX: +61 (0) 3 9629 2800

August 2003 Exinda Networks Pty Ltd. All rights reserved. Exinda Networks and images mentioned and/or used herein belong to their respective owners. Exinda Optimizer is either a registered trademark or a trademark of Exinda Networks Pty Ltd. All other trademarks, tradenames, service marks.

Exinda Optimizer provides a simple management user interface for you to control your optimization policies (Figure 1). It provides all details of prioritized traffic flows and capacity guarantees that are in place for each prioritization and can be used to: (a) observe the current policy adopted by Exinda Optimizer, or (b) remove, edit optimization policies or to add new policies. The optimization policies shown in Figure 1 comprise the Optimization Configuration, which dictates the how traffic flows are optimized in your network.

Each optimization policy is broken up into the following sub-components:

- **Rule #:** A simple numeric identification of each specific optimization policy.
- **Schedule:** Exinda Optimizer allows you to schedule certain policies to automatically switch on or off at particular scheduled times. We will discuss how you can use Exinda Optimizer to create schedule policies further in this report.
- **Client:** The specific client network host upon which to apply the optimization policy.
- **Direction:** The direction of data flow through the Exinda Optimizer that is affected by the optimization policy (i.e. towards client or away from client)
- **Server:** The specific server network host upon which to apply the optimization policy.
- **Traffic Type:** The type of traffic to which the optimization policy should be applied.

The Exinda Optimizer display also contains the name of the specific optimization policy and the bandwidth limit that is applied to that policy (eg. "General (1500kbps)"). As such, each policy can either be guaranteed a minimum bandwidth, or constrained to a maximum bandwidth at times of congestion. For example, constraining bandwidth will stop large email attachments (which can be received at any time) consuming bandwidth when time sensitive applications are needed.

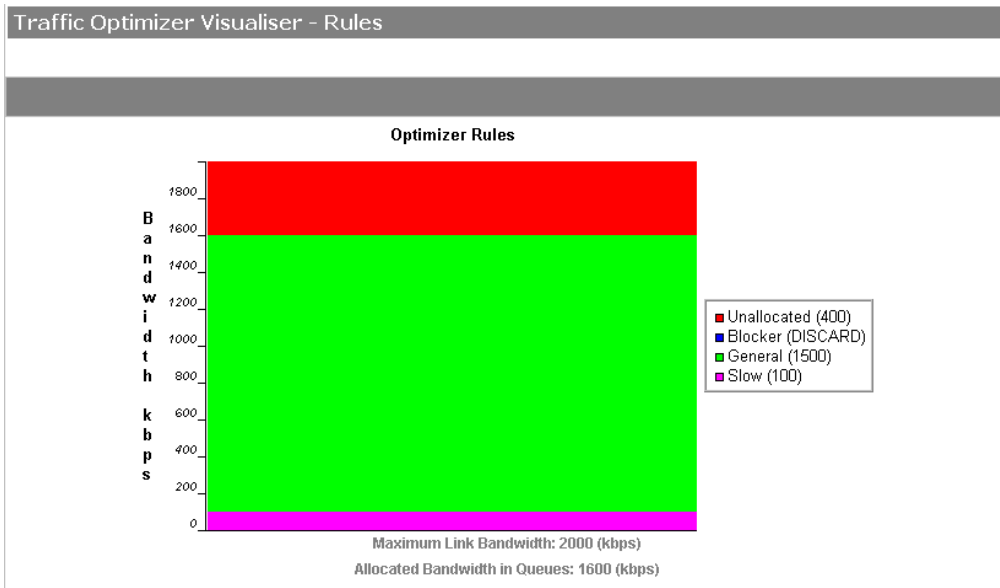


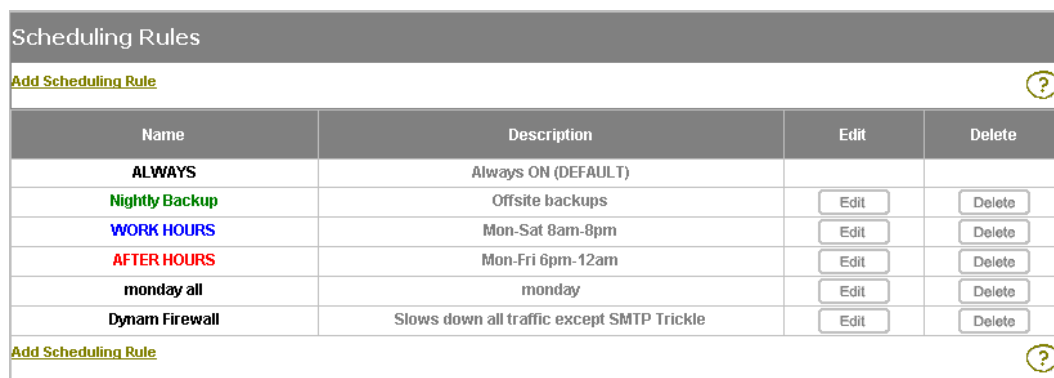
Figure 2. The Exinda Optimizer configuration viewer showing the allocation of your link bandwidth according to optimisation policy.

For simplicity, Exinda Optimizer provides visual representations of your configuration, as shown in Figure 2. These visual aides are easy to understand and read, making the management of your network easier.

Question: How can I define a time schedule policy to control my Exinda Optimizer?

An adaptive optimization configuration allows individual policies to be automatically enabled and disabled at different times in the day. So you can have different configurations for your network for different times, such as high load (eg. Business hours), and locked down (eg. Midnight). This ability allows you to ensure that your network remains responsive to your changing business needs.

Exinda Optimizer allows you to automate your network optimization for different times in the day. For example, you may wish to turn off all optimization policies during the evening when there is no one at the office and so no need for critical application prioritization. Thus, enabling you to lock down your network at night to improve security while still allowing automated backup services and e-mail to function.



Name	Description	Edit	Delete
ALWAYS	Always ON (DEFAULT)		
Nightly Backup	Offsite backups	Edit	Delete
WORK HOURS	Mon-Sat 8am-8pm	Edit	Delete
AFTER HOURS	Mon-Fri 6pm-12am	Edit	Delete
monday all	monday	Edit	Delete
Dynam Firewall	Slows down all traffic except SMTP Trickle	Edit	Delete

Figure 3. Scheduler configuration viewer.

Figure 3 shows the simple display to show all of your defined schedule rules. This display is the interface which you can use to add, delete and edit time schedules for your network. The interface is broken down according to:

- **Name:** A name to identify the time schedule (eg. “After hours”, or “Morning Peak”).
- **Description:** A further definition of the time schedule (eg. “Between 5pm and 8am”).

Add/Edit Scheduling Rules

Note: To add more than five lines save the Rules and edit again. 5 additional blank lines will appear. ?

Rule Name	Color Code	Description
AFTER HOURS	RED	Mon-Fri 6pm-12am

Line	Start Day	End Day	Start Time	End Time
1	MONDAY	FRIDAY	18:00	24:00
2				
3				
4				
5				
6				

Save Cancel ?

Figure 4. The Exinda Optimizer schedule editing interface, detailing a time schedule for “every weeknight between 6pm and 12am”.

You can edit any existing schedule rule by selecting the “edit” button, or can add a new rule by selecting the “Add Schedule Rule” link. In these cases, an interface as shown in Figure 4 will be displayed, allowing you to define a schedule rule using up to six time intervals. You can also define more schedule rules by saving and re-entering the edit screen.

Question: How can I prioritize and block certain flows of traffic?

Traffic Optimization is implemented by selectively prioritizing key traffic flows for optimum performance, while also blocking inappropriate or unnecessary flows. This allows applications that are essential to your business to continue to function with a guaranteed quality of service (QoS), while malicious or unnecessary applications are limited in operation or blocked. These simple yet powerful mechanisms make your network much more efficient and secure.

Exinda Optimizer allows you to give priority to particular types of traffic through your network. This is a feature that allows you to ensure that critical network applications continue to operate even in the midst of network congestion. For example, prioritization of time critical applications (such as VoIP and SSH) will guarantee that they receive superior quality of service. This allows your business to continue working regardless of your network’s traffic congestion.

Add/Edit Optimization Rules

To delete a line entry simply blank out the drop down lists on that line. ?

Rule #	Schedule	Policy Name	Policy	Guaranteed Bandwidth	Maximum Bandwidth	Priority
100	ALWAYS	Blocker	Discard	1 kbps	1 kbps	1 (high)
Client	Direction		Traffic Type			
ALL	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>		ALL	KaZaA		
	<input type="radio"/> <input type="radio"/> <input type="radio"/>					
	<input type="radio"/> <input type="radio"/> <input type="radio"/>					
	<input type="radio"/> <input type="radio"/> <input type="radio"/>					
	<input type="radio"/> <input type="radio"/> <input type="radio"/>					
	<input type="radio"/> <input type="radio"/> <input type="radio"/>					

Save Cancel

Figure 5. An optimiser rule to always block Kazaa traffic.

The prioritization functions are:

- Preferring of critical traffic flows over non-critical flows in times of peak congestion. This ensures that key applications receive superior quality of service than non-essential applications and is enabled by selecting the “optimize” policy option in figure 5.
- Allocation of bandwidth capacity to particular traffic flows depending on the time of day. This allows you to control the use of your network and guarantee continued operation of key applications and be enabled through the “schedule” option shown in figure 5.
- Block unwanted traffic flows from your network. This allows you to “lock down” your network to prevent unwanted applications such as P2P or music downloads from consuming valuable capacity resources and can be enabled through by selecting the “discard” policy option in figure 5.

Optimization can be configured using the policy management interfaces shown in Figures 1 and 5, allowing you to edit, delete or add new optimization policies quickly and simply. Schedules defined using the interfaces shown in Figures 3 and 4 can be selected as shown in the “Schedule” dropdown box in Figure 5.

Exinda Optimizer makes it simple to manage your network policy.

Summary

In this report we presented the simple management interfaces provided by Exinda Optimizer to optimize your business’s network resources. We have explained the graphical user interfaces that are provided for you to configure, schedule and optimization policies. Exinda Optimizer provides your business with a single, easy to use, simple to understand and powerful tool to manage and control your network.