IMPLEMENTATION GUIDE



CONFIGURING AND IMPLEMENTING A10 NETWORKS LOAD BALANCING SOLUTION WITH JUNIPER'S SSL VPN APPLIANCES

Although Juniper Networks has attempted to provide accurate information in this guide, Juniper Networks does not warrant or guarantee the accuracy of the information provided herein. Third party product descriptions and related technical details provided in this document are for information purposes only and such products are not supported by Juniper Networks. All information provided in this guide is provided "as is", with all faults, and without warranty of any kind, either expressed or implied or statutory. Juniper Networks and its suppliers hereby disclaim all warranties related to this guide and the information contained herein, whether expressed or implied of statutory including, without limitation, those of merchantability, fitness for a particular purpose and noninfringement, or arising from a course of dealing, usage, or trade practice.

Table of Contents

Introduction	. 3
Scope	. 4
Design Considerations	. 4
Description and Deployment Scenario	. 4
Configure AX2	13
SA6500 Active-Active Configuration	15
Creating a Cluster in sa6500-c	15
Adding a Cluster Member in sa6500-c	
Joining a Cluster in sa6500-d	18
Monitoring a Cluster	19
SA Series Configuration References	20
Summary	20
About A10 Networks	20
About Juniper Networks	20

Table of Figures

Figure 1: Logical topology overview Output Ou	3
Figure 2: Logical topology overview with the IP addresses used in this example	3
Figure 3: Select the interface	5
Figure 4: Enter the IP address and mask for e1	5
Figure 5: Set up HA	6
Figure 6: Configure the health monitor	8
Figure 7: Add the servers	9
Figure 8: Configure the source NAT pool	10
Figure 9: Enter general settings and click Add to include a virtual port	11
Figure 10: Configure port settings (settings for port 443 shown)	11
Figure 11: Configure the source-IP persistence template	12
Figure 12: Virtual ports configured and listed on the Port tab	12
Figure 13: Set up HA (compare with the setup for AX1).	14
Figure 14: HA Config Sync	14

Introduction

The combined solution of Juniper Networks[®] SA Series SSL VPN Appliances and the A10 Networks AX Series Advanced Traffic Manager provides an enhanced SSL VPN service. The access and security features of the SA Series are easily extended as needed by deploying AX Series server load-balancing functionality for additional security, availability, and capacity.

AX Series load balancers add the following benefits to an SA Series solution:

- Intelligent, flexible load-balancing algorithms to select the best SA Series node for each session
- Industry-leading connection speed, supporting greater than 500,000 new TCP connections per second
- Customizable health monitors to ensure service availability
- Stickiness options, such as persistence based on client source IP address
- Hardware-based protection against distributed denial of service (DDoS) attacks
- One virtual VPN server to provide a single point of access for all users in all locations
- High availability (HA) AX redundancy with session synchronization to eliminate single point of failure



Figure 1: Logical topology overview



Figure 2: Logical topology overview with the IP addresses used in this example

Scope

The deployment guide is intended to describe the installation steps necessary to implement the A10 Networks AX Series load balancer with the Juniper Networks SA Series SSL VPN Appliances solution. The guide is intended to provide detailed configuration information for organizations' system engineers and technical staff.

Design Considerations

AX Series Appliances

Firmware: AX Series version 2.x or later

Platform: Any

Performance: AX Series appliances are high-performance systems, and characteristics vary by platform. Performance examples are provided in various third-party performance reports at http://www.a10networks.com. Sample figures:

- >500,000 new connections per second (CPS)
- Millions of concurrent sessions
- 1-9+ million hardware SYN/sec for DDoS
- Multi-Gb throughput

Juniper Networks IC Series Unified Access Control Appliances

- Software: 6.0R3.1 (build 12507) or later
- Platform: Juniper Networks SA6500 SSL VPN Appliance
- Performance: 5,000 simultaneous users per appliance

Description and Deployment Scenario

This section enables solution implementation, detailing device configuration for all relevant protocols and interfaces.

The following procedures show you how to configure a pair of AX load balancers to provide HA and load balancing for a Juniper SA Series cluster. The configuration for the SA Series cluster follows.

Configure AX

First, AX1 will be configured, and then its configuration will be synchronized to AX2.

Add the IP Address to the Interface

- 1. Select Config Mode > Network > Interface.
- 2. In the Interface column, click on "e1."
- 3. Expand the IPv4 tab.
- 4. Enter the IP address and mask in the IP Address and Mask fields. In this example, enter 172.16.0.11 and 255.255.255.0.
- 5. Click OK at the bottom of the window. The interface list reappears.

Aonitor Mode Config Mode	LAN	Management
Service 🕨	Interface	IP Address
Network 🔍	□ <u>e1</u>	0.0.0/0
C	🗆 e 🖸	0.0.0/0
<u>e Interface</u>	e3	0.0.0/0
» Trunk	🗌 e4	0.0.0/0
» VLAN	e5	0.0.0/0
» ACL » ARP	🗌 e6	0.0.0/0
» Route	e7	0.0.0/0
» DNS	🗌 e8	0.0.0/0
» ICMP Rate Limiting	e9	0.0.0/0
» STP	🗌 e10	0.0.0.0/0

Figure 3: Select the interface

Interface >> LAN >> ethernet1

General				
Port Number:	1			
Туре:	ethernet			
Status:	O Enabled	Oisabled		
MAC Address:	0090.0B0B.94	4F6		
Name:				
Speed:	Auto		*	
Duplex:	Auto		*	
Flow-Control:	O Enabled	Oisabled		
CPU Process:	O Enabled	Oisabled		
ICMP Rate Limiting:				
O IPv4				
IP Address:	172.16.0.11			
Mask:	255.255.255.0			
	IP Address:		Mask:	O Add
	IP Address		Mask	Delete

Secondary IP List:	I Address	musik	Delete
Access List:		~	
O IPv6			
© VIP			
⊙ на			
≪ OK K Cancel			

Figure 4: Enter the IP address and mask for e1

Add the Default Gateway

- 1. Select Config Mode > Network > Route.
- 2. Click Add.
- 3. In the IP Address Prefix field, enter 0.0.0.0.
- 4. In the Netmask field, enter 0.0.0.0.
- 5. In the Gateway field, enter 172.16.0.1.
- 6. Click OK. The default route appears in the route table.

Set up HA

- 1. Select Config Mode > HA > Setting.
- 2. On the General tab, select "1" from the Identifier drop-down list.
- 3. Click Enabled next to HA Status.
- 4. Click Enabled next to Preempt Status.
- 5. In the HA Mirroring IP Address field, enter the IP address of AX2 (172.16.0.12 in this example).
- 6. Enter Group parameters:
 - a. Expand the Group tab.
 - b. Select "1" from the Group Name drop-down list.
 - c. In the Priority field, enter 100.
 - d. Click Add.
- 7. Click OK at the bottom of the page.
- 8. Enable SSH access on the HA interface:
 - a. Select Config Mode > System > Access Control.
 - b. Select the SSH checkbox in the row for ethernet1.

ing >> HA Global		
General		
dentifier:*	1 🗸 Set ID:	
HA Status:	Enabled Disabled	
Preempt Status:	Enabled Disabled	
lime Interval:	2 100ms	
A Mirroring IP Address:	172.16.0.12	
limeout Retries:	5 Seconds	
ARP Retry:	4	
100		
loating IP Address		
Ioating IP Address Status Check		

Figure 5: Set up HA

Set up a Service Group for the SA Series Cluster

- 1. Select Config Mode > Service > SLB.
- 2. On the menu bar, select Service Group.
- 3. Click Add.
- 4. For the Name, enter "sa_group."
- 5. For the Type, leave "TCP" selected.
- 6. For the load-balancing Algorithm, select Least Connection.
- 7. Configure an HTTPS health monitor:
 - a. In the Health Monitor drop-down list, select "create." The configuration tabs for configuring a health monitor appear.
 - b. In the Name field, enter "sa_monitor." From the Type drop-down list, select HTTPS.
 - c. Click OK. The service group configuration tabs reappear.
- 8. Add the SA Series servers:
 - a. On the Server tab, in the Server field, enter the IP address of an SA Series server. (In this example, enter 172.16.0.61.)
 - b. In the Port field, enter 0.
 - c. Click Add.
 - d. Repeat for the second SA Series server, but enter IP address 172.16.0.62.
- 9. Click OK at the bottom of the page to finish creating the service group.

Service Group			
Name: *	sa_group		
Туре:	TCP	×	
Algorithm:	Least Connection	~	
Health Monitor:		~	
Min Active Members:	ping		
Description:	create		~ ~
rvice Group >> Health M	Ionitor /		
Health Monitor	4		
Name: *	sa_monitor		
Retry:	3		
Consec Pass Req'd:	1		
Interval:	30	Seconds	
Timeout:	5	Seconds	
Method			
Override IPv4:			
Override IPv6:			
Override Port:			
Method:	Internal O External		
Туре:	HTTPS	×.	
Port:	443		
Host:			
URL:	GET 💉 /		
User:			
Password:			

Figure 6: Configure the health monitor

Service Gr	roup						
Name: *		sa_group					
Type:		TCP			*		
Algorithm	:	Least Co	nnection		*		
Health Mo	nitor:	sa_moni	tor		*		
Min Active	e Members:						
Descriptio	on:						< <u>></u>
IPv4/IPv6: Server: *		IPv4 172.16.0.6	O IPv6 52	0	Port: *	0	🗇 Add
Server Po	rt Template(SPT):	default		~	Priority:	1 🗸	
Server Po	rt Template(<u>SPT</u>): Server	default	Port	✓	Priority:	1 v Priority	Ø Updat
		default	Port 0	Constant P		1 V Priority 1	 Ø Updat Ø Delete
	Server	default		SPT	It	Priority	 Updation Delete Enable Disable

Figure 7: Add the servers

Set up the Source NAT Pool

- 1. Select Config Mode > Service > SNAT.
- 2. Click Add.
- 3. In the Name field, enter "sa_snat."
- 4. In both IP Address fields, enter 172.16.0.51.
- 5. In the Netmask field, enter 255.255.255.0.
- 6. From the HA Group drop-down list, select "1."
- 7. Click OK.

ame: *	sa_snat	
tart IP Address: *	172.16.0.51	
End IP Address: *	172.16.0.51	
letmask: *	255.255.255.0	
Gateway:		
HA Group:	1 🗸	

Figure 8: Configure the source NAT pool

Set up the Virtual Server

- 1. Select Config Mode > Service > SLB.
- 2. On the menu bar, select Virtual Server.
- 3. Click Add.
- 4. In the Name field, enter "sa_vip."
- In the IP Address field, enter the IP address at which clients will request the SA Series service. This is the IP address that DNS should send when replying to client queries for the SA Series service. In this example, enter 172.16.0.50.
- 6. From the HA Group drop-down list, select the HA group configured previously (group ID "1").
- 7. Configure a virtual port:
 - a. On the Port tab, click Add. The Virtual Server Port tab appears.
 - b. From the Type drop-down list, select TCP if not already selected.
 - c. In the Port field, enter "443."
 - d. From the Service Group drop-down list, select "sa_group."
 - e. Select Enabled next to HA Connection Mirror.
 - f. From the Source NAT Pool drop-down list, select "sa_snat."
 - g. From the Persistence Template Type drop-down list, select Source IP Persistence Template.
 - h. From the Source IP Persistence Template field, select "create." The configuration tab for the template appears.
 - i. In the Name field, enter " sa_source."
 - j. In the Timeout, change the value to 20.
 - k. Click OK to return to the Virtual Server Port tab. The port appears on the Port tab.
- 8. Click Add again to configure another virtual port. For this port, use the following settings:
 - Type Others
 - Port 0
 - Service Group sa_group
 - Source NAT Pool sa_snat
 - Source IP Persistence Template sa_source
- 9. Click OK.

10. Click OK again to finish creating the virtual server.

eneral						
lame: *		sa_vip	Wildcard			
P Address: *		172.16.0.50	③ IPv4 ○ IPv6			
Status:		Enabled Disabled				
ARP Status:		Enabled	Obisabled			
HA Group:		1 Dynamic Server Weight				
Virtual Server Te	emplate:	default	*			
Description:				~		
Port						
Status	Port	Туре	Service Group	🕀 Add 🕞		
	·		·	© Edit 🖑 © Delete © Enable		

	DeleteEnableDisable
✓ OK X Cancel	



SLB >>	Virtual	Server	>>	Port	>>	Create
--------	---------	--------	----	------	----	--------

ype: *	2021			
	TCP	~		
ort: *	443			
ervice Group:	sa_group	*		
connection Limit:	100000 01	Drop 🔿 Reset		
	Use default server se	lection when preferr	ed method fails	
	Use received hop for	response		
itatus:	Enabled O Di	sabled		
A Connection Mirror:	Enabled O Di	sabled		
Virect Server Return:	O Enabled 💿 Di	sabled		
YN Cookie:	🔿 Enabled 💿 Di	sabled		
irtual Server Port Template:	default	*		
ccess List:		*		
ource NAT Pool:	sa_snat	*		
FleX:		*		
CP Template:		*		
Persistence Template Type:	Source IP Persistenc	e Template 👻		
ource IP Persistence Template:	sa_source	*		
Policy Template:		*		
	Access List:	1	*	O Add
	Source NAT Pool:	sa_snat	*	Ø Update
CL-SNAT Binding:	Access List	Source N/	AT Pool	Delete

Figure 10: Configure port settings (settings for port 443 shown)

ame: *	sa_source
latch Type:	Port 🗸
imeout:	20 Minutes
on't Honor Conn Rules:	
etmask:	

Figure 11: Configure the source-IP persistence template

	ral						
m	e: *		sa_vip				
Ad	dress: *		172.16.0.50				
Status:		Enabled O Disabled					
RP	Status:		Enabled	Disabled			
G	iroup:		1	Y Dynamic Server Weight			
rtu	ial Server Te	emplate:	default	*			
					~		
SC	cription:				~		
rt							
	Status	Port	Туре	Service Group	O Add		
_	Status	Port 443	Type TCP	Service Group sa_group	O Add		
	0						
		443	TCP	sa_group	Ø Edit		
	0	443	TCP	sa_group	Edit Delete		
	0	443	TCP	sa_group	© Edit © Delete © Enable		
	0	443	TCP	sa_group	© Edit © Delete © Enable		
	0	443	TCP	sa_group	© Edit © Delete © Enable		
	0	443	TCP	sa_group	© Edit © Delete © Enable		

Figure 12: Virtual ports configured and listed on the Port tab

Configure AX2

Add the IP Address to the Interface

- 1. Select Config Mode > Network > Interface.
- 2. In the Interface column, click on "e1."
- 3. Expand the IPv4 tab.
- 4. Enter the IP address and mask in the IP Address and Mask fields. In this example, enter 172.16.0.12 and 255.255.255.0.
- 5. Click OK at the bottom of the window. The interface list reappears.

Add the Default Gateway

- 1. Select Config Mode > Network > Route.
- 2. Click Add.
- 3. In the IP Address Prefix field, enter 0.0.0.0.
- 4. In the Netmask field, enter 0.0.0.0.
- 5. In the Gateway field, enter 172.16.0.1.
- 6. Click OK. The default route appears in the route table.

Set up HA

- 1. Select Config Mode > HA > Setting.
- 2. On the General tab, select "2" from the Identifier drop-down list.
- 3. Click Enabled next to HA Status.
- 4. Click Enabled next to Preempt Status.
- 5. In the HA Mirroring IP Address field, enter the IP address of AX1 (172.16.0.11 in this example).
- 6. Enter Group parameters:
 - a. Expand the Group tab.
 - b. Select "1" from the Group Name drop-down list.
 - c. In the Priority field, enter 90.
 - d. Click Add.
- 7. Click OK at the bottom of the page.
- 8. Enable SSH access on the HA interface:
 - a. Select Config Mode > System > Access Control.
 - b. Select the SSH checkbox in the row for ethernet2.
 - c. Click OK.

Setting >> HA Global							
General							
Identifier:*	2 🗸 Set ID:						
HA Status:	Enabled Disabled						
Preempt Status:	Enabled Disabled						
Time Interval: 2 100ms							
HA Mirroring IP Address: 172.16.0.11							
Timeout Retries: 5 Seconds							
ARP Retry:	4						
Group Name: 1 👻 Prie	Group Name Priority Oelete						
© Floating IP Address							
O Status Check							
≪∕ OK €							

Figure 13: Set up HA (compare with the setup for AX1)

Synchronize the Load-Balancing Configuration from AX1 to AX2

- 1. Select Config Mode > HA > Config Sync.
- 2. Enter the admin username and password required for Enable access to AX1 (in this example, "admin" and "a10").
 3. Click OK.

User:* Password :*	admin
Sync All Partitions :	
Operation:	
Peer Option:	

Figure 14: HA Config Sync

SA6500 Active-Active Configuration

Table 1: License							
NODE	LICENSE	COMMENT					
sa6500-c	 Enables 5,000 simultaneous users of SA6500 	• License for total concurrent users					
	 Enables Juniper Networks Secure Application Manager and Network Connect for SA6500 	• License to use Network Connect					
sa6500-d	 Enables clustering: Allows 5,000 additional users to be shared from another SA6500 	• Clustering license for second node					

Creating a Cluster in sa6500-c

1. To create a new cluster, choose...

Туре:	SA-6500	
Cluster Name:	sa-dcb	Name of the cluster to create. Must be alphanumeric, "-", or "_"; and must start with a letter.
Cluster Password:	Andrek Andrek	Shared secret among the nodes in the cluster. Must be at least 6 characters long
Confirm Password:	Achikolaska k	Shared secret among the nodes in the cluster. Must match the password you typed in the previous line
Member Name:	sa6500c	Name of this node in the duster Must be alphanumeric, "-", or "_"

Are you sure you want to create a new cluster sa-dcb ?

Please click Create to create a new cluster and add this appliance with member name sa6000-c to the cluster. Click Cancel if you do not want to create a cluster.

Create Cancel

2. By default, a cluster is created in the active-active configuration. To modify the settings, choose **Clustering > Properties**. Then make your changes. For instance, you can select **disable external interface when internal interface fails** as shown here.

Clustering
Status Properties
Type: SA-6500
Cluster Name: sa-dcb
Cluster Password: automate
Confirm Password: Second
Configuration Settings
C Active (Passive configuration
 C Active/Passive configuration This is a high-availability failover mode, in which one node is active while the other is held as backup.
Internal VIP:
External VIP:
Active/Active configuration
This mode requires an external load-balancer.
Synchronization Settings
Protocol: Onicast Omulticast OBroadcast
□ Synchronize log messages
WARNING: Enabling the cluster 'Synchronize log messages' feature results in large data transfers between bandwidth to support such transfers.
V Synchronize user sessions
✓ Synchronize last access time for user sessions
Network Healthcheck Settings
Number of ARP Ping failures before interface is disabled (should be greater than 0): 3
Disable external interface when internal interface fails
C Advanced Settings
Save Changes Delete Cluster

3. When you are finished making changes, click the **Save Changes** button.

Adding a Cluster Member in sa6500-c

4. Before a cluster member can join a cluster, you need to define it. Choose **Clustering > Status**. Two cluster members, sa6500-c and sa6500-d, are defined in the following screenshot.

	stering						
Sta	tus Properti	es		_			
	ter Name: sa-						
Type Conf	e: SA- figuration: Act	6500 ive/Active					
	-						
Ad	d Members	Enable Disa	ble Remove				
	Member Nam	ne Internal Addre	ss External Address	Status	Notes	Sync Rank	Update
	* <u>sa6500-c</u>	8.8.9.9/25	172.16.8.61/23	0	Leader	0	
	sa6500-d	8.8.9.8/25	172.16.8.62/23	0	Enabled, Unreachable	0	
Inc	dicates the no	de you are curre	ntly using				

5. To add a member to the cluster, select the cluster on the **Status** tab.

Clustering		
Status Properties		
Cluster Name: sa-dcb Type: SA-6500 Configuration: Active/Active Add Members Enable Disable Remove		
Member Name Internal Address External Address Status	Notes	Svoc Pank Lindate

6. Click the Add Members button. The following screenshot shows how to add sa6500-d as a cluster member.

7. Click the **Add** button to include the cluster member.

Joining a Cluster in sa6500-d

After cluster information has been defined for sa6500-c, it is time for sa6500-d to join the cluster. Log in
 sa6500-d admin URL and choose **Cluster > Join**. Enter the cluster name, cluster password, and existing member address (for example, the internal address of sa6500-c).

Join Existing Cluster		
Join		
Cluster Name:	sa-dcb	Name of the cluster to join
Cluster Password:	kolaisislaida	
Existing Member Address:	8.8.9.9	Internal IP address of any existing cluster member
Join Cluster		
Confirm Join Cluster		
This node will next contact the clust member of the cluster.	ster member '8.8.9.9' an	d ask to join the cluster sa-dcb. If this succeeds, the node will join as
WARNING: This host's entire state netmask etc.	will be overwritten with	the current cluster configuration, including bookmarks, IP address,
Please click Join to join the cluster Click Cancel to return to the previo		
Join Cancel		

Monitoring a Cluster

1. To display the status of the current cluster, choose Clustering > Status.

Clu	Clustering								
Sta	ati	us Properties		-	_				
Cluster Name: sa-dcb Type: SA-6500 Configuration: Active/Active Add Members Enable Disable Remove									
		Member Name	Internal	Address	External Addres	s Status	Notes	Sync Rank	Update
	*	<u>sa6500-c</u>	8.8.9.9/	25	172.16.8.61/23	٥	Leader	0	
		<u>sa6500-d</u>	8.8.9.8/	25	172.16.8.62/23	٥	Enabled	0	

2. To display a dashboard showing the system status for all cluster members, choose System > Status.

Critical Events	System Capacity Utilization	Graphs display last 1 ho
Page Settings	Concurrent Users (Edit 🗣 <u>Dovnload</u>)	sa6500-c
S ystem Version 5.0R3.1 (build 12507) <u>Sownload Package</u>		
a st Reboot 8 days, 19 hours, 84 minutes, 44 seconds	2 0 12:40 13:00 LUCAT USERS	13: 20 • LUCA1 NC USERS
i ystem Date & Time <u>Edit</u> 2008-03-10)1:36:07 PM	■ NC Users	sa6500-c
Logging Disk: 0% Full	Concurrent Meeting Graph (<u>Edit</u> \$ <u>Dovnload</u>)	sausou-c
fax Licensed Users: 5000		
Signed-In Users: 1	0.5	
iigned-In Mail Users: 0	0.0	13: 20
	Meetings	
fember Status		
0 🥪 <u>\$86500-c</u> *	Hits Per Second (<u>Edit</u> T <u>Download</u>)	sa6500-c
0 🥪 <u>sa6500-d</u>	0.3	
* Node currently used	0.2	11 _ 11
	0.1	
	0.0 12:40 13:00	13: 20

SA Series Configuration References

- SA Series system software downloads: http://www.juniper.net/techpubs/software/ive/
- Juniper Networks Knowledge Base: http://kb.juniper.net/
- SSL VPN (IVE) Version 6.0 technical documents: http://www.juniper.net/techpubs/software/ive/6.x/6.0/

Summary

The SSL VPN solution consisting of Juniper Networks SA Series SSL VPN Appliances and A10 Networks AX Series provides one of the most reliable and scalable secure access solutions. New and existing SSL VPN deployments alike can benefit from AX Series features including configurable health monitors, flexible load balancing, and persistence ("stickiness") options—and HA. hardware-based DDoS protection detects and drops unfriendly TCP traffic while allowing legitimate user traffic to the SA Series nodes. HA eliminates service interruption due to AX or link unavailability. GSLB provides additional flexibility and ease of use, enabling a single-user access experience across multiple sites—regardless of user location—while transparently directing the user to the best site based on site health, user location, and other configurable metrics.

AX Series server load balancers allow SA Series deployments to scale in support of today's mobile workforce. Tomorrow's ever-increasing numbers of users—running increasingly bandwidth-intensive applications—continue to enjoy fast, reliable secured access without the need to manage and utilize multiple URLs due to user location or network load. For additional AX Series information, please visit **www.a10networks.com**.

About A10 Networks

A10 Networks was founded in Q4 2004 with a mission to provide innovative networking and security solutions. A10 Networks makes high-performance products that help organizations accelerate, optimize and secure their applications. A10 Networks is headquartered in Silicon Valley with offices in the United States, EMEA, Japan, China, Korea and Taiwan. For more information, visit **www.a10networks.com.**

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at **www.juniper.net**.

Corporate and Sales Headquarters

Juniper Networks, Inc. 1194 North Mathilda Avenue Sunnyvale, CA 94089 USA Phone: 888.JUNIPER (888.586.4737) or 408.745.2000 Fax: 408.745.2100 www.juniper.net

APAC Headquarters

Juniper Networks (Hong Kong) 26/F, Cityplaza One 1111 King's Road Taikoo Shing, Hong Kong Phone: 852.2332.3636 Fax: 852.2574.7803

EMEA Headquarters

Juniper Networks Ireland Airside Business Park Swords, County Dublin, Ireland Phone: 35.31.8903.600 EMEA Sales: 00800.4586.4737 Fax: 35.31.8903.601 To purchase Juniper Networks solutions, please contact your Juniper Networks representative at 1-866-298-6428 or authorized reseller.

Copyright 2010 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Junos, NetScreen, and ScreenOS are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

8010041-002-EN Oct 2010

🖧 Printed on recycled paper