

GajShield – Module 4

Previous Modules

- By now, you have already learnt
 - To setup the firewall with basic policies
 - To setup URL filtering policies
 - To create network objects
 - To add a static route
 - To add a source route
 - To add auto-failover and load-balancing policies

GajShield – Module 4

- In this modules, we will learn
 - How to restrict bandwidth on a traffic
 - Create a service object
 - Create a bandwidth queue
 - Create a bandwidth policy
 - How to provide incoming services
 - Add an alias
 - Add a service object
 - Add a destination nat policy
 - Add a source nat policy

GajShield: Bandwidth policy

- A new GM joined our company. My boss asked me to route his browsing traffic through ISP2 and cap his bandwidth to 128Kbps.
- Tasks to perform
 - Create host object for my COO. His IP address is 192.168.2.117
 - Create a bandwidth queue of 128Kbps
 - Create a policy with the bandwidth limitation

GajShield: Bandwidth Management

The screenshot shows the GajShield SecureGate v5 web-based administration interface. The browser window title is "Gajshield: Web based Administration and Management Tool - Mozilla Firefox". The address bar shows the URL "https://192.168.2.176/cgi-bin/mainmenus.cgi". The page title is "GajShield SecureGate v5" and the main heading is "Firewall Management". The navigation tabs include "Quick Setup", "Rules", "Bandwidth", "Install Policies", "Backup Rules", and "Admin Ips". The left sidebar contains a menu with categories: NETWORK, FIREWALL, USERS, VPN, SYSTEM, ADMIN, REPORT, BROWSING, TRAFFIC CHART, IPS, and LOGOUT. The "Bandwidth" tab is active, displaying a "Configure Bandwidth" form. The form fields are as follows:

Configure Bandwidth	
Queue Name	newGM
Direction	secure to ISP2
Bandwidth (kbps)	128
Scheduler	CBQ
Scheduler Options	BOUNDED
Priority	1
Parent	None

An "Add" button is located below the form fields. The footer of the page contains the text "Copyright © GajShield Infotech (I) Pvt. Ltd. All rights reserved" and the IP address "192.168.2.176".

GajShield: Bandwidth Management

The screenshot shows the GajShield SecureGate v5 web-based administration interface. The browser window title is "Gajshield: Web based Administration and Management Tool - Mozilla Firefox". The address bar shows the URL "https://192.168.2.176/cgi-bin/mainmenus.cgi". The page title is "GajShield SecureGate v5". The main navigation menu includes "Quick Setup", "Rules", "Bandwidth", "Install Policies", "Backup Rules", and "Admin Ips". The left sidebar contains various system management options: NETWORK, FIREWALL, Networks, Services, Policies, USERS, VPN, SYSTEM, ADMIN, REPORT, BROWSING, TRAFFIC CHART, IPS, and LOGOUT. The main content area is titled "Firewall Management" and is currently displaying the "Bandwidth" configuration page. The configuration form includes several sections: "Dir." (secure to ISP2), "Src." (newGM, Ignore), "Serv." (http, No NAT), "Dest." (any, No NAT), "Action" (accept), "Status" (active), "Log" (yes), and "Queue" (newGM). A "Schedule" section allows for time-based filtering. The "Route - Failover" section shows two links: Link 1 (int3-219.65.11.21) and Link 2 (None). A "Comment" field contains the text "policy for newGM with b/w capl". An "Add" button is located at the bottom of the form. The footer of the page contains the copyright notice "Copyright © GajShield Infotech (I) Pvt. Ltd. All rights reserved" and the IP address "192.168.2.176".

Dir.	Src.	Serv.	Dest.
secure to ISP2	newGM ↓ Ignore	http ↓ No NAT	any ↓ No NAT

Action	Status	Log	Queue
accept	active	yes	newGM

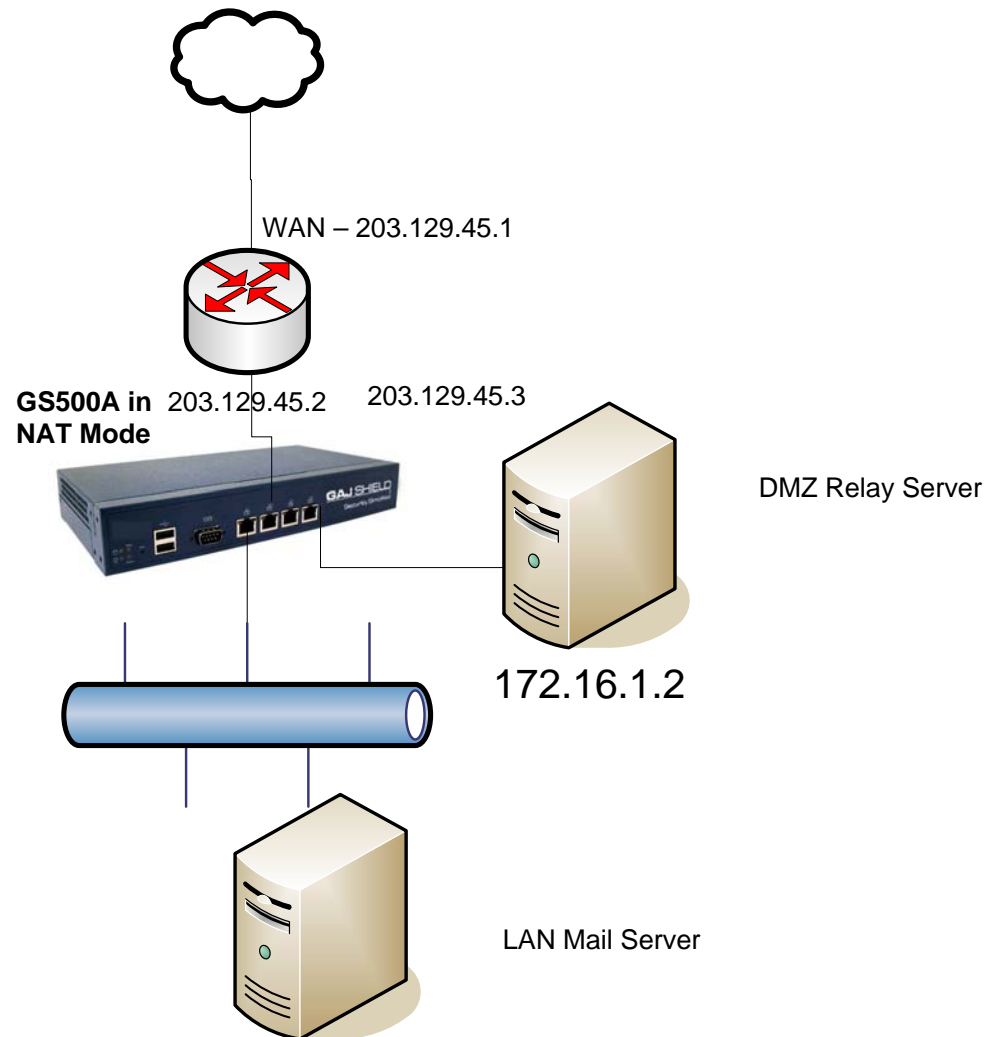
Schedule										
Day	Date	Month	Year	Time	-	Day	Date	Month	Year	Time

Ld. Bal.	Route - Failover		Comment
<input type="checkbox"/> ISP1	Link 1	int3-219.65.11.21	policy for newGM with b/w capl
<input type="checkbox"/> ISP2	Link 2	None	

GajShield: Hosting a server

- Our ISP provided mail services to us. We have constantly getting breakdowns in our service. We decided to host our own Linux based mail server.
- I was told to install a Linux server in the DMZ which would receive mails from the Internet and send mails too. This server would then route mails to our internal server

GajShield: Hosting a server



GajShield: Hosting a server

- Tasks to be performed
 - Create an Alias IP i.e. give an additional IP to our WAN interface connected to ISP1. Give the IP as 203.129.45.3
 - Configure the DMZ interface with network address as 172.16.1.0/255.255.255.0
 - Create a host object for 203.129.45.3 as 'MailServerExternalIP'
 - Create a host object for 172.16.1.2 as 'MailServerInternalIP'
 - Finally create a policy to allow smtp traffic from the Internet to the ip 203.129.45.3 routed to the DMZ mail server

GajShield: Alias IP

The screenshot displays the GajShield SecureGate v5 Firewall Management web interface. The browser window title is "Gajshield: Web based Administration and Management Tool - Mozilla Firefox". The address bar shows the URL "https://192.168.2.176/cgi-bin/mainmenus.cgi". The interface features a navigation menu on the left with categories like NETWORK, FIREWALL, USERS, VPN, SYSTEM, ADMIN, REPORT, BROWSING, TRAFFIC CHART, IPS, and LOGOUT. The main content area is titled "Firewall Management" and includes tabs for "Interfaces", "Aliases", "Routes", "Nameservers", and "Restart Nw". The "Aliases" tab is active, showing a "Configure Aliases" form with the following fields:

Configure Aliases	
Interface	ISP1
IP Address	203.129.45.3
Netmask	255.255.255.0

An "Add" button is located below the form fields. The footer of the interface contains the text "Copyright © GajShield Infotech (I) Pvt. Ltd. All rights reserved" and the IP address "192.168.2.176".

GajShield: Network Objects

The screenshot displays the GajShield SecureGate v5 Firewall Management interface within a Mozilla Firefox browser window. The browser's address bar shows the URL `https://192.168.2.176/cgi-bin/mainmenus.cgi`. The interface features a navigation menu on the left with categories like NETWORK, FIREWALL, USERS, and VPN. The main content area is titled "Hosts" and contains a table of network objects.

Host ID	Host IP	Tasks
ExternalMailServerIP	203.129.45.3	<input type="checkbox"/> <input type="checkbox"/>
fwip-DMZ	172.16.1.0	<input type="checkbox"/> <input type="checkbox"/>
fwip-ISP1	203.129.45.2	<input type="checkbox"/> <input type="checkbox"/>
fwip-secure	192.168.2.176	<input type="checkbox"/> <input type="checkbox"/>
InternalMailServerIP	172.16.1.2	<input type="checkbox"/> <input type="checkbox"/>
localhost	127.0.0.1	<input type="checkbox"/> <input type="checkbox"/>
mandar	192.168.2.67	<input type="checkbox"/> <input type="checkbox"/>
myboss	192.168.2.116	<input type="checkbox"/> <input type="checkbox"/>
mywanrouter	192.168.2.221	<input type="checkbox"/> <input type="checkbox"/>
newGM	192.168.2.117	<input type="checkbox"/> <input type="checkbox"/>

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Done 192.168.2.176

GajShield: Policy creation

The screenshot displays the GajShield SecureGate v5 web-based administration tool in a Mozilla Firefox browser. The browser's address bar shows the URL `https://192.168.2.176/cgi-bin/mainmenus.ggi`. The application's title bar reads "GajShield SecureGate v5 Firewall Management".

The interface features a left-hand navigation menu with the following items: NETWORK, FIREWALL, Networks, Services, Policies, USERS, VPN, SYSTEM, ADMIN, REPORT, BROWSING, TRAFFIC CHART, IPS, and LOGOUT. The "Policies" item is currently selected.

The main content area is titled "Rules" and contains a configuration form for creating a policy. The form is organized into several sections:

- Dir.:** A dropdown menu set to "ISP1 to DMZ".
- Src.:** A dropdown menu set to "any". Below it, a "Ignore" checkbox is checked.
- Serv.:** A dropdown menu set to "smtp". Below it, a "No NAT" checkbox is checked.
- Dest.:** A dropdown menu set to "ExternalMailServerIP". Below it, a "InternalMailServerIP" checkbox is checked.
- Action:** A dropdown menu set to "accept".
- Status:** A dropdown menu set to "active".
- Log:** A dropdown menu set to "yes".
- Queue:** A dropdown menu set to "default".
- Schedule:** A section with dropdown menus for Day, Date, Month, Year, and Time, separated by a minus sign.
- Ld. Bal.:** A checkbox labeled "ISP1" which is unchecked.
- Route - Failover:** A dropdown menu set to "Link 1" and another set to "None".
- Comment:** An empty text input field.

An "Add" button is located at the bottom of the configuration form. At the bottom of the page, a copyright notice reads "Copyright © GajShield Infotech (I) Pvt. Ltd. All rights reserved". The browser's status bar at the very bottom shows "Done" and the IP address "192.168.2.176".