

Powering communications
with Security

BILLION™

Keeping You Business 'On'
- iBusiness Security Appliance series

Jun 2005 updated

Usage Suggestion

This presentation document containing competition information is ideally created for the purpose of pre-sell training to the audience of Billion's sales representatives, authorized sales agents, authorized distributors, or multiple tiered re-sellers when pre-selling education is needed. The disclosure of this entire documentation to end-users may not be encouraged.

Today's Business Issues

- Internet as imperative tool to business productivity
- Convergence of varying business applications
- Growing dispersing workforce, suppliers, business partners
- Total Cost of Ownership
- Secure Corporate Network Access
- Protection against potential threats and attacks

What to do with Communications



High Internet Availability



Innovative Access Methods



Collaboration & Management



Cost-Effective Solution









VPN & Remote



Advanced Security

Billion's BiGuard Series

BiGuard series - iBusiness Security Appliance - addresses SMB's issues in today's business environments:

High Internet Availability		✓ Efficient router-based Internet security appliances for SME
Innovative Access Methods		✓ Industry competitive methodologies of distributing data traffic and management
Collaboration & Management		✓ Solutions for head offices, branch offices, and remote users (mobile workers, external partners, suppliers...etc.)
Cost-Effective Solution		✓ Low-cost unit, all-in-one, compact gateways
VPN & Remote		✓ VPN solutions of head-office gateway, branch office gateway, remote client
Advanced Security		✓ Rich Firewall features

BiGuard series keep your business always 'online'

BiGuard Solutions

Bandwidth Management – Quality of Service

The state-of-the-art bandwidth management mechanism enables network administrator to set up bandwidth policy based on IP, services, and Mac addresses. The flexible design allows the user to set up guaranteed bandwidth, max bandwidth, and bandwidth priority.

Load Balancing

BiGuard 30's Dual WAN ports enable Outbound and Inbound Load Balancing designed for cost-effective management of two ISP connections.

Fail Over backup

BiGuard30's Dual WAN ports is designed to assure the availability of Internet access. In case the 1st ISP connection fails, the backup ISP connection will be automatically established.

Firewall

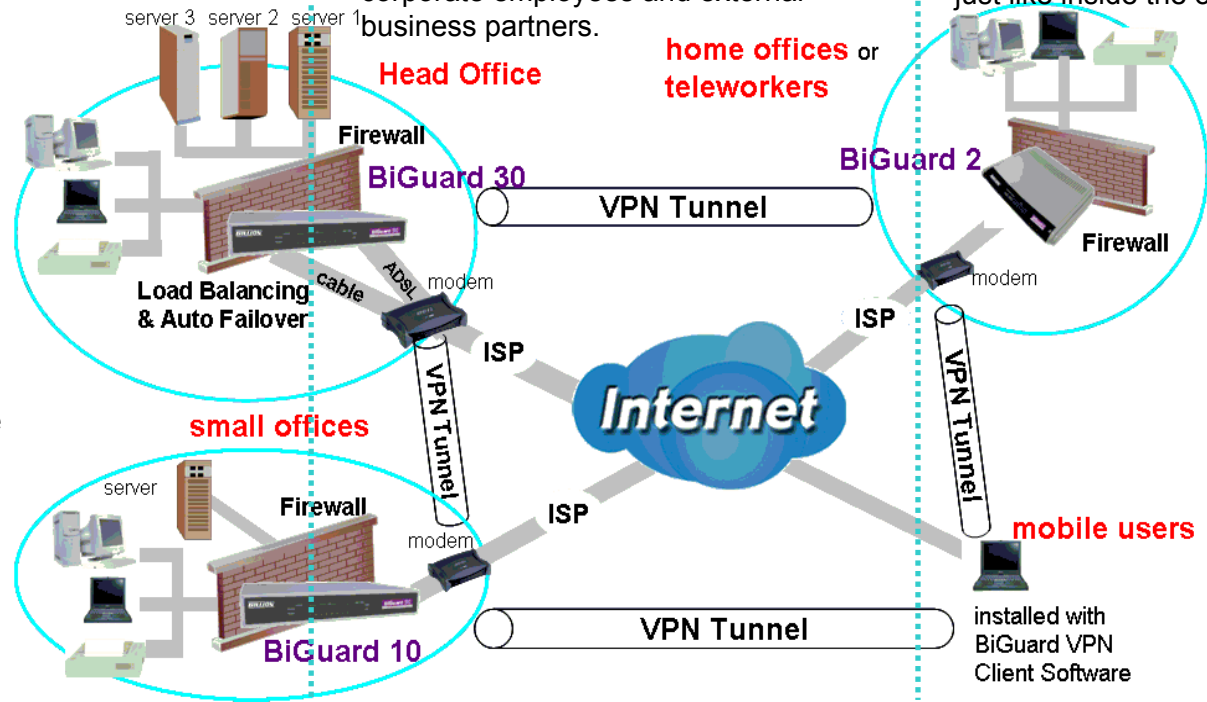
Integrated with most advanced firewall features, such as Stateful Packet Inspection, Denial of Service prevention, and firewall access policy

VPN

Solutions include office-to-office VPN connection and remote access VPN connection. The high throughput is designed with the capability of newest encryption decryption technology which enables secure communications with corporate employees and external business partners.

Remote Client Access

The BiGuard VPN client software enables the mobile users to easily and safely connect to corporate network and access corporate resource just like inside the office.



BiGuard 30

Key Features

iBusiness Security Gateway SMB

- For central sites to establish office network and connect with branch offices, remote dial up and tele-workers
- For small and medium sized business demanding for application-based network solutions at low-capital investment
- Load Balancing for bandwidth optimization and network resilience
 - ✓ DNS Inbound and outbound load balancing
 - ✓ Protocol binding
 - ✓ VPN load balance (*)
- Automatic Fail Over for network redundancy
 - ✓ auto fail over
 - ✓ VPN fail over(*)
- Policy-based traffic management
- Quality of Service control for bandwidth management and traffic prioritization
- Support up to 30 IPSec VPN connections
- VPN throughput is up to 30 Mbps+
- Rich Firewall security
- E-mail alert and logs of attack
- Rack-mounted support
- 30-day FREE trial of BiGuard IPSec VPN Client (1-user) included



(*) For future release

BiGuard 30

Hardware Specification

Physical Interface

- ✓ WAN: 2-port 10/100M auto-sensing & auto-crossover switch
- ✓ LAN: 8-port 10/100M auto-sensing & auto-crossover switch
- ✓ Factory default reset button
- ✓ Power Jack

Physical Specification

- ✓ Housing : Metal and Rack-mounted
- ✓ Dimensions: 250mm x 166mm x 35mm (9.84" x 6.54" x 1.38")

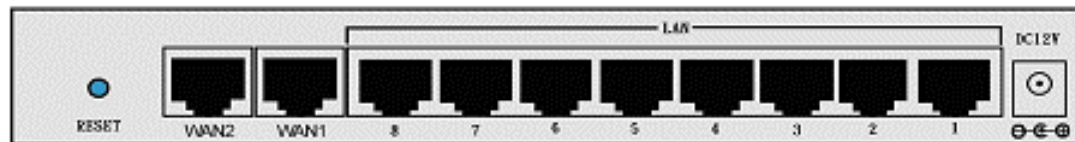
Power Requirement

- ✓ Input: 12V DC, 1A

Front Panel



Back Panel



BiGuard 10

Key Features

iBusiness Security Gateway Small Office

- For small office network to connect with headquarter and tele-workers
- For small and medium sized business demanding for application-based network solutions at low-capital investment
- 10 simultaneous IPSec VPN connections
- VPN throughput is up to 20 Mbps+
- **Quality of Service control for bandwidth management and traffic prioritization**
- Robust Firewall security
- E-mail alert and logs of attack
- Rack-mounted support
- 30-day FREE trial of BiGuard IPSec VPN Client (1-user) included



BiGuard 10

Hardware Specification

Physical Interface

- ✓ WAN: 1-port 10/100M auto-sensing & auto-crossover switch
- ✓ LAN: 8-port 10/100M auto-sensing & auto-crossover switch
- ✓ Factory default reset button
- ✓ Power Jack

Physical Specification

- ✓ Housing : Metal and Rack-mounted
- ✓ Dimensions: 250mm x 166mm x 35mm (9.84" x 6.54" x 1.38")

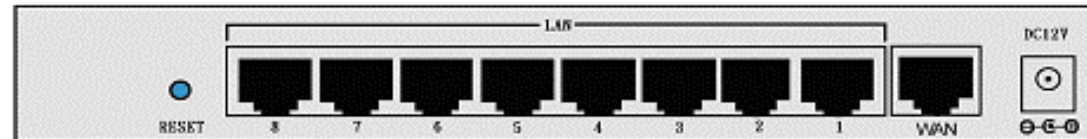
Power Requirement

- ✓ Input: 12V DC, 1A

Front Panel



Back Panel



BiGuard 2

Key Features

iBusiness Security Gateway Home Office

- For home offices or mobile users to dial up and connect with corporate network, or for very small offices to be connected with head offices.
- For business requiring application-based network solutions at low-capital investment
- Support up to 2 IPSec VPN connections
- VPN throughput is up to 4 Mbps+
- 8-port Switch makes no need of buying extra device when expanding extra server/client
- Quality of Service control for bandwidth management and traffic prioritization
- Robust Firewall security to protect against hackers' attack
- E-mail alert and logs of attack
- 30-day FREE trial of BiGuard IPSec VPN Client (1-user) included



BiGuard 2

Hardware Specification

Physical Interface

- ✓ WAN: 1-port 10/100M auto-sensing & auto-crossover switch
- ✓ LAN: 8-port 10/100M auto-sensing & auto-crossover switch
- ✓ Factory default reset button
- ✓ Power Jack

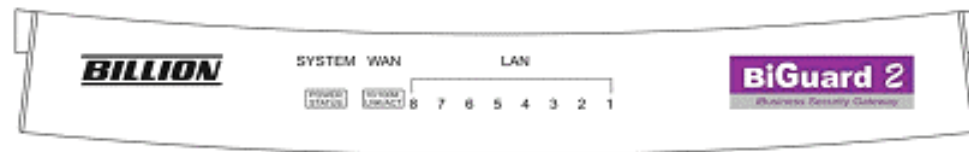
Physical Specification

- ✓ Housing : Plastic and stand able (Default is lie)
- ✓ Dimensions: 265mm x 176mm x 44mm (10.43" x 6.93" x 1.73")

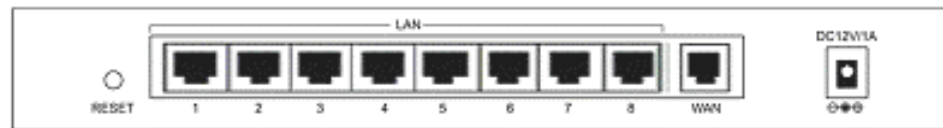
Power Requirement

- ✓ Input: 12V DC, 1A

Front Panel



Back Panel



BiGuard Gateway Feature Overlook

iBusiness Security Appliance

Product & Features	BiGuard 30	BiGuard 10	BiGuard 2
Market Segment	SMB	Small Office	Home Office
CPU	Intel Xscale IXP422	Intel Xscale IXP422	Intel Xscale IXP420
LAN	8	8	8
WAN	2	1	1
Flash	8M	8M	8M
Memory (SDRAM)	32M	32M	32M
Firewall	V	V	V
Content Filtering	V	V	V
VPN Accelerator	Hardware	Hardware	Software
VPN throughput	30Mbps	20Mbps	4Mbps
IP Sec VPN Tunnels	30	10	2
Quality of Service	V	V	V
Hardware Accelerator	V	V	-
Auto Fail-over	V	-	-
Load Balance	V	-	-
Protocol Binding	V	-	-
Rack-mounted	V	V	-

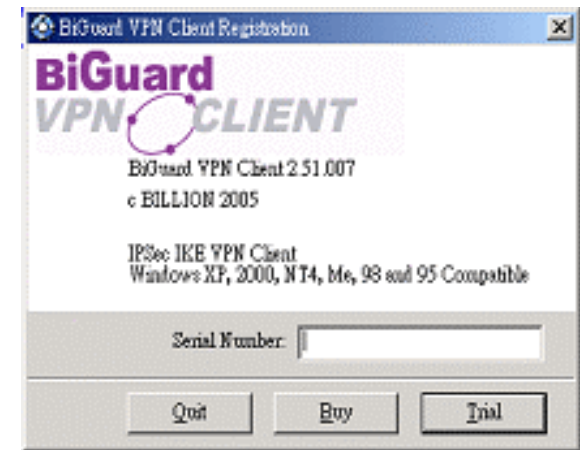
BiGuard IPsec VPN Client Software

What is BiGuard VPN Client

Window-based software that is implemented with IPsec VPN solution to allow a remote site to establish a secure connection over the Internet to corporate network

Who needs Billion VPN Client Software

- ✓ For remote users, mobile workers, branch offices to build up VPN connections to corporate networks
- ✓ For end-users using Billion VPN-enabled devices to expand remote VPN access for point-to-point connections

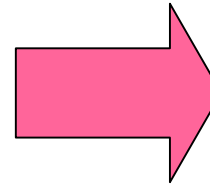


Optimize collaboration with business partners and officemates

BiGuard IPsec VPN Client Software

Key Features

- Use USB Stick to store VPN Security elements
- IPsec VPN tunneling with DES/3DES/AES encryption
- IKE Key management
- Point-to-Point Tunnel
- VPN Configuration Wizard
- Multiple Profiles
- Supports all Microsoft OS
- Support all Billion VPN-enabled devices, such as BiGuard, BiPAC 85xx, BiPAC 75xx series, BiPAC 7402, and BiPAC 7402G



BENEFITS

**Portability
Scalability**

Strong Encryption

**Easy to use
Flexible Configuration
Management
Compatibility**

- ✓ *30-day FREE trial available inside BiGuard series of packages*
- ✓ *Free trial download available to distributors for pre-selling*



BiGuard IPsec VPN Client Software

USB Stick Feature

How to store Security elements into an USB Stick?

Once you plug in an USB Stick for the first time, the "AutoDetect" feature will prompt for copy or full removal of security elements from computer onto the stick.



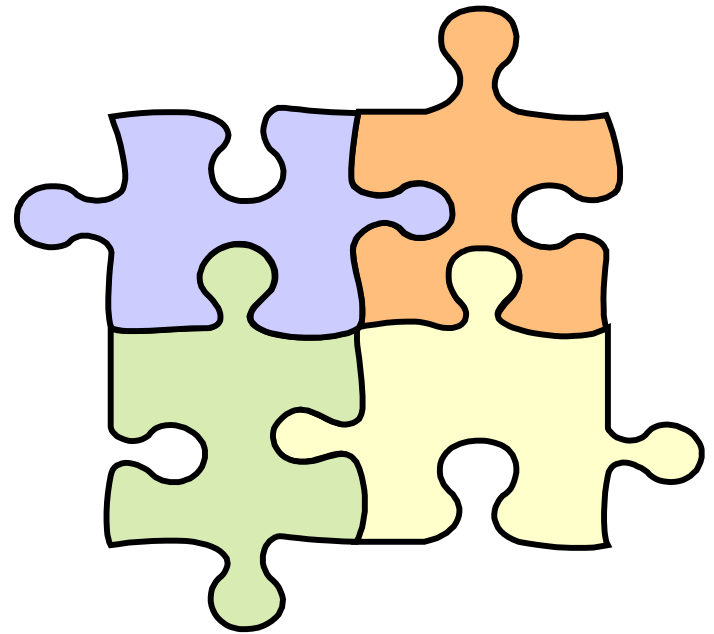
How the "Auto-open VPN tunnel" feature works from an USB Stick?

- ✓ Plug in your USB Stick
- ✓ The "Auto-open VPN Tunnels when plug in" feature of the VPN Client will decrypt security elements from the USB Stick and open configured tunnels.



No tunnel can be opened without an USB stick!

Competition Landscape



Feature & Price Comparison

BiGuard 30

Product & Features	Billion BiGuard 30	Netgear FVS124G	Linksys RV082	ZyXEL ZyWALL 35	Draytek Vigor 3300 series	QNO FVR9208
Rack-mounted	V	-	V	V	V	V
CPU	Intel Xscale IXP422	200MHz 32-bit RISC	tba	tba	tba	Intel IXP425 (533M)
LAN	8	4	8	4	4	8
WAN	2	2	2	2	1 (V3300B) 3 (V3300B+)	2
Flash	8M	4M	tba	tba	8M	16M
Memory (SDRAM)	32M	16M	tba	tba	32M	32M
Firewall throughput	90Mbps	tba	tba	90Mbps	tba	100Mbps
Firewall & Content Filtering	V	V	V	V	V	V
VPN throughput	30 Mbps+	10 Mbps	30 Mbps	40 Mbps	30 Mbps	70 Mbps
IP Sec VPN Tunnels	30	25	50	35	128	100
Quality of Service	V	-	-	-	V	V
Hardware Accelerator	V	V	-	-	V	V
Auto Fail-over	V	V	V	V	V	V
Load Balance	V	V	V	V	V	V
Certified & others	30-day VPN Client trial incl.	VPNC 1-user client S/W included	-	ICSA Dial-up backup	ICSA	VPNC
Street Price (US\$) VAT excl.	\$ 330 (suggested retail price)	\$ 170	\$ 300	\$ 600 - 800	Coming soon	\$ 920



Feature & Price Comparison

BiGuard 10

Brand	Billion	Netgear	DrayTek	ZyXEL
Model	BiGuard 10	FVS318	Vigor 2900	ZyWALL 10 / ZyWALL 10W
Flash	8M	2M	tba	tba
Memory (SDRAM)	32M	16M	tba	tba
LAN / WAN	8 / 1	8 / 1	4 / 1	1 / 1
VPN tunnels	10	8	32	10
VPN throughput	20 Mbps+	1.2Mbps	tba	16Mbps
Firewall & Content Filtering	V	V	V	V
Quality of Service	V	-	V	V (ZyWALL 10W only)
Rack-mounted	V	-	-	-
Certified & others	30-day VPN Client trial incl.	VPNC certified, Kensington Lock slot for theft protection	1 USB port, print server included	ICSA certified 802.11g compliant dial-up backup (all ZyWALL 10W only)
Street Price (US\$) VAT excl.	\$ 240 (suggested retail price)	\$ 190	\$ 180	\$ 220 (Z10) \$ 340 (Z10W)





Feature & Price Comparison

BiGuard 2

Brand	Billion	ZyXEL
Model Name	BiGuard 2	ZyWall 2
LAN / WAN port	8 / 1	4 / 1
VPN tunnels	2	2
VPN throughput	4 Mbps+	2.2Mbps
Firewall throughput	90Mbps	12Mbps
Quality of Service	V	-
Dial-up backup	-	V
Others	30-day VPN Client trial incl.	ICSA
Street Price (US\$) VAT excl.	\$186 (suggested retail price)	\$190

Feature & Price Comparison

BiGuard IPSec VPN Client

competitor	Product Description & Package Content	Street Price (US\$), tax excl.	
Billion	BiGuard IPSec VPN Client (30-day free trial included inside BiGuard series of packages)	1. 1-user Serial number selling - \$48 (SRP) 2. Retail package - tba	
ZyXEL	VPN client Software Safenet SoftRemote	1-user pack - \$ 35 -70+ 5-user pack - \$ 134 - 220 10-user pack - \$ 266 - 270+	
D-Link	NETDEFEND VPN Remote Access Software	DS-601 (1-user) - \$41 DS-605 (5-user) - \$ 150+ • Get 1 DS-605 FREE with buying a DFL-700, 2 DS-605 FREE for buying a DFL-1100 (<i>UK promo</i>) • DFL-700 / DFL-1100 : SMB / large enterprise VPN Firewall gateways	
Netgear	ProSafe VPN Client Software (1-user lic incl. inside FVS124G : SMB 2-WAN load balance gateway)	VPN01L - \$ 45 - 50+ VPN 05L - \$ 150 - 160+	

Features Highlight



Quality of Service

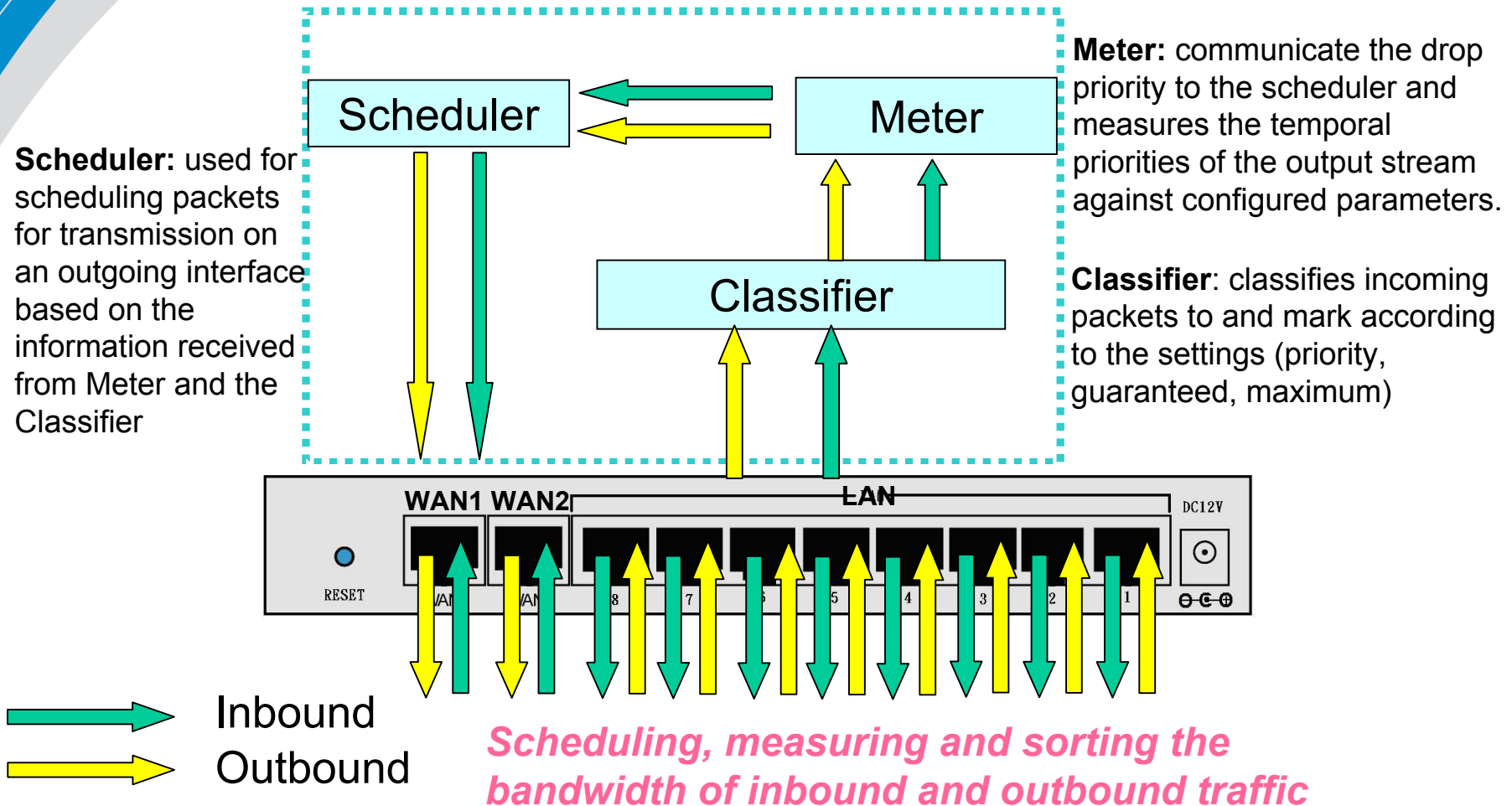
Smooth and Responsive
Net Connection

gives you full control over traffic
priority and bandwidth management



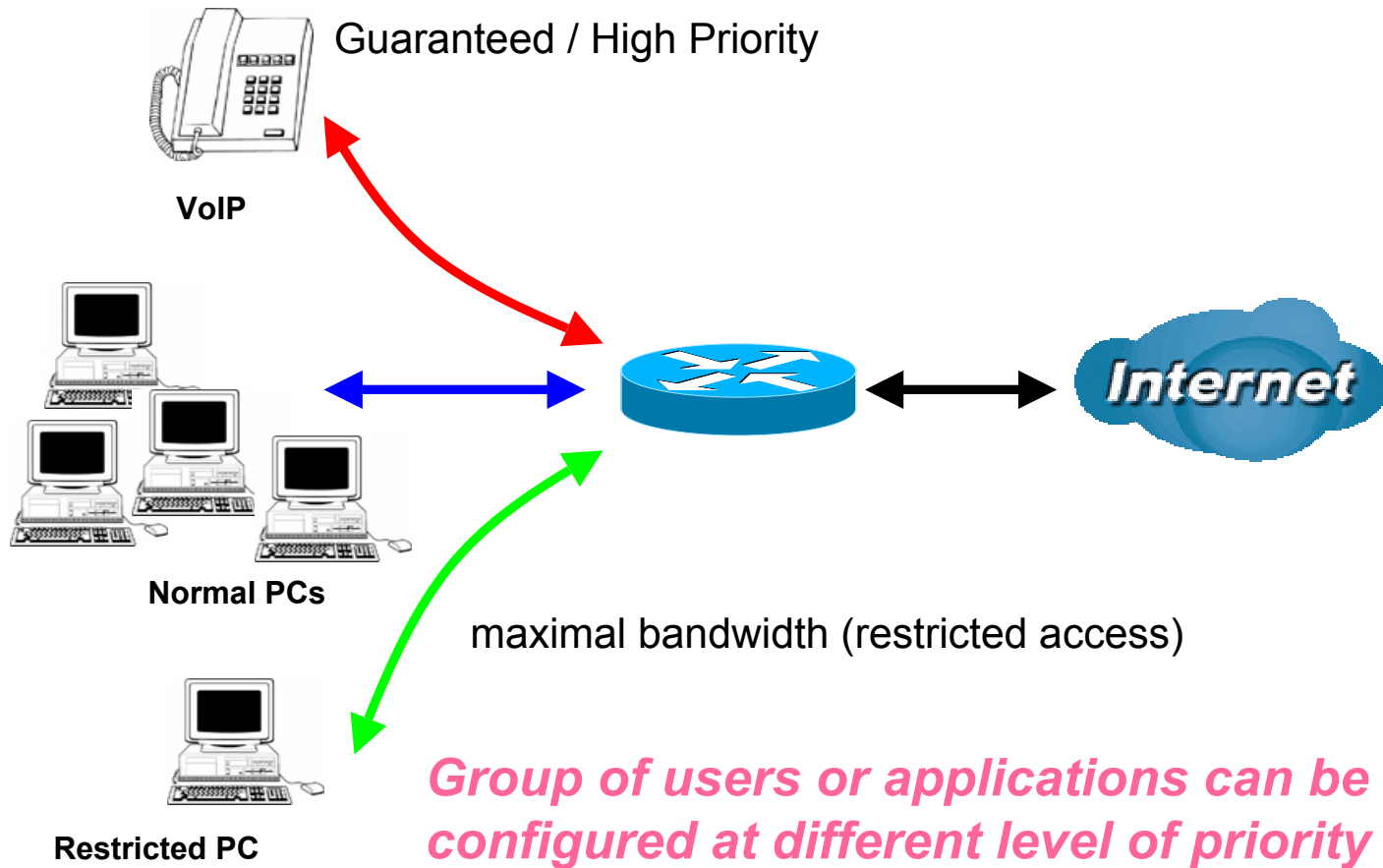
Quality of Service

Inbound/Outbound Bandwidth Management



Quality of Service

Policy Based Traffic Prioritization



Auto Fail Over

Keep your Net
Connection always ON

When the 1st Internet access fails, the
2nd connection will be auto established



Auto Fail Over

What is Auto Fail Over

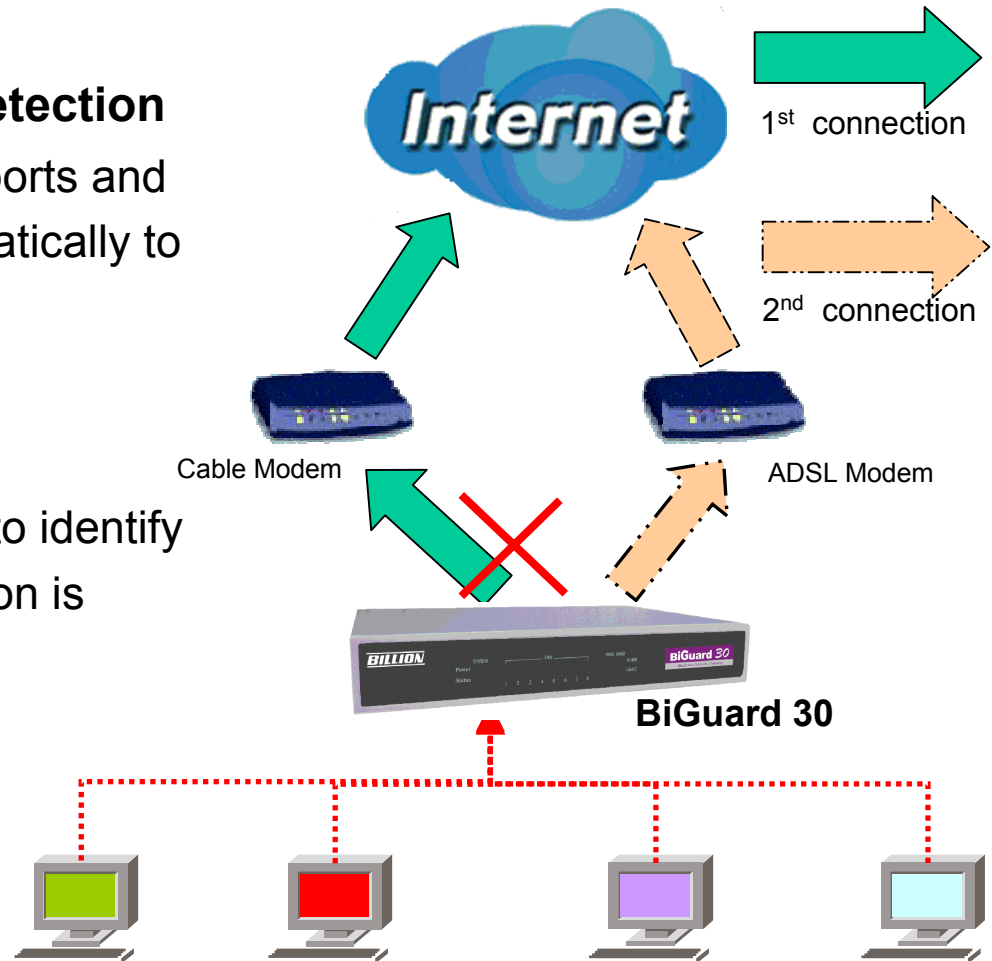
- ✓ Automatically detects the failure of the port and redirects traffic through the other activated port
- ✓ Assures the availability of Internet access - the backup ISP connection will be automatically established when the 1st ISP connection fails

Why needs Auto Fail Over

- ✓ To be 'always online' for Business Continuance
- ✓ To have back-up in case of connection disruption or breakdown
- ✓ To assure network redundancy, zero downtime, for improvement of Business Productivity and Customer Satisfaction

How Auto Fail Over Works

- **Hardware connection detection**
Auto detects the Ethernet ports and select the other port automatically to redirect the data traffic
- **Software detection**
Inspect the specific server to identify whether the WAN connection is active or not



Load Balancing

Optimize the bandwidth
and network availability

Intelligently distribute the packets
through the least-loaded connection



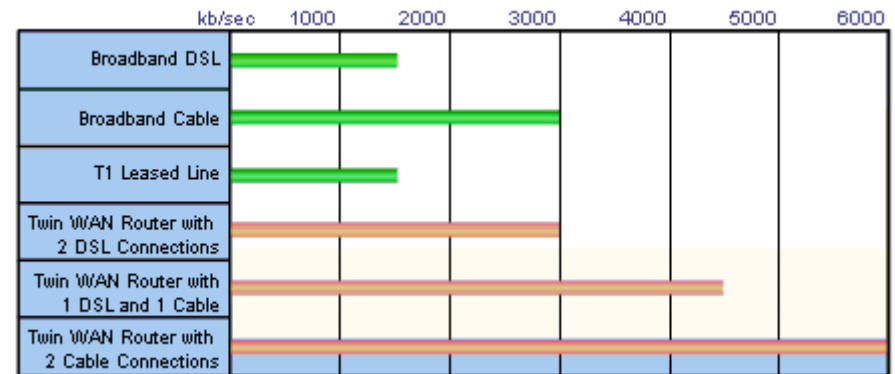
Load Balancing

What is Load Balancing


- ✓ Technologies of layer-3,4 protocols with advanced algorithms which intelligently inspect several variables about the content of TCP/IP packet and current traffic load of each WAN port, then directs traffic to the best available, least-loaded connection
- ✓ Leveraging 2 broadband connections, especially for applications of PPPoE, PPTP and cable lines


Why needs Load Balance

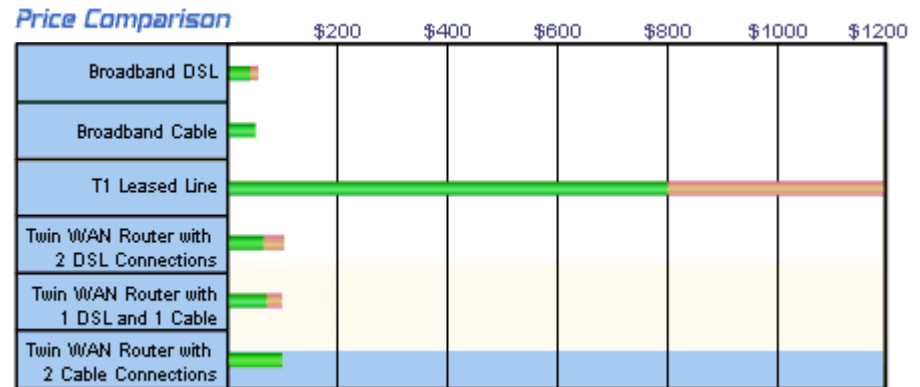
- ✓ Bandwidth and performance optimization
- ✓ For the best responsive servers
- ✓ Cost Effectiveness
- ✓ No single point of failure



Bandwidth Comparison

 Minimal/Default cost of broadband type

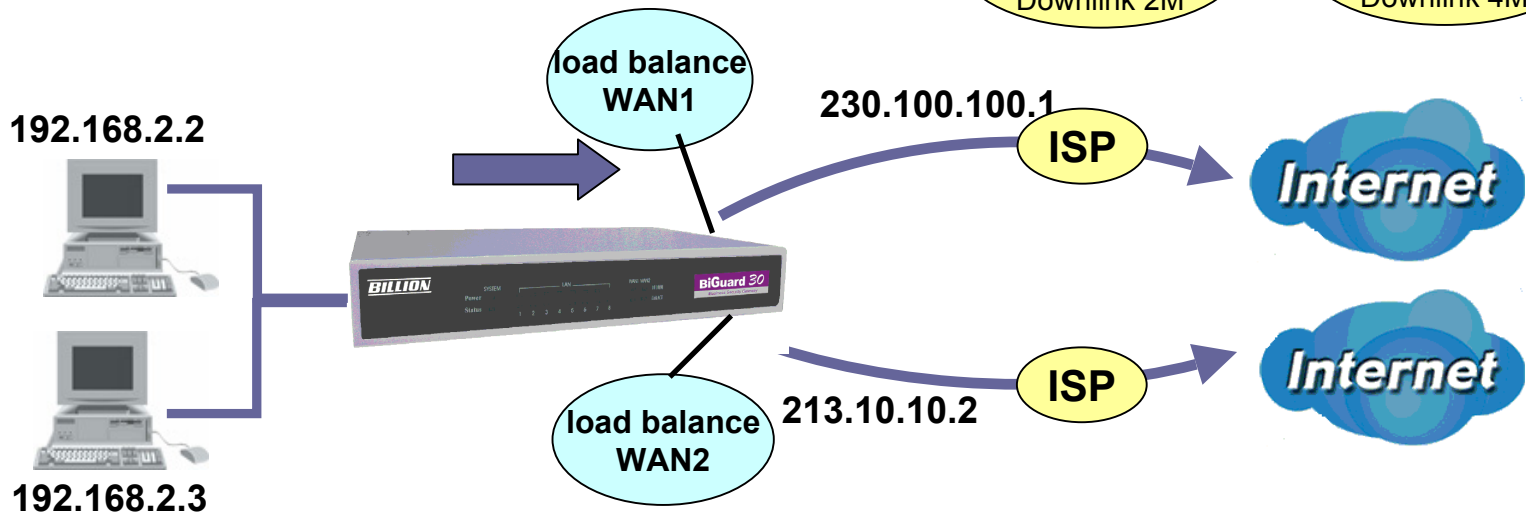
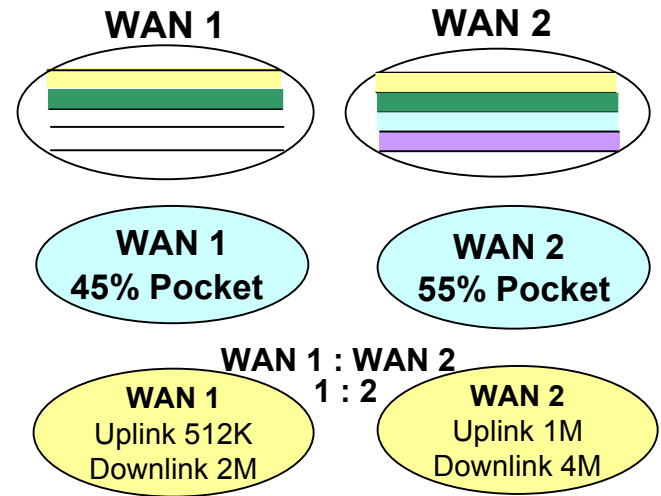
 Variable cost of broadband type based upon different service provider, service package, and scenario.



Price Comparison

How Load Balancing Works

- Balance traffic loading :
 - ✓ By session (# of connections)
 - ✓ By traffic (# of packets)
 - ✓ By traffic weight of link capability



Load Balancing - Protocol Binding

Protocol Binding

- ✓ For certain users or applications, the data traffic is configured to go through specific WAN port

Why Protocol Binding

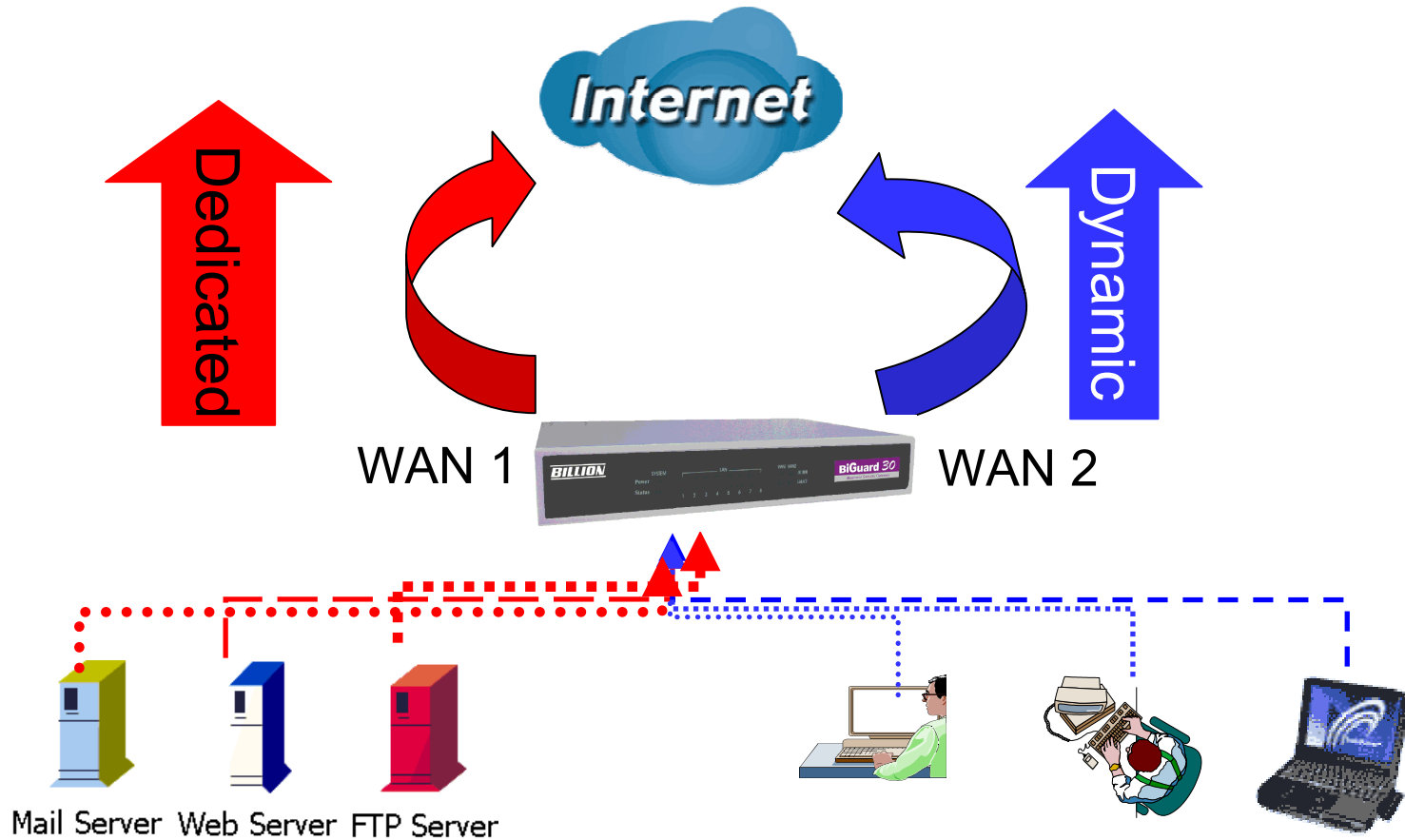
- ✓ Office productivity
- ✓ Traffic management policy

Set up Policy

- ✓ Packet Type : TCP, UDP
- ✓ Source IP : from IP address range
- ✓ Destination IP : to IP address range
- ✓ Port Range : service port range

Policy Set-up	Application	Port Assignment
Policy 1 : Sales	email, http, video	WAN Port 1
Policy 2 : R&D	ftp, email, ICQ, MSN	WAN Port 2

How Protocol Binding Works



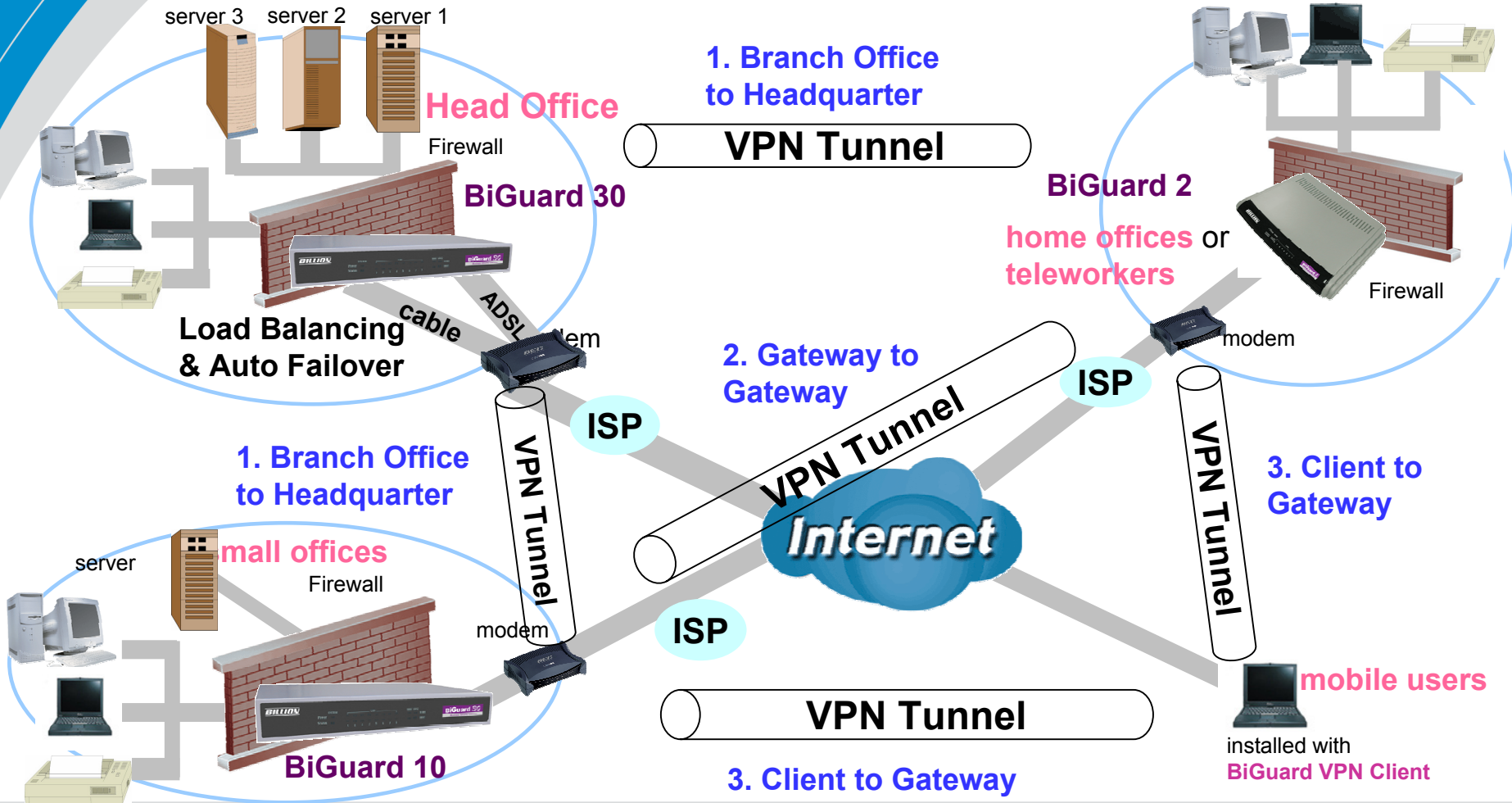
Virtual Private Network

Secure and Safe

Enable end-to-end secure tunnel
over the Internet

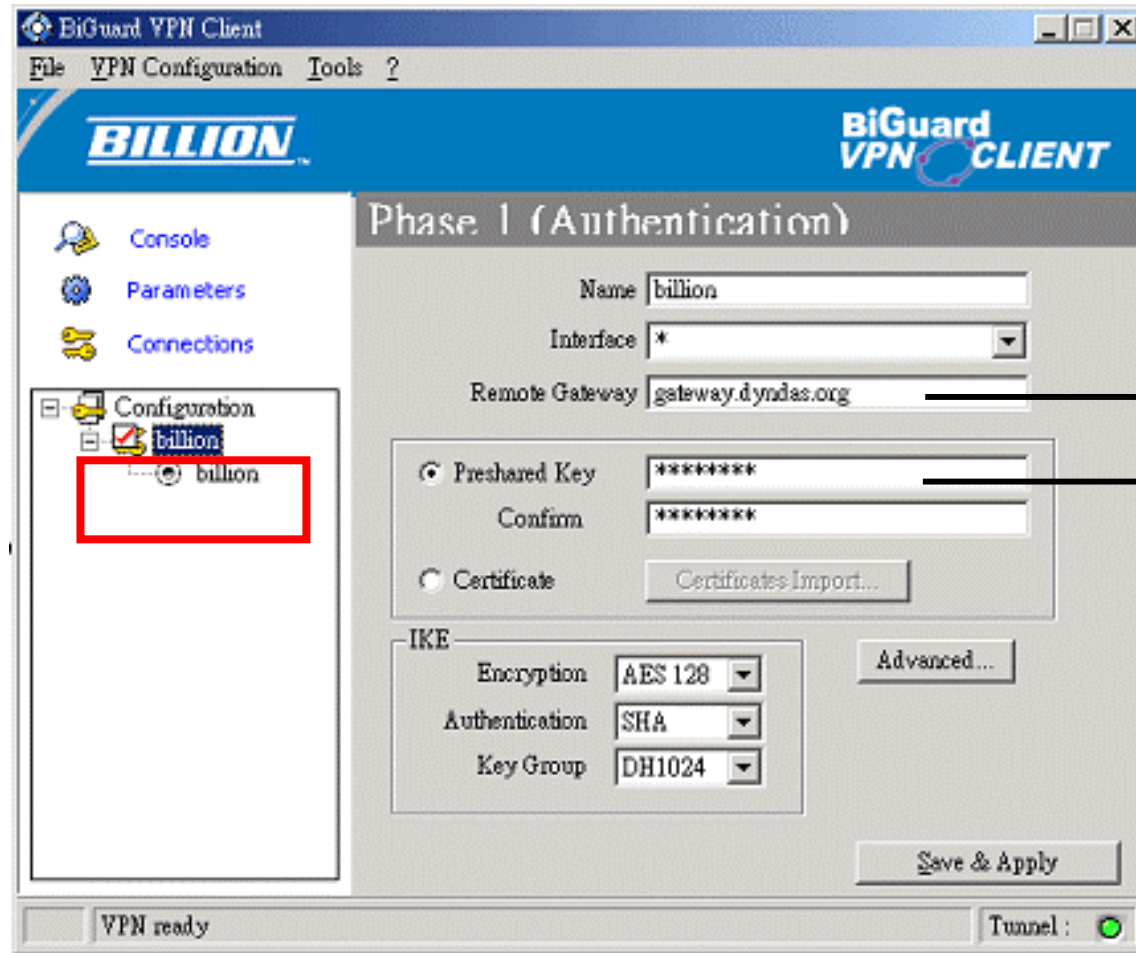


General VPN Setup



BiGuard IPSec VPN Client

Phase 1 Authentication



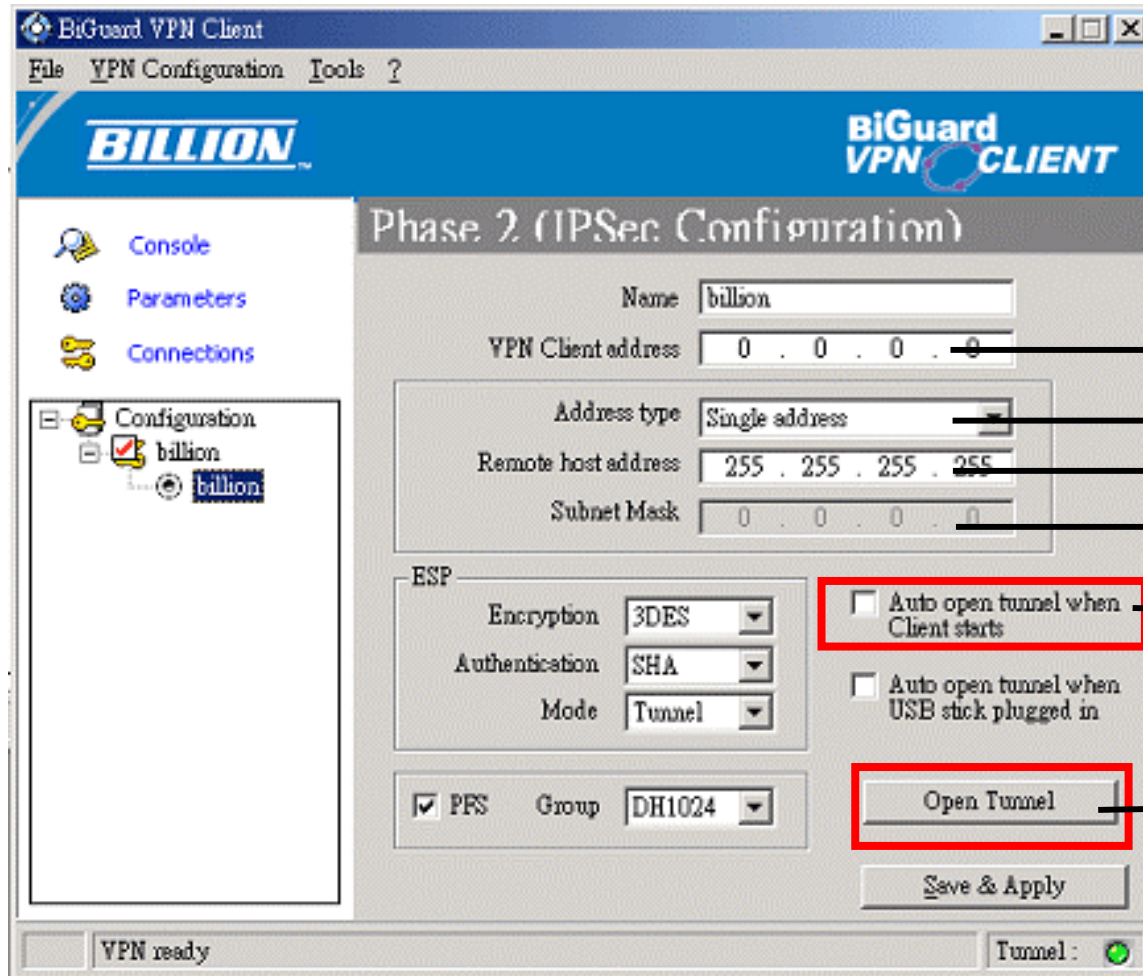
Remote Gateway

Pre-shared Key

(the same as remote gateway's Pre-shared key)

BiGuard IPsec VPN Client

Phase 2 IPsec Configuration



VPN Client Address

Address type

Remote LAN address

Subnet mask

Auto open tunnel when USB stick plugged in

Open tunnel

Sales Support

- For product sample, BiGuard product prices, pre-sell technical training, contact your Billion sales manager, or email to request at sales@billion.com
- For marketing materials or support, email us at marketing@billion.com
- For more details about BiGuard product info, visit www.billion.com/product/biguard.htm
- For VPN Client trial download, visit www.billion.com/partner/partner.php
(ID/password required, open to Billion's authorized distributors for pre-sell evaluation only)



Question & Answer



Thank You !

