

Bluecoat IPv6 test Results with CITC lab



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Blue Coat

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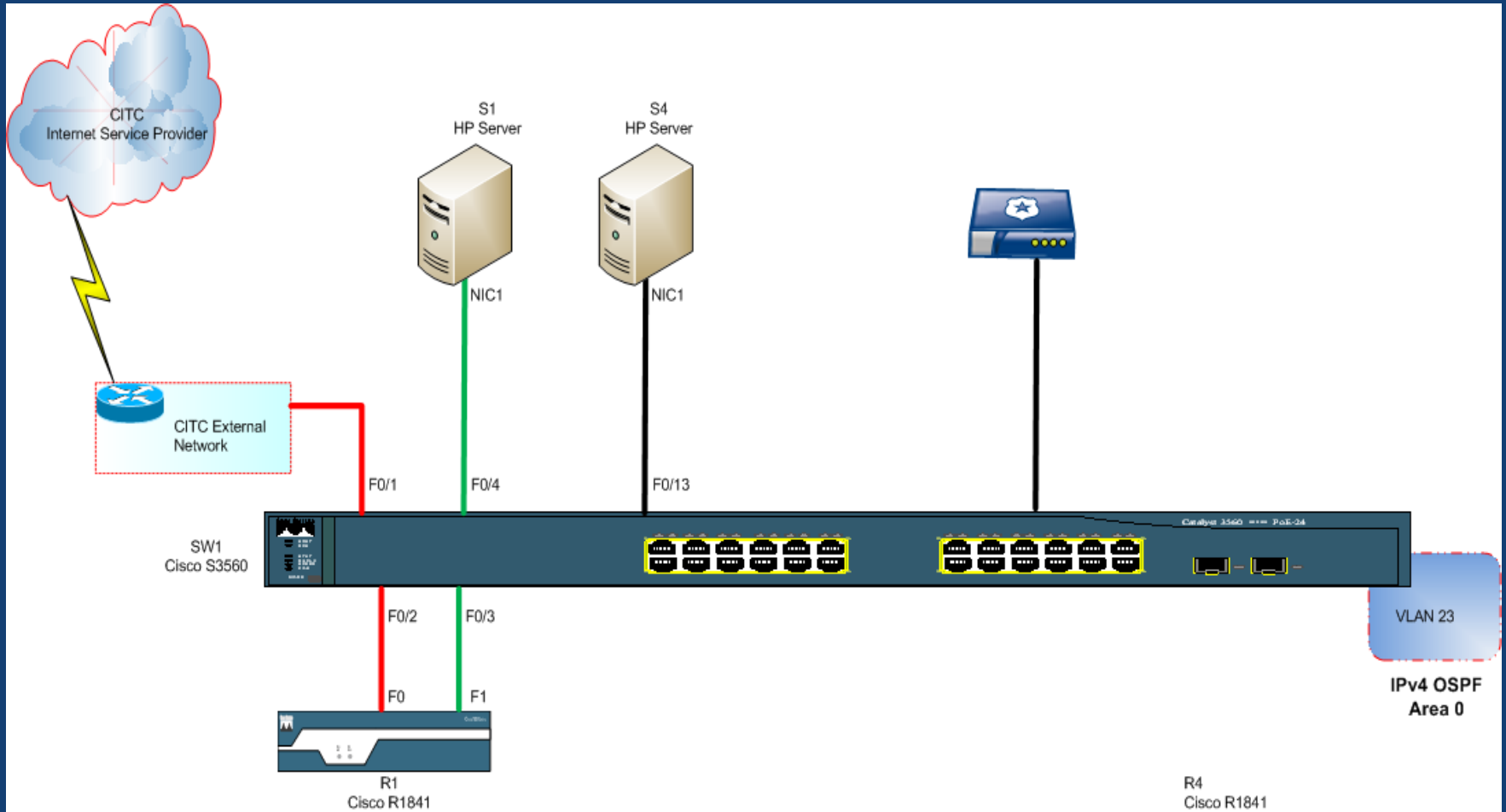
Agenda

- Introduction.
- Test LAB.
- Blue Coat solutions
- Summary

Introduction

- Introduction.
- Bluecoat with IPV6 technology.
- Test LAB.
- Blue Coat solutions
- Summary

Introduction to the CITC LAB



Test LAB

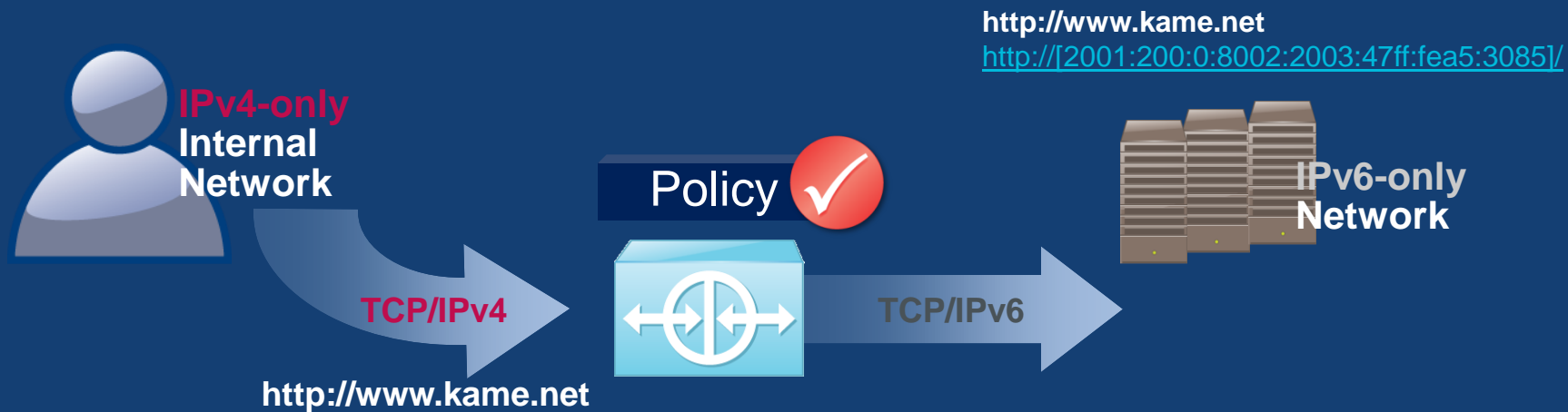
- Test Objectives
- Test Scenarios.
- Test Result.
- Test Conclusions.
- Questions.

Test Objectives

- To provide an overview of the capabilities of the bluecoat proxy SG to support IPv6 protocol.
- Emulating the integration of IPv6 with IPv4 Networks Performance & control.
- To simulate several scenarios and provide hands-on practice and learning on the proxy Experienced.
- Proof of concepts for testing technology services and products.
- To provide solution to the ISPs using different scenarios.
- To simulate and test IPv6 proxy HTTP services based on IPv6 Network.

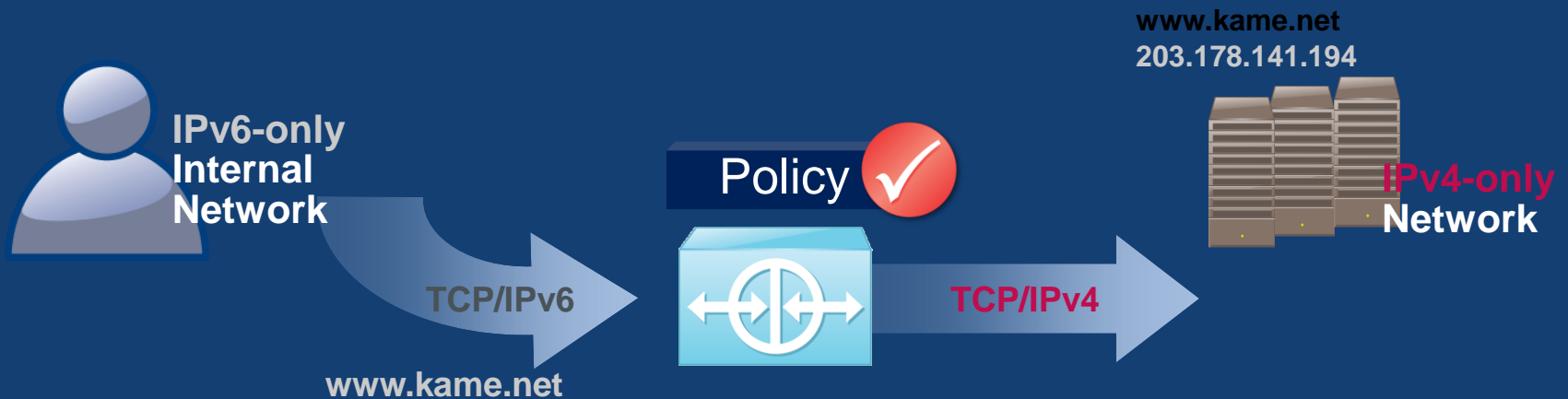
Test Scenarios -1

Client with IPv4 address only accessing IPv6 sites



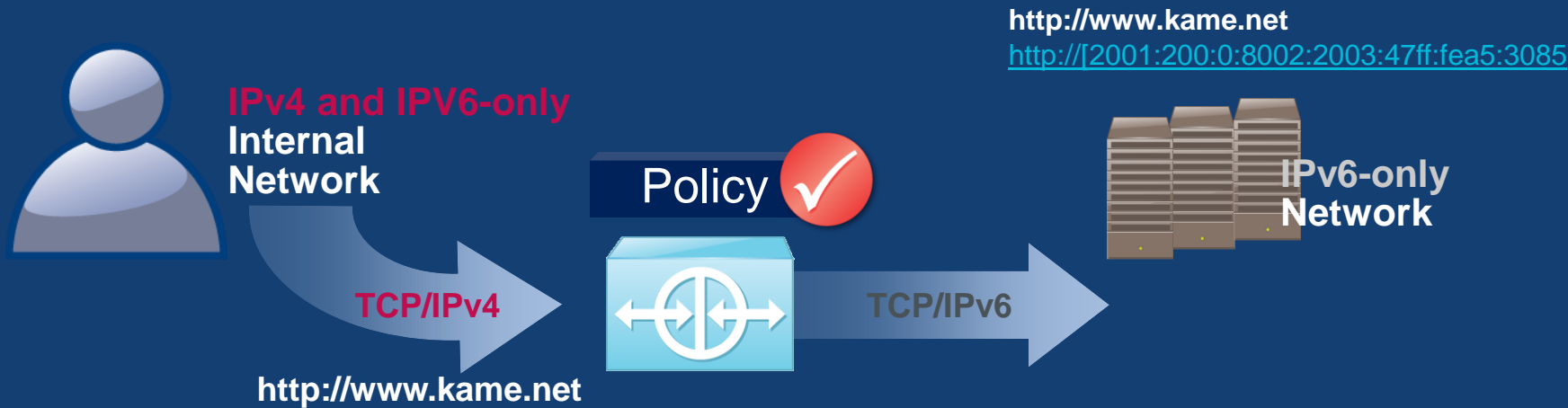
Test Scenarios -2

Client with IPv6 address only accessing IPv6 and IPV4 sites



Test Scenarios -3

Client with both IPv4 and IPV6 addresses accessing IPv4 and IPv6 sites



Key ProxySG Features Test

- Configuring the appliance with IPV6 setting.
- Managing the appliance using IPV6 address.
- Broad protocol support
 - HTTP, HTTPS, SSL, DNS, SSH, TCP Tunnels and Telnet.
- IP Spoofing.
- Logging.
- Caching.
- Statistics.

Key ProxySG Features Test

- Configuring the appliance with IPV6 setting using CPL.

1. Assign IP Address :

```
IPV6-LAB#(config)interface 0:0
IPV6-LAB#(config interface 0:0)ip-address 2001:1490:100:12::11
ok
```

2. Assign Gateway IP Address :

```
IPV6-LAB#(config)ip-default-gateway 2001:1490:100:12::1
ok
IPV6-LAB#(config)
```

3. Check the Configuration :

```
interface 0:0 ;mode
ip-address 172.16.1.200 255.255.255.0
ip-address 2001:1490:100:12::11
exit
```

```
IPV6-LAB#show ip-default-gateway
Default IP gateways
  Gateway                               Weight  Group
  172.16.1.1                             100     1
  2001:1490:100:12::1                     100     1
IPV6-LAB#
```

Key ProxySG Features Test

Configuring the appliance with IPV6 setting using GUI.

1. Assign IP Address :

The screenshot displays the Blue Coat ProxySG Management Console interface. The main window is titled "Configure Interface IPs" and is overlaid on a background configuration page. The background page shows the "Adapters" section for a physical interface, with fields for "Adapter/Interface:", "Status for interface 0:0:", "Link State:", "Speed:", "Duplex:", and "Bridge Group:". Below these fields are "Interface Settings" and "VLANs:" sections. The "VLANs:" section includes a table with columns for "VLAN ID" and "Physical Interface", and buttons for "New VLAN", "Edit", and "Delete VLAN".

The "Configure Interface IPs" dialog box contains the following elements:

- IP Addresses:** A list of IP addresses, currently showing "172.16.1".
- Add list item:** A sub-dialog box for adding a new IP address. It contains fields for "IP Address:" (with the value "2001:1490:100:12::11") and "Prefix Length or Subnet Mask:" (with the value "64").
- Buttons:** "OK" and "Cancel" buttons are present at the bottom of both the "Add list item" dialog and the main "Configure Interface IPs" dialog.

At the bottom of the main console window, there are buttons for "Preview", "Apply", "Revert", and "Help".

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Key ProxySG Features Test

Configuring the appliance with IPV6 setting using GUI.

1. Assign IP Address :

Blue Coat ProxySG

Management Console IPv6-LAB Model 210-10 S/N 0508061235 SGOS 5.4.1.14 Proxy Edition

HOME | DOCUMENTATION | SUPPORT | FEEDBACK | LOG O

Statistics Configuration Maintenance License Expired Health: Critical

- General
 - Identification
 - Clock
 - Archive
- Network
 - Adapters*
 - Routing
 - DNS
 - WCCP
 - Private Network
 - Advanced
- ADN
- Services
- ProxyClient
- SSL
- Proxy Settings
- Bandwidth Mgmt.
- Content Filtering
- Authentication
- External Services
- Forwarding
- Health Checks
- Access Logging
- Policy

Adapters Bridges

Adapter/Interface:

Status for interface 0:0:

Link State: Up

Speed: 100 Mbps

Duplex: Full

Bridge Group: passthru-0

Adapter 0

Interface 0 (WAN)

Interface Settings

VLANs:

Native VLAN for interface 0:0 1

VLAN ID	IP Address	Prefix Length (Subnet Mask)
Physical Interface	172.16.1.200	24(255.255.255.0)
	2001:1490:100:12:0:0:11	64

New VLAN Edit Delete VLAN

Preview Apply Revert Help

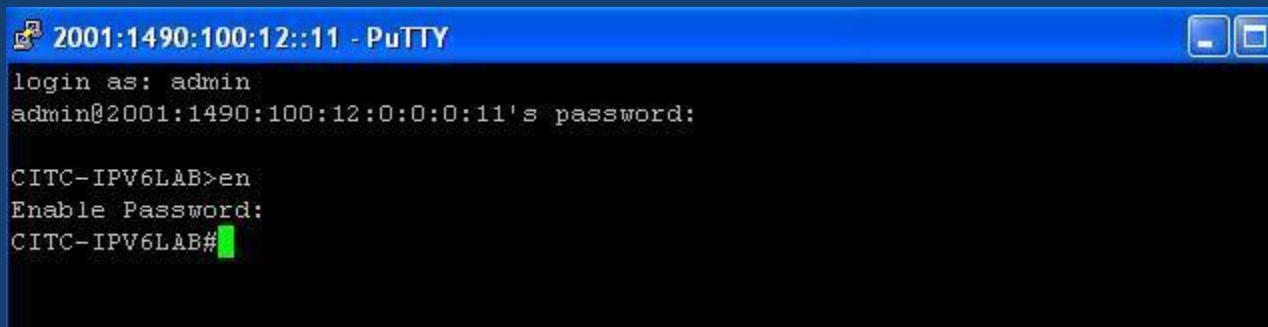
Unsaved changes, press "Apply" to save changes

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Key ProxySG Features Test

Managing the appliance using IPV6 address :

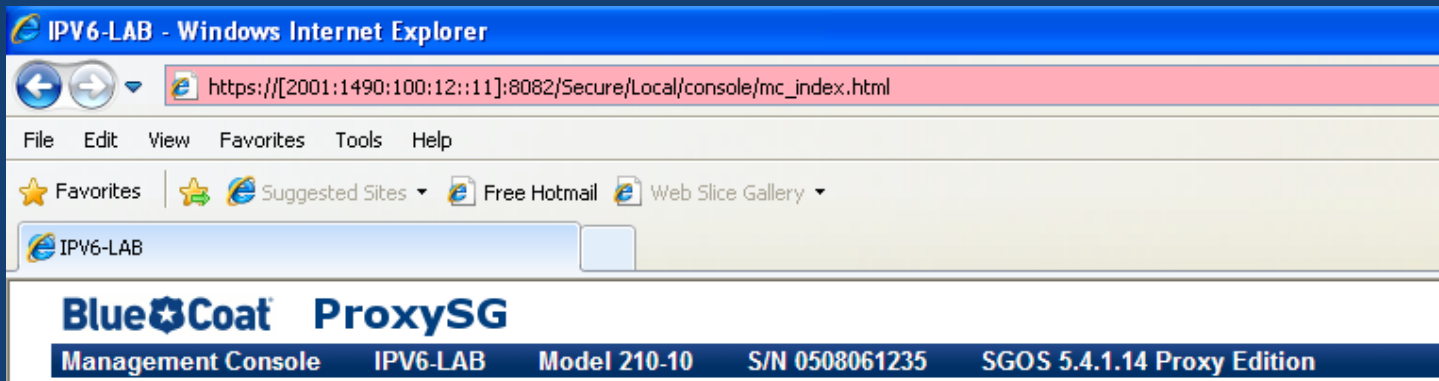
- Using the SSL



```
2001:1490:100:12::11 - PuTTY
login as: admin
admin@2001:1490:100:12:0:0:0:11's password:

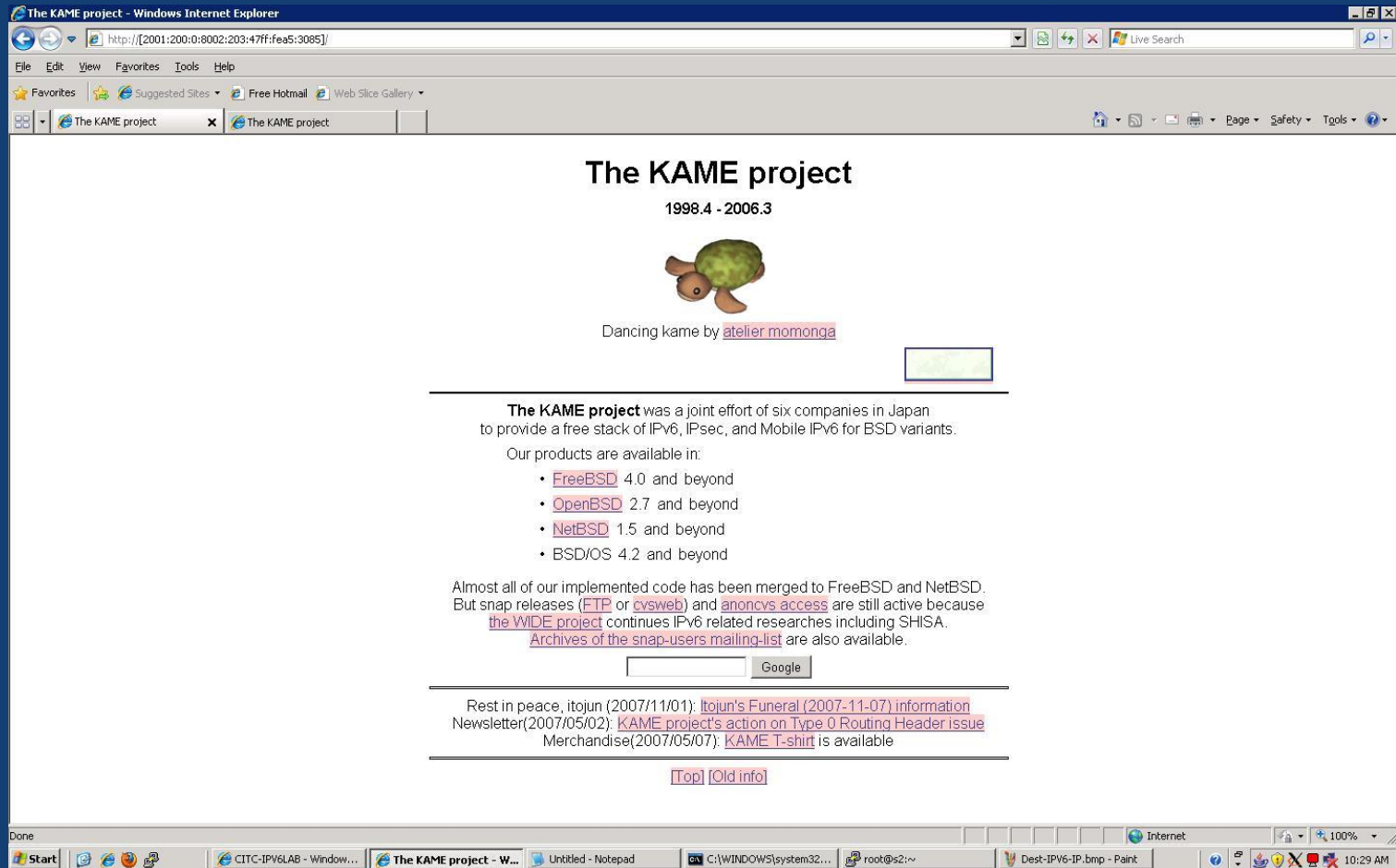
CITC-IPV6LAB>en
Enable Password:
CITC-IPV6LAB#
```

- Using the GUI



Key ProxySG Features Test


- Accessing IPV6 Sites



Key ProxySG Features Test

- Accessing IPV6 Sites – using IPV6 address

The KAME project
1998.4 - 2006.3



Dancing kame by [atelier momonga](#)

The KAME project was a joint effort of six companies in Japan to provide a free stack of IPv6, IPsec, and Mobile IPv6 for BSD variants.

Our products are available in:

- [FreeBSD](#) 4.0 and beyond
- [OpenBSD](#) 2.7 and beyond
- [NetBSD](#) 1.5 and beyond
- BSD/OS 4.2 and beyond

Almost all of our implemented code has been merged to FreeBSD and NetBSD. But snap releases ([FTP](#) or [cvsweb](#)) and [anoncvs access](#) are still active because [the WIDE project](#) continues IPv6 related researches including SHISA. [Archives of the snap-users mailing-list](#) are also available.

Rest in peace, itojun (2007/11/01): [Itojun's Funeral \(2007-11-07\) information](#)
Newsletter(2007/05/02): [KAME project's action on Type 0 Routing Header issue](#)
Merchandise(2007/05/07): [KAME T-shirt](#) is available

[Top](#) [Old info](#)

Key ProxySG Features Test

- Monitor the Sessions – IPV4 Clients accessing IPV6 Sites

The screenshot displays the Blue Coat ProxySG Management Console interface. The main content area is titled "Proxied Sessions" and shows a table of active sessions. The table has columns for Client, Server, A, S, FW, I, Duration, Client Bytes, Server Bytes, Savings, and C. Three sessions are listed, all with a duration of 5 seconds. The first session is expanded to show details.

Client	Server	A	S	FW	I	Duration	Client Bytes	Server Bytes	Savings	C
▶ 192.168.12.10:2767	2001:200:0:8002:203:47ff:fea5:308...					5 sec	4,713	0	n/a	
● 192.168.12.10:2768	2001:200:0:8002:203:47ff:fea5:308...					5 sec	769	0	n/a	
● 192.168.12.10:2769	www.mononga.org:80					5 sec	725	0	n/a	

Below the table, there are buttons for "Terminate Session" and "Download". At the bottom of the table area, it says "Total displayed sessions: 3 Total displayed connections: 4".

Key ProxySG Features Test

- Monitor the Sessions –IPV6 clients accessing IPV6 sites

The screenshot displays the Blue Coat ProxySG Management Console interface within a Windows Internet Explorer browser window. The browser address bar shows the URL https://192.168.12.11:8082/Secure/Local/console/mc_index.html. The console header includes the Blue Coat ProxySG logo and navigation links for HOME, DOCUMENTATION, SUPPORT, FEEDBACK, and LOG OUT. Below the header, the console is divided into three main sections: Statistics, Configuration, and Maintenance. The Maintenance section is active, showing a 'Proxied Sessions' table. The table has columns for Client, Server, A, S, FW, I, Duration, Client Bytes, Server Bytes, Savings, C, BC, OC, P, BM, and Service Name. A single session is displayed with the following details:

Client	Server	A	S	FW	I	Duration	Client Bytes	Server Bytes	Savings	C	BC	OC	P	BM	Service Name
2001:1490:100:12::10:60698	2001:200:0:8002:203:4...					4 sec	4,011		0	100%					External HTTP

Below the table, there are 'Terminate Session' and 'Download' buttons. The status bar at the bottom of the console indicates 'Total displayed sessions: 1' and 'Total displayed connections: 1'. The browser's status bar shows 'Done' and 'Internet'.

Key ProxySG Features Test

- Caching test - IPV6 clients accessing IPV6 sites

The screenshot displays the Blue Coat ProxySG Management Console interface within a Windows Internet Explorer browser window. The browser title is "CITC-IPV6LAB - Windows Internet Explorer" and the address bar shows "https://192.168.12.11:8082/Secure/Local/console/mc_index.html". The console header includes "Blue Coat ProxySG" and "Management Console CITC-IPV6LAB Model 200-C S/N 5006066047 SGOS 5.4.1.1 Proxy Edition". The "Statistics" tab is active, showing a "Health: Warning" status. The "Proxied Sessions" section is expanded, displaying a table with one session entry. The table columns are Client, Server, A, S, FW, I, Duration, Client Bytes, Server Bytes, Savings, C, BC, OC, P, BM, and Service Name. The session entry shows a client IP of 2001:1490:100:12::10:60698, a server IP of 2001:200:0:8002:203:4..., a duration of 4 sec, 4,011 client bytes, 0 server bytes, and 100% savings. The service name is External HTTP. Below the table are "Terminate Session" and "Download" buttons. The footer of the console shows "Copyright © 2002-2009, Blue Coat Systems, Inc. All rights reserved." and a "Help" button.

Client	Server	A	S	FW	I	Duration	Client Bytes	Server Bytes	Savings	C	BC	OC	P	BM	Service Name
2001:1490:100:12::10:60698	2001:200:0:8002:203:4...					4 sec	4,011	0	100%						External HTTP

Key ProxySG Features Test

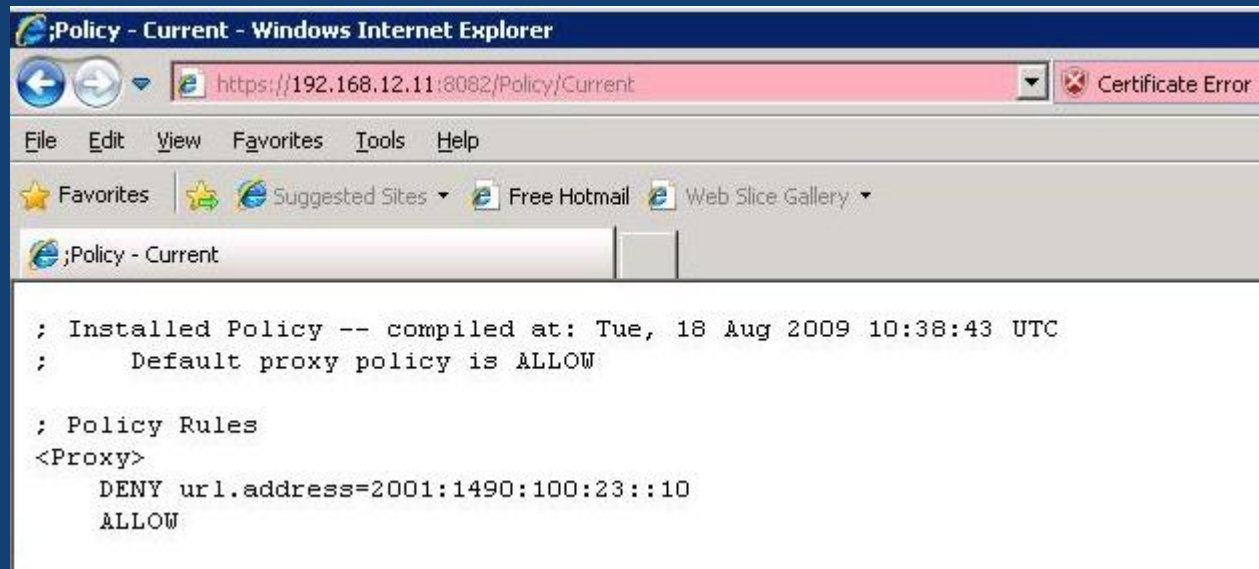
- Caching test – IPV4 clients accessing IPV6 sites

The screenshot displays the Blue Coat ProxySG Management Console interface. The main content area shows the 'Proxied Sessions' tab, which includes a table of active sessions. The table columns are Client, Server, A, S, FW, I, Duration, Client Bytes, Server Bytes, Savings, C, BC, and O. Below the table are buttons for 'Terminate Session' and 'Download'. The status bar at the bottom indicates 'Total displayed sessions: 11' and 'Total displayed connections: 33'.

Client	Server	A	S	FW	I	Duration	Client Bytes	Server Bytes	Savings	C	BC	O
▶ 192.168.23.10:51222	2001:1490:100:23:10:80					1.8 min	155,841	108,101	30.56%			
▶ 192.168.23.10:51287	2001:1490:100:23:10:80					1.2 min	66,017	23,042	65.16%			
▶ 192.168.23.10:51288	2001:1490:100:23:10:80					1.2 min	82,845	40,878	50.54%			
▶ 192.168.23.10:51292	2001:1490:100:23:10:80					1.2 min	84,017	42,598	49.24%			

Key ProxySG Features Test

- Applying Policy on IPV6 sites and Clients



The screenshot shows a Windows Internet Explorer browser window. The title bar reads ";Policy - Current - Windows Internet Explorer". The address bar contains "https://192.168.12.11:8082/Policy/Current" and a "Certificate Error" icon. The menu bar includes File, Edit, View, Favorites, Tools, and Help. The Favorites bar shows "Favorites", "Suggested Sites", "Free Hotmail", and "Web Slice Gallery". The main content area displays a text-based policy configuration page with the following text:

```
; Installed Policy -- compiled at: Tue, 18 Aug 2009 10:38:43 UTC
;   Default proxy policy is ALLOW

; Policy Rules
<Proxy>
  DENY url.address=2001:1490:100:23::10
  ALLOW
```

Key ProxySG Features Test

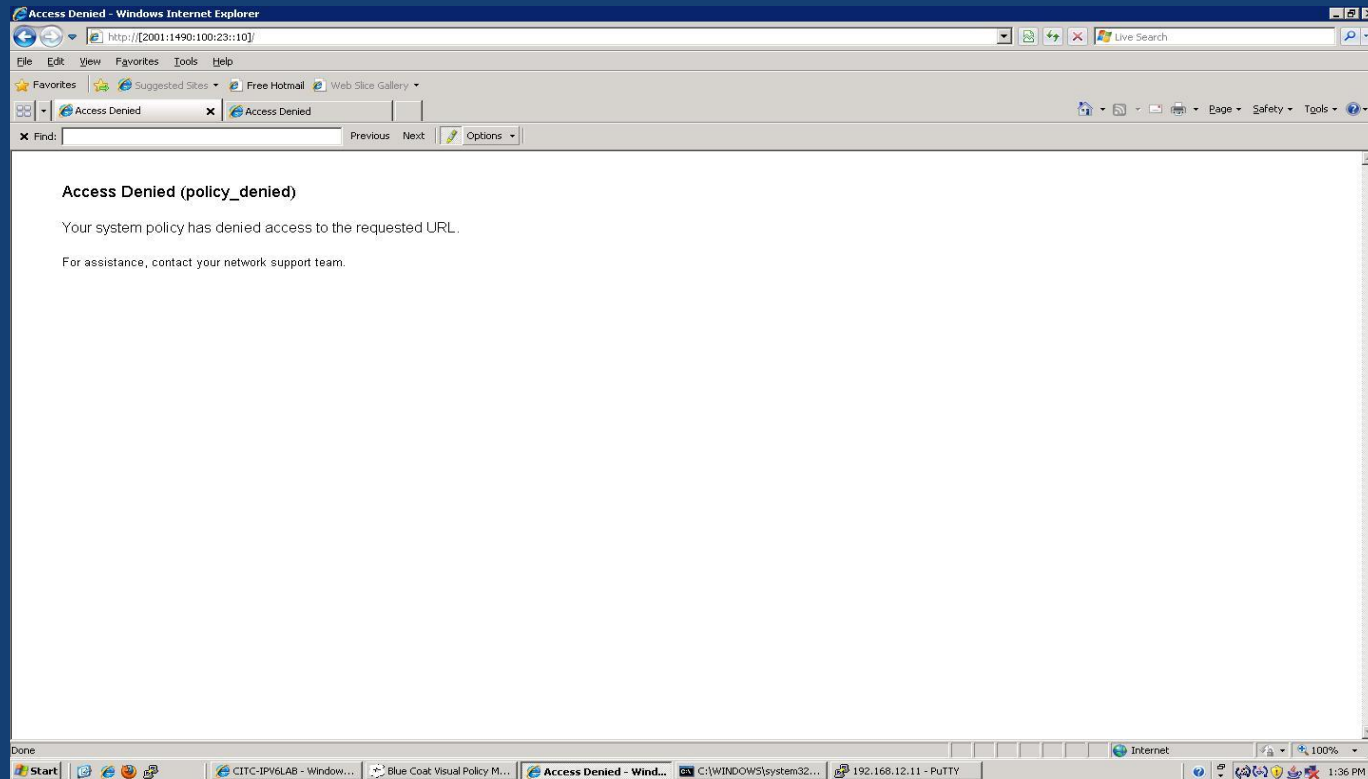
- Applying Policy on IPV6 sites and Clients

```
; Installed Policy -- compiled at: wed, 05 Aug 2009 10:38:44 UTC
;   default proxy policy is DENY

; Policy Rules
<Proxy>
  DENY client.address=192.168.12.11 url.domain=http://www.ipv6.org.sa/
  ALLOW
```

Key ProxySG Features Test

- Applying Policy on IPV6 sites and Clients



Summary

- The test has been made for Explicit and Transparent Deployments.
- The test approve that bluecoat proxy support IPV6 protocol.
- we could not test any web filter software because CITC did not have any ready one.
- A detailed document has been issued for the test LAB, include full details about the LAB.

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