

Cisco Router configuration for WCCP:

```
!  
ip wccp 97 redirect-list wccp-redirect -->re-direct acces-list with Service ID 97  
!  
interface FastEthernet4/0 -----> interface facing client local LAN, If multiple LAN interface then each  
interface will need "redirect in"  
description WCCP Client VLAN  
ip wccp 97 redirect in  
!  
  
ip access-list extended wccp-redirect  
permit tcp any any eq www ----->allowing port 80 traffic  
permit tcp any any eq 443 -----> allowing port 443 traffic  
deny ip any any  
!  
!
```

Hint: use wccp service id b/w 90-97

Web Security Appliance (WSA) configuration for WCCP:

From Web security appliance GUI:

Network----->Transparent re-direction

The screenshot displays the IronPort S650 GUI for configuring a WCCP v2 service. The browser window title is "IronPort S650 (wsa02.csw.sbr.ironport.com) - Network > Transparent Redirection - Microsoft Internet Explorer". The address bar shows "https://wsa02.csw.sbr.ironport.com:8443/network/tr_device". The user is logged in as "admin on wsa02.csw".

The main navigation tabs are: Monitor, Web Security Manager, Security Services, Network, and System Administration. The "Network" tab is active, and a dropdown menu is open, showing options: Interfaces, Transparent Redirection (highlighted), Routes, Internal SMTP Relay, Authentication, Upstream Proxies, External DLP Servers, and DNS.

The "Add WCCP v2 Service" configuration page is shown. The "Service Profile Name" is "WCCP_Rotuer". The "Service" is set to "Dynamic service ID". The "Dynamic service ID" is "97". The "Port numbers" are "80,443". The "Redirect based on destination port" option is selected. Other options include "Redirect based on source port (return path)", "Load balance based on server address", and "Load balance based on client address".

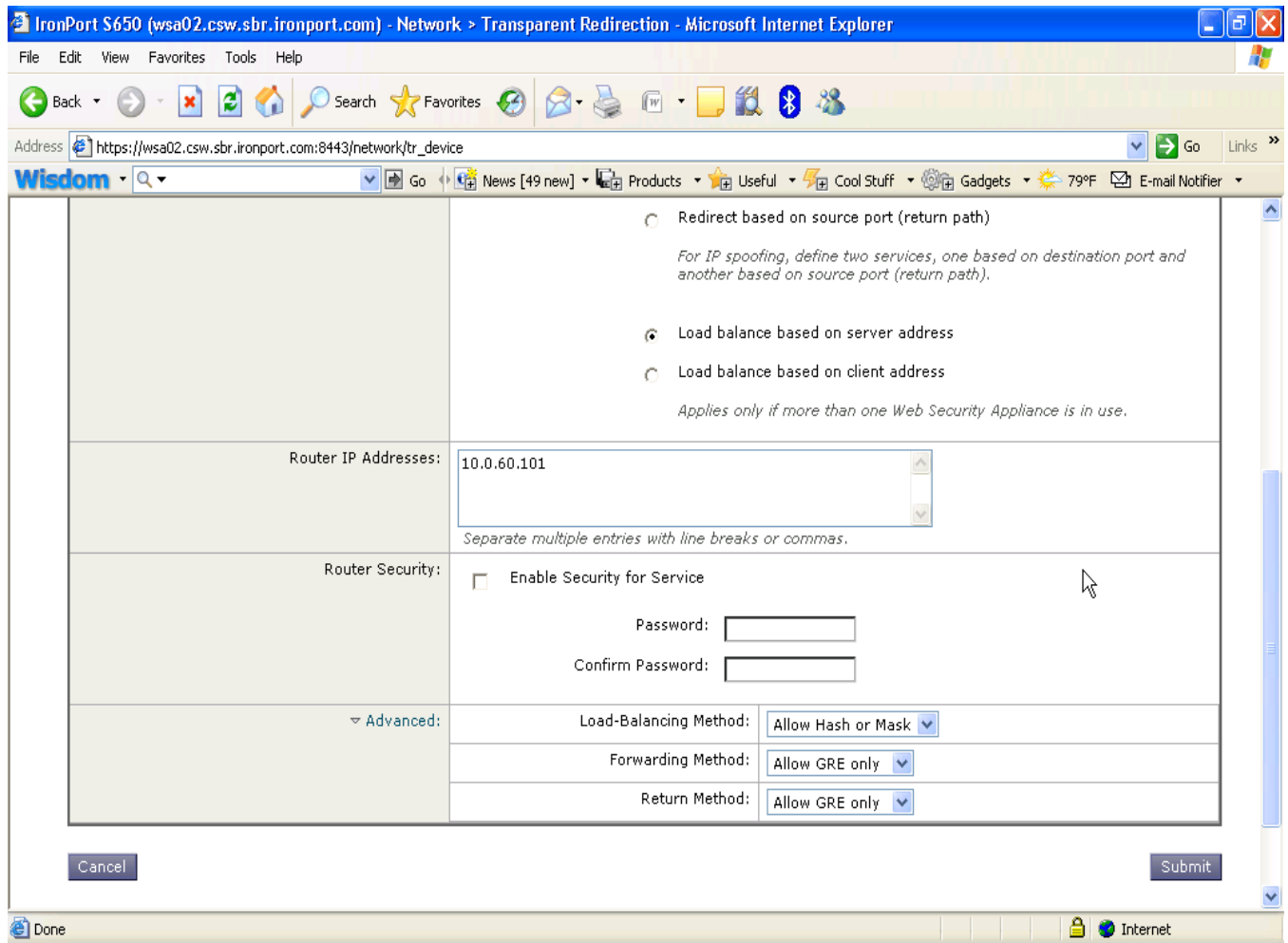
A "Commit Changes >" button is visible in the top right corner of the configuration area.

Enter service profile name, Dynamic service ID, port number etc..

The screenshot shows the IronPort S650 web interface in Microsoft Internet Explorer. The browser title is "IronPort S650 (wsa02.csw.sbr.ironport.com) - Network > Transparent Redirection - Microsoft Internet Explorer". The address bar shows "https://wsa02.csw.sbr.ironport.com:8443/network/tr_device". The page is titled "Add WCCP v2 Service" and includes a "Commit Changes" button. The configuration form is as follows:

WCCP v2 Service	
Service Profile Name:	<input type="text" value="WCCP_Rotuer"/>
Service:	<input type="radio"/> Standard service ID: 0 web-cache (destination port 80) <input checked="" type="radio"/> Dynamic service ID: <input type="text" value="97"/> 0-255 Port numbers: <input type="text" value="80,443"/> <small>(up to 8 port numbers, separated by commas)</small> <input checked="" type="radio"/> Redirect based on destination port <input type="radio"/> Redirect based on source port (return path) <small>For IP spoofing, define two services, one based on destination port and another based on source port (return path).</small> <input checked="" type="radio"/> Load balance based on server address <input type="radio"/> Load balance based on client address <small>Applies only if more than one Web Security Appliance is in use.</small>

Scroll down to enter Router IP address, then Advanced to select forwarding and return method, submit and commit the change:



Output from the Cisco router CLI with “debug ip wccp packets” and “debug ip wccp events enabled”,
Once the Cisco router and web security appliance basic configuration is completed:

```
10.0.60.101 - PuTTY
Cisco-3845-2#debug ip p
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask in
fo (28 bytes)
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_validate_wc_assignments: no srvc grp mask d
ata, exit
*Sep 1 21:52:04.099: WCCP-EVNT:GRE adjacency added for 10.0.60.21
*Sep 1 21:52:04.099: %WCCP-5-SERVICEFOUND: Service 97 acquired on WCCP client 1
0.0.60.21
*Sep 1 21:52:04.099: WCCP-PKT:D97: Received valid Here_I_Am packet from 10.0.60
.21 w/rcv_id 00031C50
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_change_router_view: D97
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_change_router_view: deallocate rtr_view (24
bytes)
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_change_router_view: allocate mask rtr_view
(60 bytes)
*Sep 1 21:52:04.099: WCCP-EVNT:wccp_change_router_view: copy orig info (28 byte
s)
*Sep 1 21:52:04.099: WCCP-EVNT:D97: Assignment wait timer started
*Sep 1 21:52:04.099: WCCP-EVNT:D97: Built new router view: 1 routers, 1 usable
WCCP clients, change # 000000B1
Cisco-3845-2#debug ip p
*Sep 1 21:52:04.099: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rc
v_id 00031C51
Cisco-3845-2#debug ip
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_set_wc_mask_assignments: enter
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_set_wc_mask_assignments: allocate current a
ssign info (540 bytes)
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_set_wc_mask_assignments: set current info (
540 bytes)
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_set_wc_mask_assignments: exit
*Sep 1 21:52:10.067: WCCP-EVNT:D97: verifying mask-value adjacency map (32)
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_change_router_view: D97
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_change_router_view: reuse rtr_view (44 of 6
0 bytes)
*Sep 1 21:52:10.067: WCCP-EVNT:wccp_change_router_view: copy blank current info
```

Router is sending "Sending I See You packet to 10.0.60.21" that is Web security appliance:

```
10.0.60.101 - PuTTY
*Sep 1 21:52:14.087: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:52:14.087: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C52
Cisco-3845-2#debug ip
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:52:24.095: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:52:24.095: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C53
Cisco-3845-2#debug ip
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:52:34.099: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:52:34.099: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C54
Cisco-3845-2#debug ip
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:52:44.067: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:52:44.067: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C55
Cisco-3845-2#debug ip
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:52:54.079: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:52:54.079: WCC
Cisco-3845-2#debug ip P-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C56
Cisco-3845-2#debug ip
```

It further details include “WCCP-PKT:D97” where service ID is 97 that must match b/w router and web security appliance:

```
10.0.60.101 - PuTTY
*Sep 1 21:56:04.083: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:56:04.083: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:56:04.083: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C69
Cisco-3845-2#
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:56:14.111: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:56:14.111: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C6A
Cisco-3845-2#
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:56:24.107: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:56:24.107: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C6B
Cisco-3845-2#
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:56:34.099: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:56:34.099: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C6C
Cisco-3845-2#
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_update_assignment_status: enter
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_update_assignment_status: exit
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_copy_wc_assignment_data: enter
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_copy_wc_assignment_data: reuse orig mask info (540 bytes)
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_copy_wc_assignment_data: exit
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_validate_wc_assignments: enter
*Sep 1 21:56:44.071: WCCP-EVNT:wccp_validate_wc_assignments: exit
*Sep 1 21:56:44.071: WCCP-PKT:D97: Sending I_See_You packet to 10.0.60.21 w/ rcv_id 00031C6D
Cisco-3845-2#
```

Show ip wccp view and details output to further verify the WCCP operation and basic connectivity:

```
10.0.60.101 - PuTTY
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#sh ip wccp 97 view
  WCCP Routers Informed of:
    172.17.150.101

  WCCP Clients Visible:
    10.0.60.21

  WCCP Clients NOT Visible:
    -none-

Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
Cisco-3845-2#
```

Wccp details shows the “state” redirection and return method, Web security appliance ip address etc..

```

10.0.60.101 - PuTTY
Cisco-3845-2#sh ip wccp 97 detail
WCCP Client information:
  WCCP Client ID:      10.0.60.21
  Protocol Version:    2.0
  State:               Usable
  Redirection:         GRE
  Packet Return:       GRE
  Packets Redirected:  0
  Connect Time:        00:06:31
  Assignment:          MASK

  Mask  SrcAddr  DstAddr  SrcPort  DstPort
  ----  -
  0000: 0x00000000 0x00000526 0x0000  0x0000

  Value SrcAddr  DstAddr  SrcPort  DstPort  CE-IP
  ----  -
  0000: 0x00000000 0x00000000 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0001: 0x00000000 0x00000002 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0002: 0x00000000 0x00000004 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0003: 0x00000000 0x00000006 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0004: 0x00000000 0x00000020 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0005: 0x00000000 0x00000022 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0006: 0x00000000 0x00000024 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0007: 0x00000000 0x00000026 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0008: 0x00000000 0x00000100 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0009: 0x00000000 0x00000102 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0010: 0x00000000 0x00000104 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0011: 0x00000000 0x00000106 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0012: 0x00000000 0x00000120 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0013: 0x00000000 0x00000122 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0014: 0x00000000 0x00000124 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0015: 0x00000000 0x00000126 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0016: 0x00000000 0x00000400 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0017: 0x00000000 0x00000402 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0018: 0x00000000 0x00000404 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0019: 0x00000000 0x00000406 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0020: 0x00000000 0x00000420 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0021: 0x00000000 0x00000422 0x0000  0x0000  0x0A003C15 (10.0.60.21)
  0022: 0x00000000 0x00000424 0x0000  0x0000  0x0A003C15 (10.0.60.21)

```

Output from the Web Security appliance CLI with level 4 WCCP debugging enabled:

From CLI: advancedproxyconfig---->wccp----> 4 (Enter the log level for debugging WCCP) and re-start the WCCP process. From the WSA CLI -> diagnostic -> proxy -> kick -> select “y” to restart, then “tail proxylogs”


```
10.0.60.21 - PuTTY
[DWG] [FWD] [SERVER]
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: needRA(=0)@1447, ISY@1431, viewchg=37, viewed=36, keychg=35
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: this period:(HIAs=2, ISYs=1) proto=6
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: ports = 80, 443, 0, 0, 0, 0, 0, 0
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: WC@0x0xb1a5b00: (10.0.60.21) mentioned:1431 weight:1 status:0
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: [ME] [ACTIVE]
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: nexus@0x0x9207500: rcvd_key(10.0.60.21,35) sent_key(10.0.60.21,35
)
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: rtr_mention@1431, ISY@1431 rtr_change#= 236 refs=0
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: [FIXED] [ALIVE] [ACTIVE] [FWD_???]
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: rstate=0, outst_HIA=0, receiveID=212691
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: rtr@0x0x91d34c0: fd(110) gre0, bind=10.0.60.21, sentto=10.0.60.10
1
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: configaddr=10.0.60.101, ID_addr=172.17.150.101, from_addr=10.
0.60.101
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:send HIA called
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1441 ###
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:HIA sent to 10.0.60.101 -- 1 ISY(s) outstanding
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1441 ###
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:ISY received from 10.0.60.101.(676 bytes)
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:ISY: accepted
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1441 ###
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE:SVC@0x0x91d0900: index=0 type=1 ID=97
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: [INSEC] [MH_DONE] [HASH_OK] [MASK_OK] [MASKING] [GREFWD_OK]
[LGR_DONE] [GRERET_OK] [RET_GRE] [DWG] [FWD] [SERVER]
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: needRA(=0)@1447, ISY@1441, viewchg=37, viewed=36, keychg=35
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: this period:(HIAs=1, ISYs=1) proto=6
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: ports = 80, 443, 0, 0, 0, 0, 0, 0
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: WC@0x0xb1a5b00: (10.0.60.21) mentioned:1441 weight:1 status:0
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: [ME] [ACTIVE]
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: nexus@0x0x9207500: rcvd_key(10.0.60.21,35) sent_key(10.0.60.21,35
)
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: rtr_mention@1441, ISY@1441 rtr_change#= 236 refs=0
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: [FIXED] [ALIVE] [ACTIVE] [NEG_PEND] [FWD_???] [FWD_GRE]
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: rstate=0, outst_HIA=0, receiveID=212693
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: rtr@0x0x91d34c0: fd(110) gre0, bind=10.0.60.21, sentto=10.0.60.10
1
02/Sep/2009:14:46:13 -0700 INFO : PROXY : - : wccp: STATE: configaddr=10.0.60.101, ID_addr=172.17.150.101, from_addr=10.
0.60.101
```

Key fields: service id =97, ports 80 and 443, Router IP address 10.60.0.101 and local ip address 10.0.60.21

[FIXED][ALIVE]{NEG_PEND}[FWD???]

```
10.0.60.21 - PuTTY
[LGR_DONE] [GRERET_OK] [RET_GRE] [DWC] [FWD] [SERVER]
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: needRA(=0)@1447, ISY@1441, viewchg=37, viewed=36, keychg=35
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: this period:(HIAs=1, ISYs=1) proto=6
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: ports = 80, 443, 0, 0, 0, 0, 0
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: WC@0x0xb1a5b00: (10.0.60.21) mentioned:1441 weight:1 status:0
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: [ME] [ACTIVE]
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: nexus@0x0x9207500: rcvd_key(10.0.60.21,35) sent_key(10.0.60.21,35)
)
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: rtr_mention@1441, ISY@1441 rtr_change#= 236 refs=0
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: [FIXED] [ALIVE] [ACTIVE] [NEG_PEND] [FWD_??] [FWD_GRE]
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: rstate=0, outst_HIA=0, receiveID=212693
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: rtr@0x0x91d34c0: fd(110) gre0, bind=10.0.60.21, sentto=10.0.60.101
)
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: configaddr=10.0.60.101, ID_addr=172.17.150.101, from_addr=10.0.60.101
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:send HIA called
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1451 ###
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:HIA sent to 10.0.60.101 -- 1 ISY(s) outstanding
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1451 ###
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:ISY received from 10.0.60.101.(676 bytes)
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:ISY: accepted
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1451 ###
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE:SVC@0x0x91d0900: index=0 type=1 ID=97
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: [INSEC] [MH_DONE] [HASH_OK] [MASK_OK] [MASKING] [GREFWD_OK]
[LGR_DONE] [GRERET_OK] [RET_GRE] [DWC] [FWD] [SERVER]
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: needRA(=0)@1447, ISY@1451, viewchg=37, viewed=36, keychg=35
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: this period:(HIAs=1, ISYs=1) proto=6
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: ports = 80, 443, 0, 0, 0, 0, 0
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: WC@0x0xb1a5b00: (10.0.60.21) mentioned:1451 weight:1 status:0
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: [ME] [ACTIVE]
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: nexus@0x0x9207500: rcvd_key(10.0.60.21,35) sent_key(10.0.60.21,35)
)
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: rtr_mention@1451, ISY@1451 rtr_change#= 236 refs=0
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: [FIXED] [ALIVE] [ACTIVE] [FWD_GRE]
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: rstate=0, outst_HIA=0, receiveID=212695
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: rtr@0x0x91d34c0: fd(110) gre0, bind=10.0.60.21, sentto=10.0.60.101
)
02/Sep/2009:14:46:23 -0700 INFO : PROXY : - : wccp: STATE: configaddr=10.0.60.101, ID_addr=172.17.150.101, from_addr=10.0.60.101
```

Next state shows as follows:

[FIXED][ALIVE][ACTIVE][FWD_GRE] ---→ We must see this stat for transparent re-direction to work.

```

10.0.60.21 - PuTTY
[LGR_DONE][GRERET_OK][RET_GRE][DWC][FWD][SERVER]
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: needRA(=0)@1447, ISY@1451, viewchg=37, viewed=36, keychg=35
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: this period:(HIAs=1, ISYs=1) proto=6
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: ports = 80, 443, 0, 0, 0, 0, 0
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: WC@0x0xb1a5b00: (10.0.60.21) mentioned:1451 weight:1 status:0
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: [ME][ACTIVE]
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: nexus@0x0x9207500: rcvd_key(10.0.60.21,35) sent_key(10.0.60.21,35
)
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: rtr_mention@1451, ISY@1451 rtr_change#= 236 refs=0
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: [FIXED][ALIVE][ACTIVE][FWD_GRE]
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: rstate=0, outst_HIA=0, receiveID=212695
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: rtr@0x0x91d34c0: fd(110) gre0, bind=10.0.60.21, sentto=10.0.60.10
1
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: configaddr=10.0.60.101, ID_addr=172.17.150.101, from_addr=10.
0.60.101
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:send_HIA called
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1461 ###
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:HIA sent to 10.0.60.101 -- 1 ISY(s) outstanding
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1461 ###
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:ISY received from 10.0.60.101.(676 bytes)
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:ISY: accepted
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: INFO:### Timestamp 1461 ###
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE:SVC@0x0x91d0900: index=0 type=1 ID=97
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: [INSEC][MH_DONE][HASH_OK][MASK_OK][MASKING][GRE_FWD_OK]
[LGR_DONE][GRERET_OK][RET_GRE][DWC][FWD][SERVER]
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: needRA(=0)@1447, ISY@1461, viewchg=37, viewed=36, keychg=35
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: this period:(HIAs=1, ISYs=1) proto=6
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: ports = 80, 443, 0, 0, 0, 0, 0
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: WC@0x0xb1a5b00: (10.0.60.21) mentioned:1461 weight:1 status:0
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: [ME][ACTIVE]
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: nexus@0x0x9207500: rcvd_key(10.0.60.21,35) sent_key(10.0.60.21,35
)
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: rtr_mention@1461, ISY@1461 rtr_change#= 236 refs=0
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: [FIXED][ALIVE][ACTIVE][FWD_GRE]
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: rstate=0, outst_HIA=0, receiveID=212697
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: rtr@0x0x91d34c0: fd(110) gre0, bind=10.0.60.21, sentto=10.0.60.10
1
02/Sep/2009:14:46:33 -0700 INFO : PROXY : - : wccp: STATE: configaddr=10.0.60.101, ID_addr=172.17.150.101, from_addr=10.
0.60.101

```

Check List for ALL the T/S tips:

1. Verify basic connectivity
2. Check the service id must match on Web security appliance and router/switch.
3. Kick/re-start wccp proxy using CLI -> diagnostic -> proxy -> kick -> select "y" to restart and tail proxylogs
4. Check the physical interfaces and verify IP address of the devices/interface.
5. Forward and return method MUST be L2 ONLY IF GRE not supported or certain hardware.
6. Verify IP connectivity b/w the devices.
7. Check the ports listed, e.g. 80, 443 for https traffic etc...
8. Review the debug info on the router/switch and web security appliance.
9. Check router/switch IOS versions for any known operational issues using compatibility matrix chart.