

# Achieving rapid success with WCCP and Web Security Gateway

**Webinar October 2011**



**Greg Didier**

- **Title: Support Specialist**
- **Accomplishments:**
  - 9 years supporting Websense products
- **Qualifications:**
  - Technical Support Mentor
  - Product Trainer

# Goals And Objectives

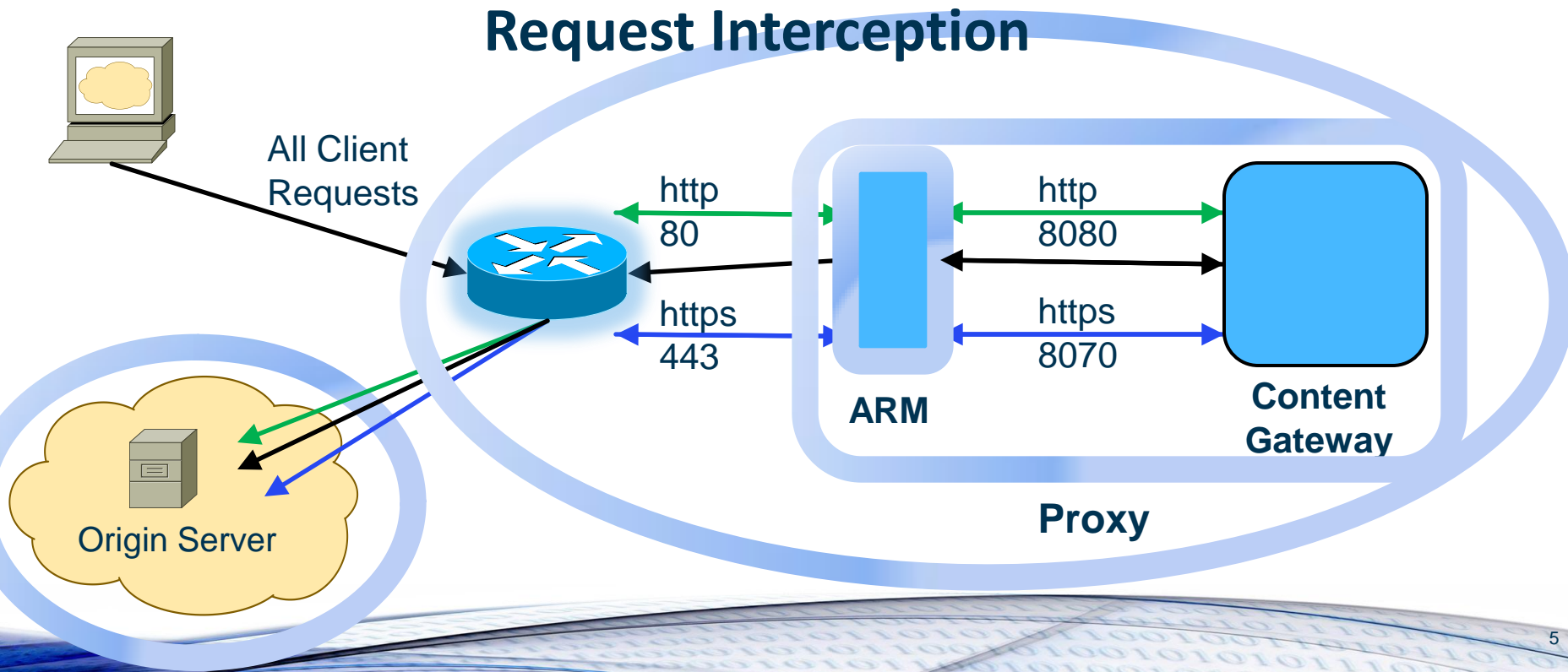
---

- WCCP v2 deployments
- Placement and best practices
  - WCCP within the network topology
  - Conditions that may negatively affect implementing WCCP v2
  - Best practice tips
- Introduce WCCP v2 topics to help spur questions for our WCCP experts
- Submit your questions now

- Employing transparent proxies:
  - A Layer 4 switch
  - A Cisco IOS-based router with Web Cache Control Protocol version 2 (WCCP v2)
  - Policy-Based Routing (PBR)
  - Software Routing
- Focus on WCCP v2 deployment
  - WCCP v2-enabled devices support redirecting HTTP, HTTPS, FTP
  - Negotiation occurs over UDP port 2048

# Terms

- WCCP Server
- WCCP Client
- Adaptive Redirection Module (ARM)
- Service Group
- Origin Server



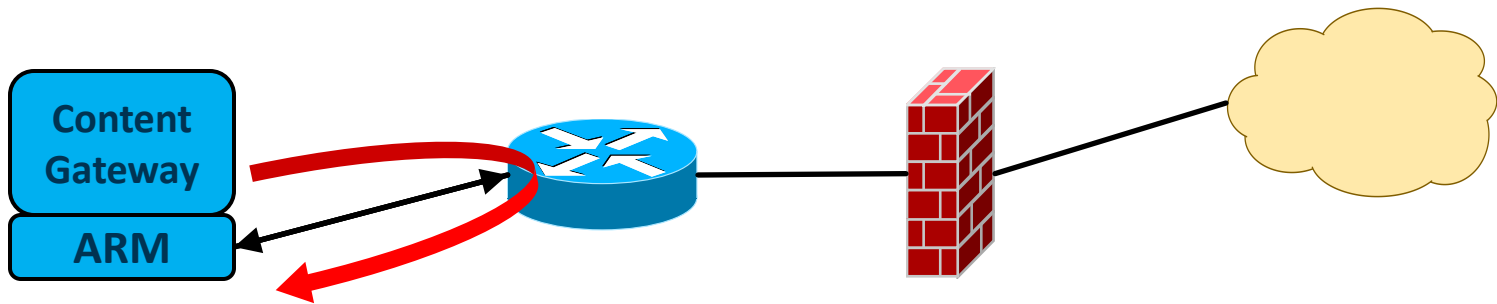


# Setting Up WCCP Overview

1. Configure the WCCP Server
  - Program the service group IDs
2. Configure WCCP Client (Content Gateway) to work with the WCCP Server
  - Define matching service group criteria
    - Identifying the router, negotiation mode, and assignment method
3. Test
  - December's Webinar will cover these steps in detail
  - In this Webinar, we are focusing on the placement of WCCP in a network

# Bypass Rule

- The WCCP Server sends traffic, per service group configuration, to the WCCP Client (the proxy)
- ARM readdresses traffic to Content Gateway on port 8080
  - Unless traffic is indentified by a static or dynamic bypass rule
- ARM can disable interception for specified clients, such that it passes their traffic directly to the origin server
  - This bypass can produce a routing loop condition



- The WCCP routing loop occurs when:
  - An upstream WCCP device redirects a packet to the Websense Content Gateway (WCG)
  - WCG determines that a packet should be bypassed
  - WCG forwards the request (with original IP header data)
  - An upstream WCCP device redirects the same packet back to WCG
- This process continues until the TCP TTL expires and the packet is dropped
- Users experience the browser hanging until the "*page cannot be displayed*" message is displayed



- The WCCP Client advertizes to the WCCP Server
- *Packet Forward / Return Methods:*
  - The mode selected should match the capabilities of the WCCP Server
    - *L2*– Requires the router or switch be Layer 2-adjacent
      - In the same subnet as Content Gateway
    - *GRE*– Overcomes L2 obstacle by adding a second Layer 3 header
      - Routers typically support only one method
      - Typically, forward and return methods should match
    - *Packet Forward*– from redirection device to proxy
    - *Packet Return*– from proxy to redirection device
- **Hash and Mask Assignment Method:**
  - *Parameters used to distribute intercepted traffic among multiple nodes in a cluster*

- It's almost time to put your WCCP questions to our WCCP experts
- These are WCCP issues frequently seen in Tech Support:
  - Possible ARM looping
  - Packet Return and Packet Forward Method negotiation
  - Choosing the best interface to enable WCCP
  - Redundancy
    - Dynamic load distribution via HASH or MASK, and weight
  - IP spoofing
  - Assigned multiple ports to a single service group

## Rick Conero

- **Title:**
  - Technical Support Lead
- **Accomplishments:**
  - Escalation Engineer
  - Architect Deployment Solutions
  - Department Trainer & Mentor
- **Qualifications:**
  - Microsoft and Cisco certified engineer
  - 15 years experience supporting enterprise networks

## Steven King

- **Title:**
  - Technical Support Analyst
- **Accomplishments:**
  - Support for Premium and Mission Critical customers
  - Created WCCP v2 guide for Technical Support
- **Qualifications:**
  - Cisco Routing & Switching Enthusiast
  - CCNA certified with knowledge in CCNP topics

- The network clients, Content Gateway proxy servers, and destination Web servers (default gateway) must reside on separate subnets
- Inbound redirections should be used whenever possible to reduce CPU overhead
- Reverse Service Group ID:
  - When IP spoofing is enabled, the proxy advertises a reverse service group for each enabled WCCP forward service group. The reverse service group must be applied along the return path of origin server responses to the proxy.
  - Cisco Documentation Search:
    - “*Configure WCCP <hardware> <IOS>*”

- Determine the capabilities of your current infrastructure by referring to your Cisco documentation in the planning phase
- For Switches:
  - Use L2 Forward/Return Method when possible
  - Use MASK assignment
- For Routers:
  - Use GRE Forward/Return
  - Use HASH assignment

## ■ For ASA/PIX:

- Use GRE Forward/Return Method
- Use HASH assignment
- Use specific layer 4 statements in the redirect list ACL
  - GOOD: *permit tcp 10.0.0.0 any eq www*
  - BAD: *permit ip 10.0.0.0 any*
- The WCG and client traffic to be redirected, should reside in the same security zone
- IP Spoofing is not a supported ASA feature
- Static bypasses must be defined via ACL entries in the redirect list on the ASA; a WCCP routing loop will occur if defined in the WCG configuration



- [Websense Content Gateway v7.6 Help document](#)
- [Configuring WCCP v2 for Websense Content Gateway](#)
- [Past Webinar: Common Configuration Methods for the Websense Content Gateway](#)
  - WCCP configuration starts 28 minutes into this webinar
- [IP spoofing](#)

## Knowledge Base

- Search or browse the knowledge base for documentation, downloads, top knowledge base articles, and solutions specific to your product.

## Support Forums

- Share questions, offer solutions and suggestions with experienced Websense Customers regarding product Best Practices, Deployment, Installation, Configuration, and other product topics.

## Tech Alerts

- Subscribe to receive product-specific alerts that automatically notify you anytime Websense issues new releases, critical hot-fixes, or other technical information.

## ask.websense.com

- Create and manage support service requests using our online portal.

## Webinar Update

Title: **Websense Web Security Gateway: What to do when a Web site does not load as expected**

Date: **November 9th, 2011**

Time: **8:00 AM PDT (GMT -7)**

How to register: <http://www.websense.com/content/SupportWebinars.aspx>

# Customer Training Options

- To find Websense classes offered by Authorized Training Partners in your area, visit:  
<http://www.websense.com/findaclass>
- Websense Training Partners also offer classes online and onsite at your location.
- For more information, please send email to:  
[readiness@websense.com](mailto:readiness@websense.com)

**WEBSENSE<sup>®</sup>**  
**Authorized Training  
Partner**

**WEBSENSE<sup>®</sup>**  
**Certified Instructor**

