




HP User Society: IT Symposium 2007

## Die neuen HP ProCurve Secure WLAN Lösungen

Ralf Krause  
18. April 2007

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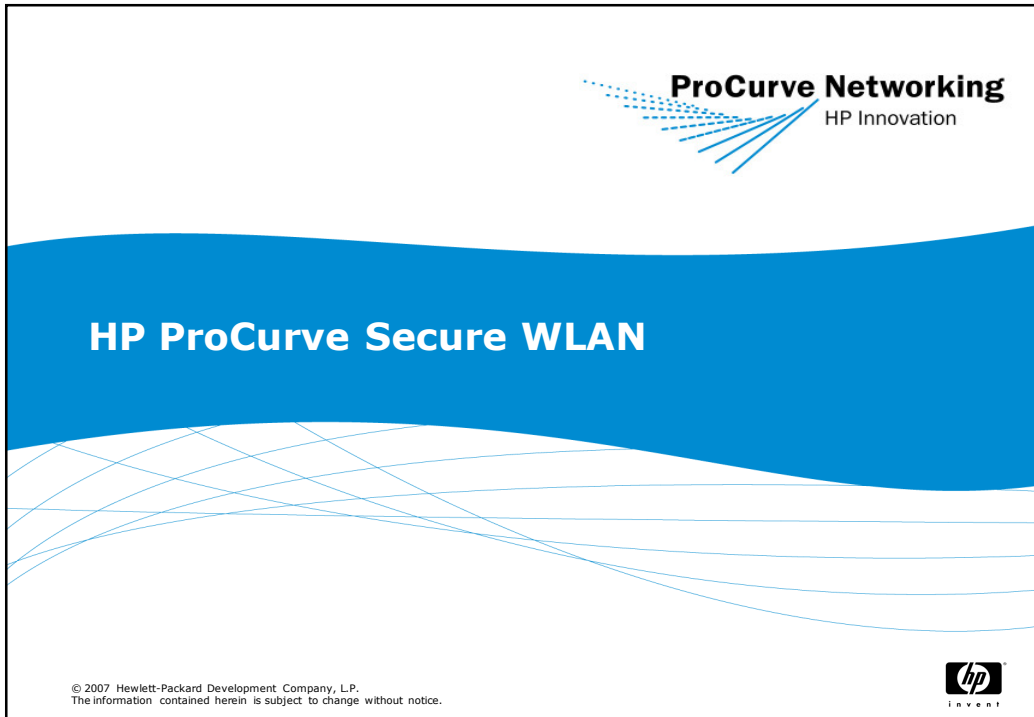


## Agenda

- HP ProCurve Secure WLAN
- Unified Wired and Wireless Networking
- What to expect in the near future
- Summary

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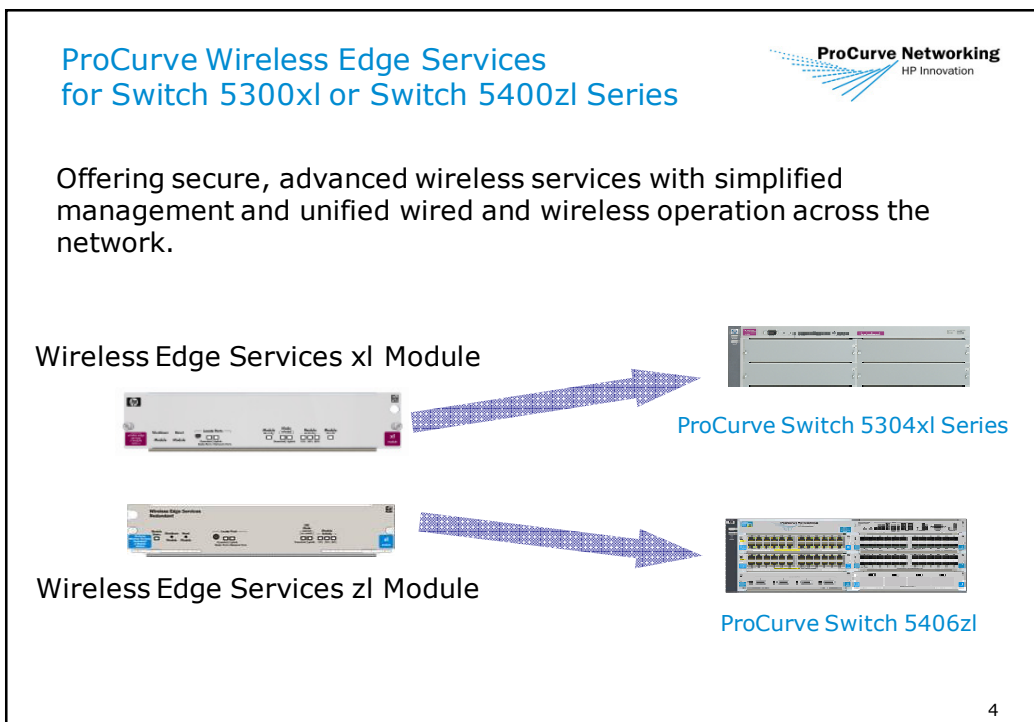

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# HP ProCurve Secure WLAN

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## ProCurve Wireless Edge Services for Switch 5300xl or Switch 5400zl Series

Offering secure, advanced wireless services with simplified management and unified wired and wireless operation across the network.


Wireless Edge Services xl Module




Wireless Edge Services zl Module



ProCurve Switch 5304xl Series

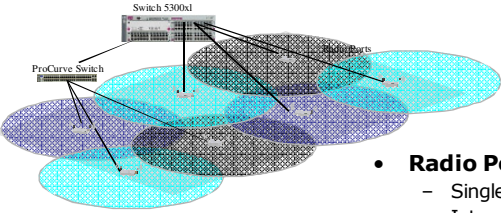


ProCurve Switch 5406zl






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## ProCurve Wireless Edge Services Radio Ports




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- **Radio Port 210 (part# J9004A)**
  - Single 802.11g radio
  - Integrated antenna
  - (No external antenna connectors)
- **Radio Port 230 (part# J9006A)**
  - Dual radio (a+b/g)
  - Integrated antenna
  - (No external antenna connectors)
- **Radio Port 220 (part# J9005A)**
  - Dual radio (a+b/g)
  - External antennas required
  - Plenum rated

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## Key Features Fortified Security




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- Security at the edge:
  - Wireless data privacy (IEEE 802.11i, WPA, WPA2)
  - Rogue AP detection
  - Wireless network "self-healing"
  - Controller Module redundancy
  - Fast client roaming
  - Web Authentication
- QOS support:
  - SpectraLink Voice Priority (SVP)
  - Wireless Multi Media extensions (WMM / IEEE 802.11e)
  - Quality of Service Weighting
  - Voice prioritisation

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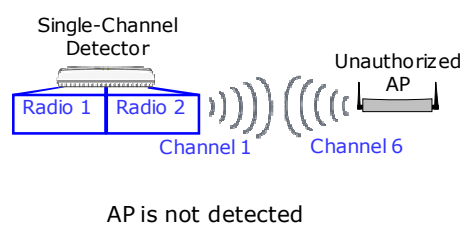


## AP Detection

### Single-Channel and Dedicated Detectors

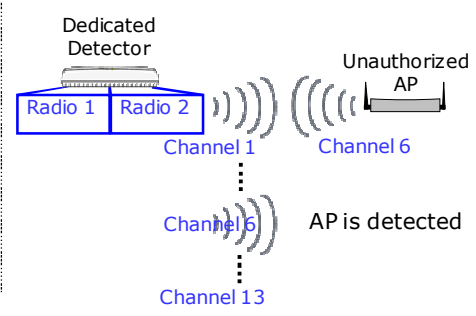
Single-Channel Detector	Dedicated Detector
Radio passively listens for beacons	Radio actively sends probe requests
Radio listens on its own channel only	Radio sends probes on all allowed channels
Radio supports wireless stations	Radio does not support wireless stations

Single-Channel Detector




AP is not detected

Dedicated Detector




AP is detected


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Unified Wired and Wireless Networking




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## ProCurve Secure, Unified Wireless and Wired Networking




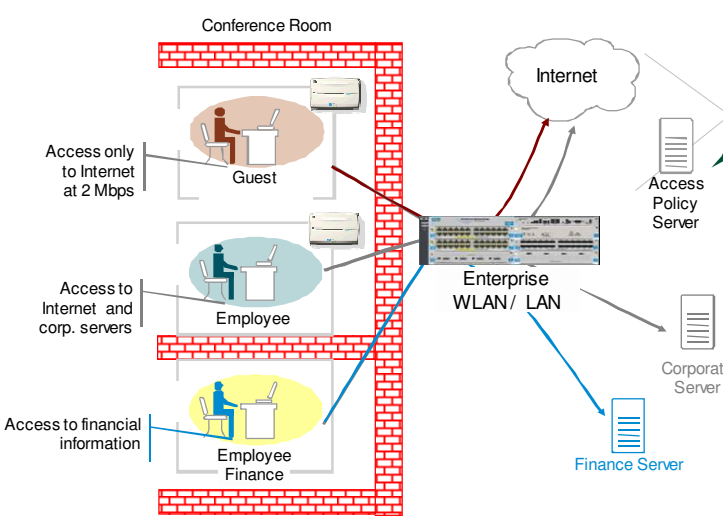
- Delivers a truly unified wired and wireless environment today, providing:
  - Operational efficiency and consistent functionality for networks of all sizes
  - Centrally administered and dynamically controlled policies



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## ProCurve Identity Driven Manager - Unified Wired and Wireless Identity





**Network Administrator**

1. Sets up role based access policy groups & assigns rules and access profiles:
  - Set rules
    - Time
    - Location
    - Device ID
  - To trigger each policy profile
    - ACL
    - VLAN
    - QoS
    - BW limit
2. Put users in appropriate access policy group

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## Unified Wired and Wireless Networking - Wireless sFlow

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- Furthering the vision of true unification of wired and wireless networks

→ Wired + wireless sFlow

- Provides the capability to leverage network management, security and traffic analysis applications across both mediums equally
- Visibility into traffic metrics such as top talkers, top applications and connections
- Enables unified wired and wireless network visibility and performance metrics that have simply not been possible to this point

sFlow Collector/Analyzer:  
ProCurve Manager Plus or  
InMon Traffic Sentinel

Network ports

Wireless LAN

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## What to expect in the near future

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## Client Services Secure, Convenient Guest Access



- Guest registration page
  - Guest administration accounts
  - Custom or randomly generated guest password/usernames with print function
  - Set time of day usage and duration per user
- Customizable welcome, success and authentication failure html pages
  - Choice to host pages internally or direct request to an external web server

### Guest Registration

User Name	<input type="text"/>	Generate
Password	<input type="text"/>	Generate
User Group	Guest	
Start Date & Time	02/18/2007-14:49	(MM/DD/YYYY-HH:MM)
Current Date - Time : 02/18/2007-14:44 Etc/UTC		
Expiration Date		
<input checked="" type="radio"/> Date		
Date & Time	02/19/2007-14:49	(MM/DD/YYYY-HH:MM)
<input type="radio"/> Preset Values		
	1 Day	
Print		
OK		
Clear		
Refresh		
Logoff		

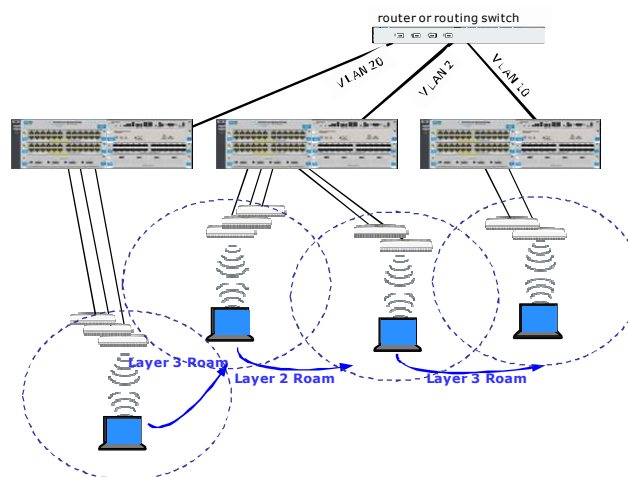
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## Client Services Layer 3 Roaming Domain



- Seamless wireless roaming across the network
  - Users remain connected as they roam across subnets/wireless modules
  - A new tunnel is initiated to the home module upon client (layer 3) roam to a new subnet/wireless module
  - A roaming domain can include up to 12 wireless modules



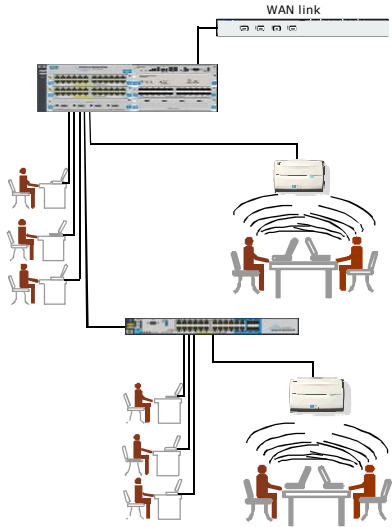
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## Network Services Built-in RADIUS and DHCP Services

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- Adaptive network services
  - RADIUS and DHCP server services available on both wired and wireless
- Network services for medium size businesses / branch offices
  - Local wired and wireless services
    - Local DHCP, NAT
    - Failover authentication
    - Wireless services, including local wired & wireless guest access and administration

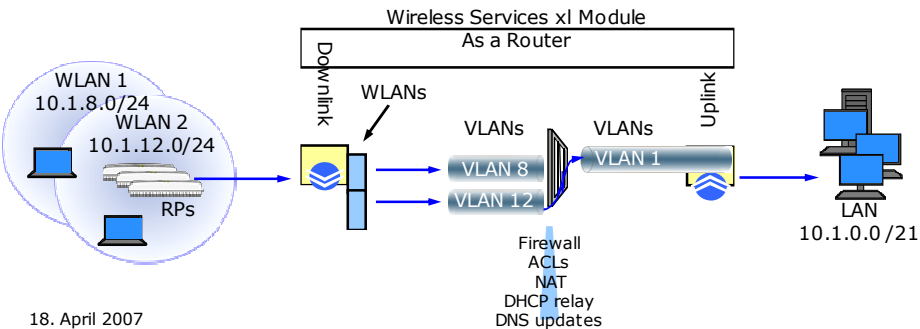


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## Network Security by means of Layer-3 Functionality

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- To protect a network without sophisticated security capabilities:
  - Separate VLANs for wireless traffic from VLANs in the Ethernet network.
  - Turn on routing (in the **Network Setup > Internet Protocol > IP Forwarding** screen).
  - Configure ACLs, DHCP, and NAT.



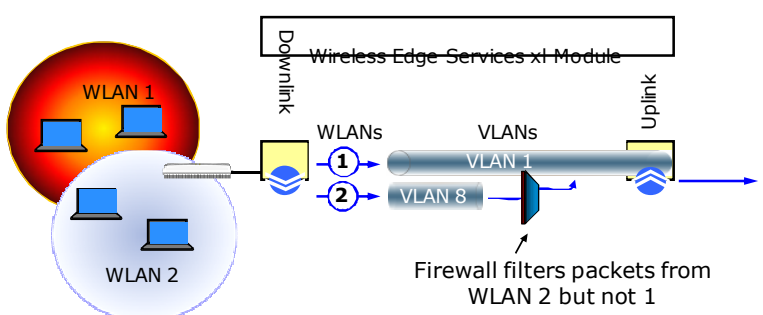
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## Screen Traffic Between the Wireless and Wired Network




1. Map the WLAN to a VLAN that exists only on the Wireless Module.
2. Ensure that IP routing is enabled.
3. Assign the Wireless Module an IP address on the WLAN's VLAN and configure other necessary services.

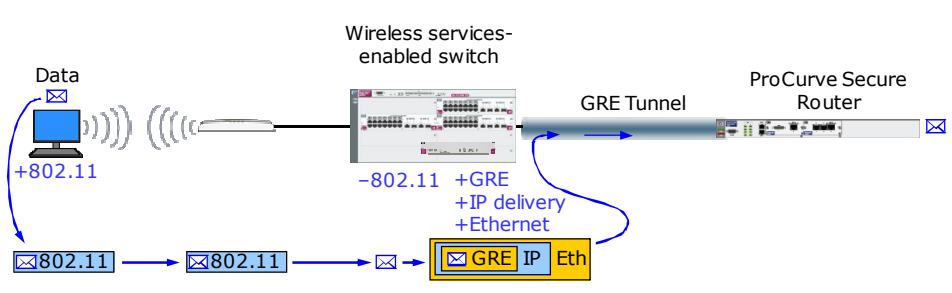


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## Routing a WLAN's Traffic Through a GRE Tunnel



- When you map a WLAN to a GRE tunnel, the Wireless Module:
  - Removes the frame's 802.11 header
  - Adds a GRE header, delivery IP header, and Ethernet header
  - Forwards the traffic on the specified tunnel interface
- Destination endpoint:
  - Receives the frame and removes the IP delivery and GRE header
  - Forwards inner packet to the original destination

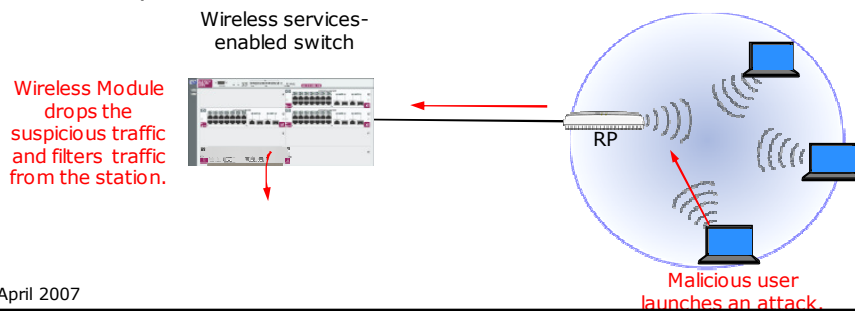


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## Wireless Intrusion Detection System (IDS)



- Protect your network against attacks:
  - Reconnaissance attack
  - Association flood attack
  - Disassociation flood attack
  - Authentication failure attack
  - 802.11 replay attack
  - Decryption attack
  - EAP start frame attack
  - TKIP attack
- Traffic from stations showing suspect behavior is filtered for a certain period of time



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## Summary

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## Summary



- Highly integrative wireless solution
- Single pane of glass for both, Administrators and Users
- Very flexible variety of wireless security mechanisms
- Standard ProCurve Lifetime Warranty

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ProCurve,  
a trusted partner for your  
secured wired and wireless  
networking infrastructure

[www.hp.com/go/procurve](http://www.hp.com/go/procurve)