


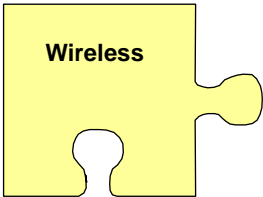
Introduction

HP ProCurve Secure Mobility Solutions

Ralf Krause

Wireless Access





Wireless

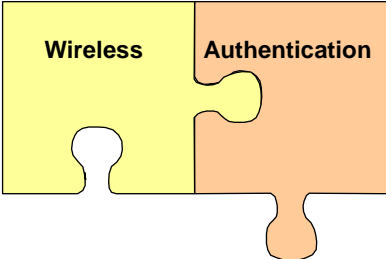

Goals for wireless LAN access:

- Authentication – prevent network access by unauthorized persons.
- Confidentiality – keep sensitive information out of the hands of intruders.
- Policy management – provide a simple way to manage access policies for a wide variety of user types.
- Availability – provide support for users that require mobility or roaming between wireless access points.

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Authentication and Authorization



Goals for authentication and authorization:

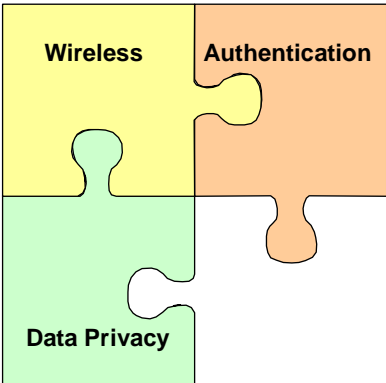

- Verify user identity and associate appropriate set of permissions.
- Enable guest access while protecting internal network.

Existing tools that provide WLAN authentication:

- IEEE 802.1X/EAP with RADIUS authentication.
- Possession of correct WEP key provides limited authentication.
- Neither provides specific authorization information.

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Data Privacy



Goals for data privacy:

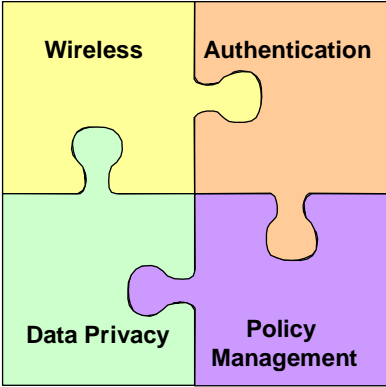
- Protect information from unauthorized disclosure.
- Provide confidentiality – one of the most important goals of network security.

Existing tools intended to achieve data privacy:

- Encryption of data with WEP key; however, it is considered less secure than some other encryption algorithms.
- Establishing a secure encrypted tunnel using VPN technologies.

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Policy Management



Goals for policy management:

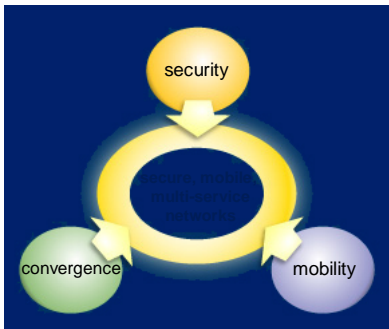
- Associate groups of users with the resources they need.
- Scalability to provide central administration for all policies.

Existing policy management tools:

- Similar users are placed in the same VLAN; access is limited by ACLs applied to router interfaces.
- VLAN-based policy management presents scalability challenges in large enterprise wireless environment.

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HP ProCurve Adaptive EDGE Architecture™



The HP ProCurve Adaptive EDGE Architecture™ delivers affordable control to the edge with command from the center. Its foundations include:

- security,
- mobility, and
- convergence.

The HP ProCurve Secure Access 700wl series products deliver a solution based on two elements of this architecture.

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HP ProCurve Secure Access 700wl Series



Product features:

- Authentication and Policy Management
 - Fine-grained policies may be defined that grant access in terms of time and place.
- Distributed Architecture
 - Edge systems are optimized for directly supporting users.
 - Access Control Server enables central management of a multi-dimensional policy database.
- Wireless Data Privacy
 - Supports encryption of information over secure tunnel between wireless client and edge system.
- Wireless Client Mobility
 - Access Control Server transparently enables handoff from one edge system to another.

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HP ProCurve Secure Access 700wl Series



Rights Manager:

- The Rights Manager is a database that holds policy information used by all Access Controllers in the domain.
- Users are organized into groups. Policies consist of:
 - locations, or entry points, the client is permitted to use based on its group membership,
 - times of day and days of the week that access is permitted at this location, and
 - precise, granular definitions of resources the user can access at the given times and locations.
- Guest User Support
 - Locations and times can be configured to allow access to “guest” users.
 - Flexible policies enable administrative definition of resources that may be used by guests at specific locations and times.

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Rights Manager Policies



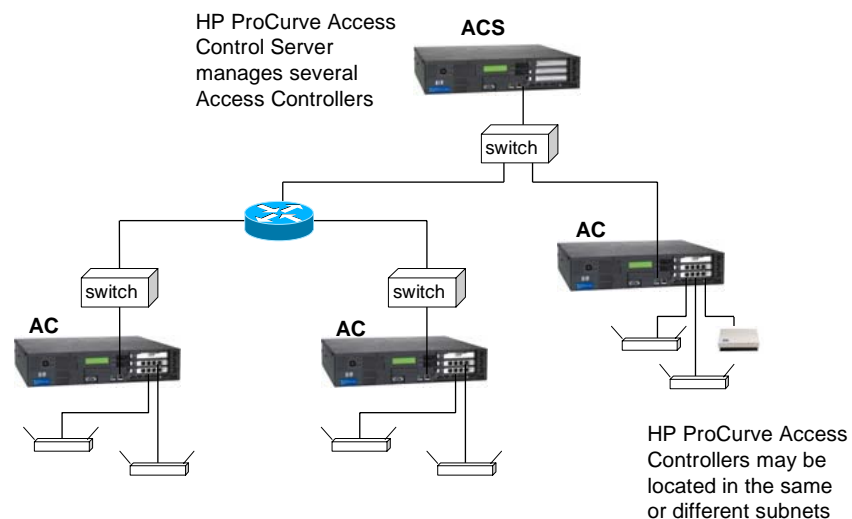
Policies are based on several criteria:

- User is associated with one or more groups.
- Group is associated with one or more locations.
- Group is associated with a set of rights.
- Locations are associated with time slots.
- The intersection of these objects results in a set of rights that is relative to time and place.
- Each object exists independently and may be associated with multiple objects.

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Typical Usage Model



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HP ProCurve Access Controller 720wl



The Access Controller is positioned between the network and wireless access points or Ethernet switches.

- It inspects each received packet and determines whether to forward, drop, or redirect based on a set of rules it receives from the Rights Manager.
- After authentication, the AC handles all per-packet operations as well as encryption that provides Wireless Data Privacy.



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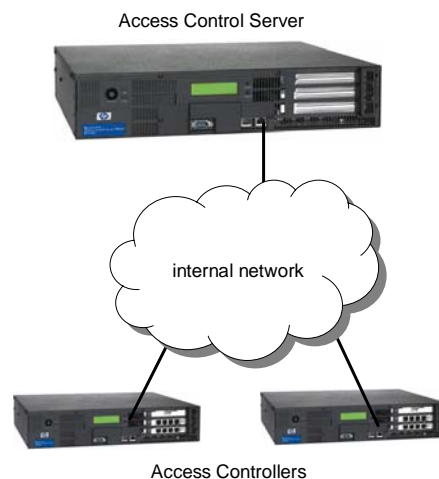
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HP ProCurve Access Control Server 740wl



The Access Control Server hosts the Rights Manager. It:

- provides the interface between Access Controllers and Rights Manager.
- can be configured to use external authentication services for user authentication.
- coordinates the handoff between Access Controllers when a wireless user roams.



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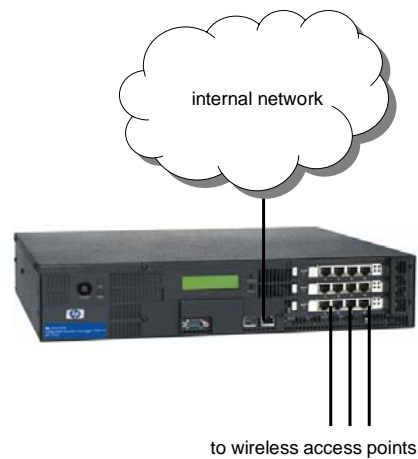
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HP ProCurve Integrated Access Manager 760wl



The Integrated Access Manager:

- is used in smaller wireless networks that do not need a distributed architecture.
- hosts the Rights Manager and performs all of the functions of the Access Control Server.
- interfaces with wireless access points and performs all of the functions of an Access Controller.



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HP ProCurve Secure Access 700wl Series Accessories



4-port Ethernet Adapter



4-Port 10/100
Ethernet Card

- 1-port Gigabit-SX Ethernet card
- 1-port Gigabit-LX Ethernet card
- Copper Gigabit Ethernet card



1-Port Gigabit
Ethernet Module

Hardware Accelerator (DES and 3DES Encryption)

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