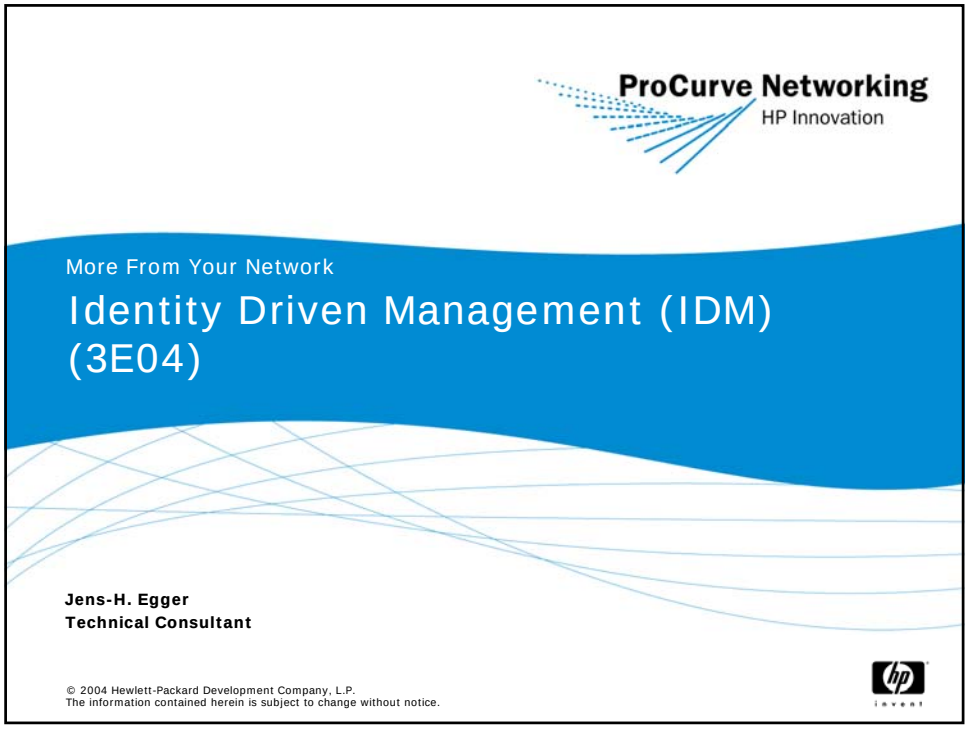
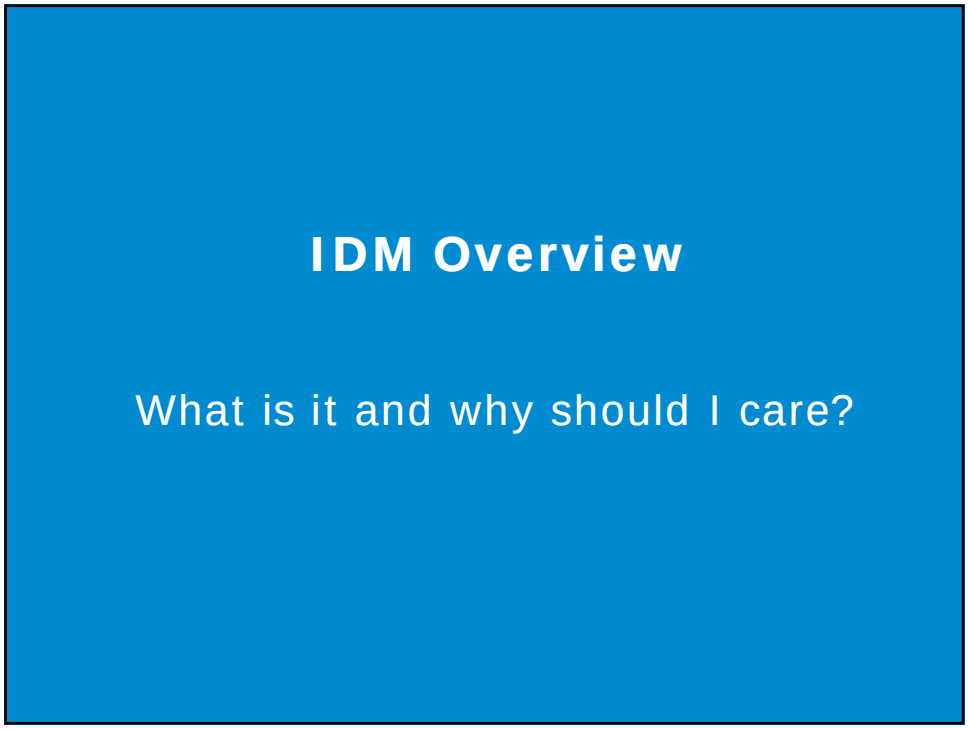
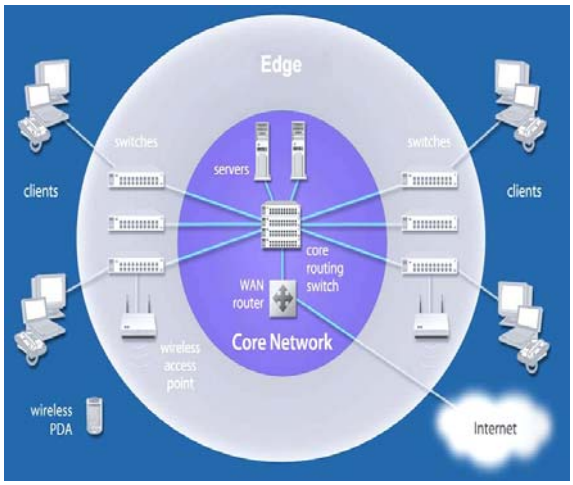

ProCurve Networking
HP Innovation
More From Your Network
Identity Driven Management (IDM)
(3E04)
Jens-H. Egger
Technical Consultant
© 2004 Hewlett-Packard Development Company, L.P.
The information contained herein is subject to change without notice.


IDM Overview
What is it and why should I care?

ProCurve Networking
HP Innovation

Core Centric Networks

- Adding more at the edge increases “decision making” in the core – constrained scalability
- Cost/performance for core switches is not linear – expensive and constrained scalability
- Many decision functions CANNOT be deferred to the core – can’t meet emerging application needs

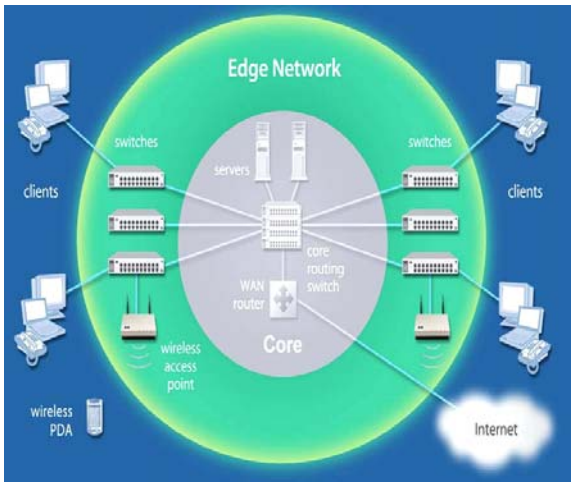


3

ProCurve Networking
HP Innovation

Edge Centric Networks

- Every EDGE switch adds “decision making” capacity – linear scalability and meets all emerging application needs
- EDGE switches are standardized volume components – affordable scalability
- A simple high-bandwidth core is sufficient – reduced cost and complexity

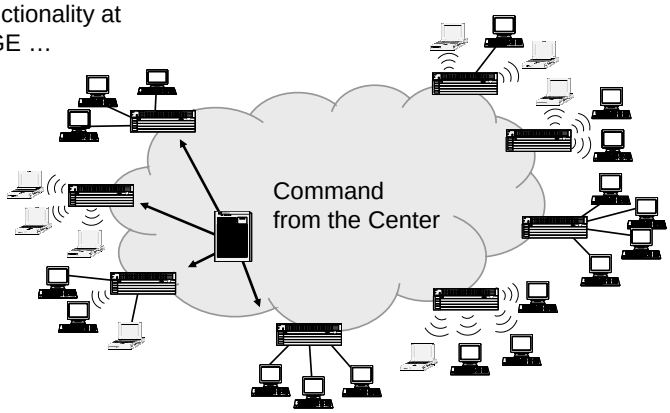


4

The Problem with Intelligent Edges…

ProCurve Networking
HP Innovation

Rich functionality at the EDGE …



… requires Command from the Center

5

The Two Key Principles

ProCurve Networking
HP Innovation

Adaptive EDGE Architecture:

A business driven network that behaves uniquely and appropriately for every user

Command from the Center

Automates the configuration of the EDGE features to provide the unique behavior

Control to the EDGE

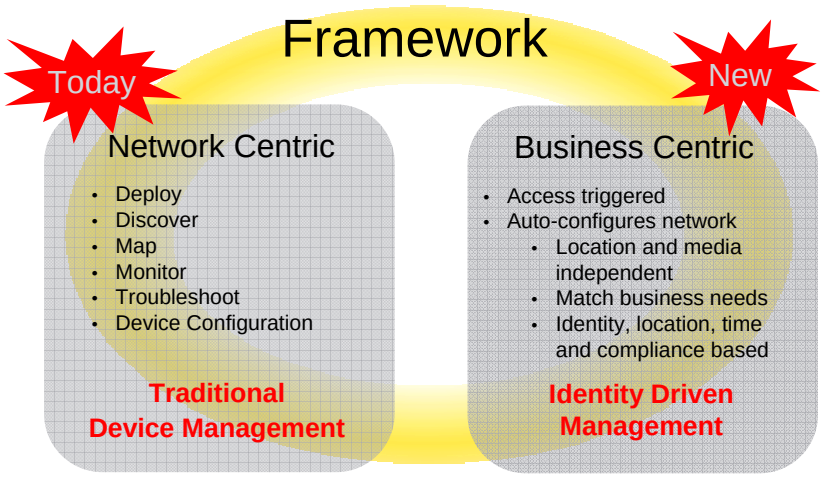
The switch and access point features that allow the correct decisions to be implemented at the EDGE

6

Command from the Center

Managing the Adaptive Edge

ProCurve Networking
HP Innovation

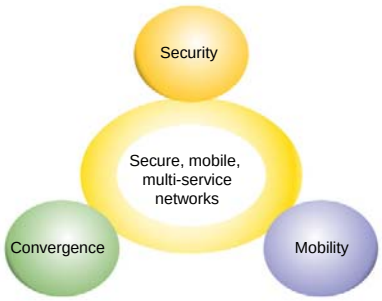


7

Command from the Center

Identity Driven Management

ProCurve Networking
HP Innovation



A flexible network for a constantly changing business world

Easily create user profiles using access communities

- communities contain resources and users
- communities can have their own attributes (time, location, etc.)
- automatically creates configuration parameters and stores in database

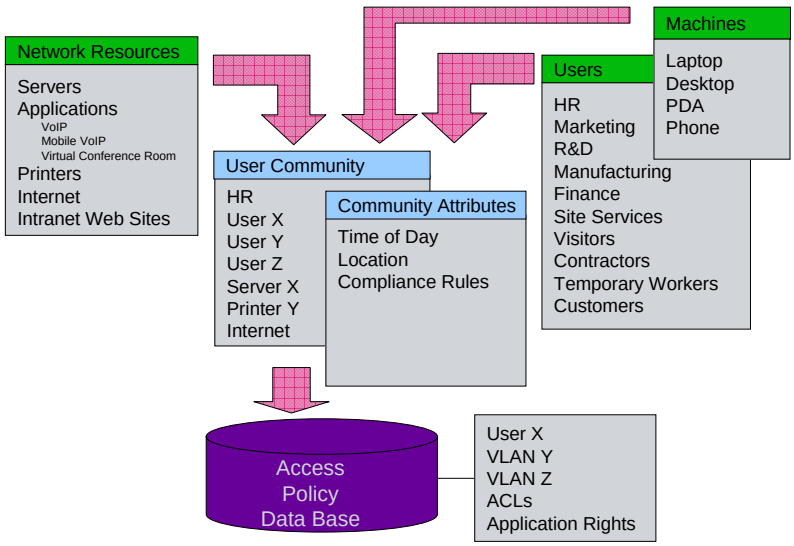
Network adapts itself to each users' unique needs

- triggered by user authentication (like 802.1X)
- pushes configuration information out to the EDGE
- easily adjust resources, users and community attributes configured and enforced at next login

8

Creating Access Policies

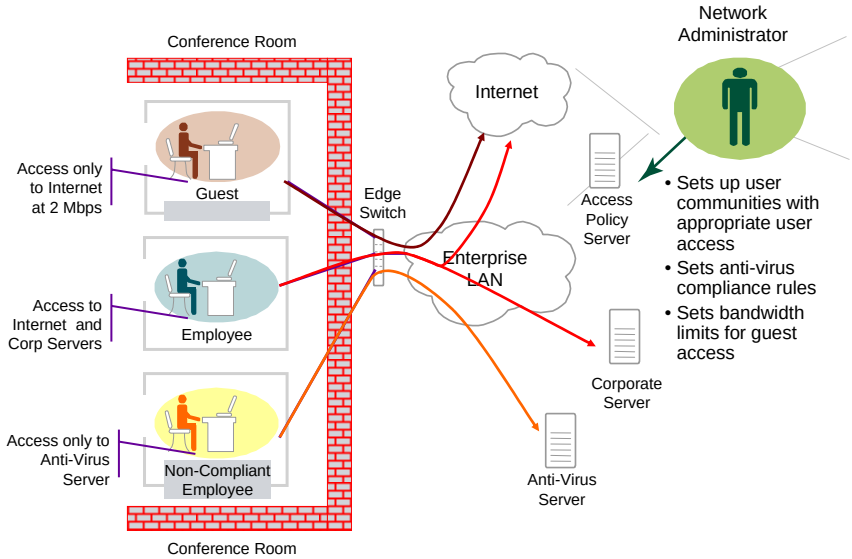
ProCurve Networking
HP Innovation



9

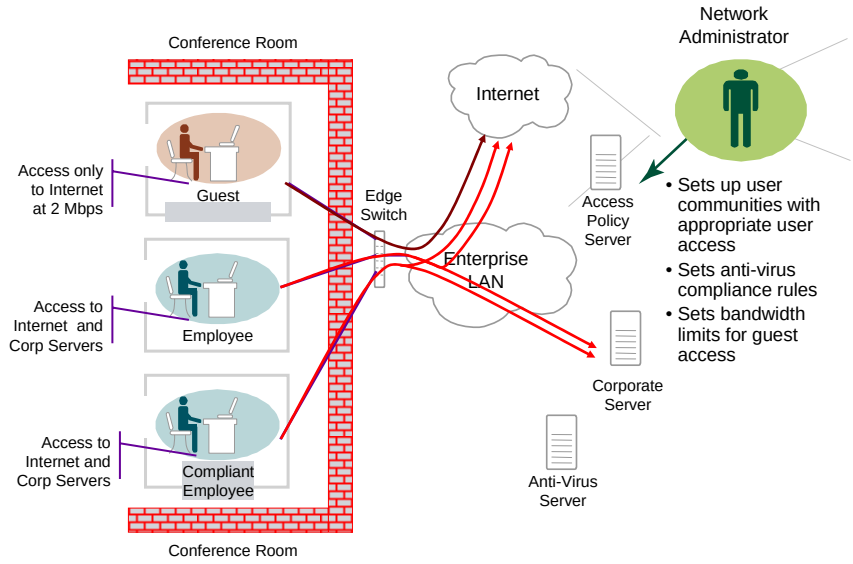
On-Demand Network User Experience

ProCurve Networking
HP Innovation



10

On-Demand Network User Experience

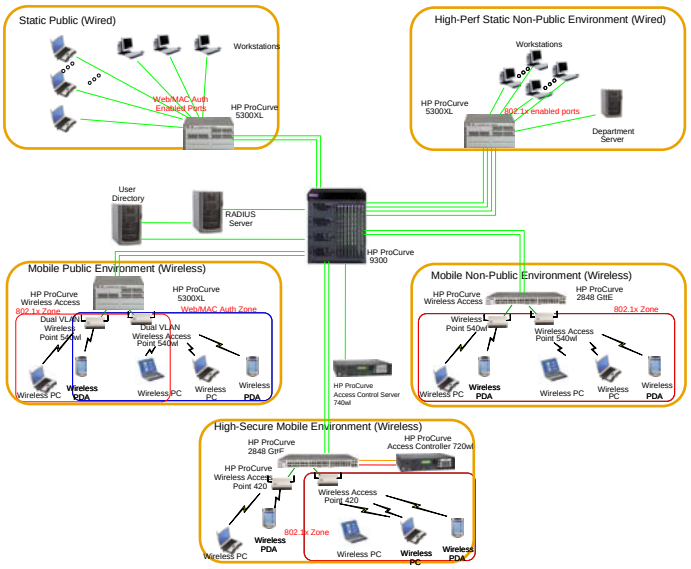


IDM Architecture

Where does it fit and how does it work?

ProCurve Networking
HP Innovation

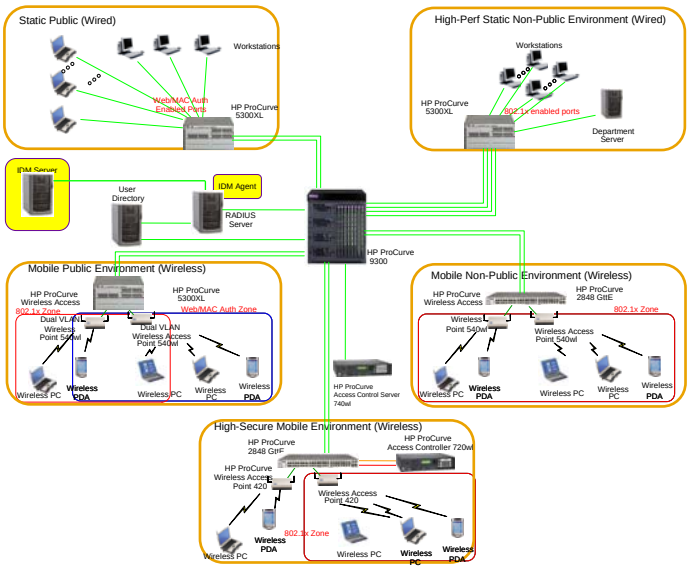
Access Control Architecture



13

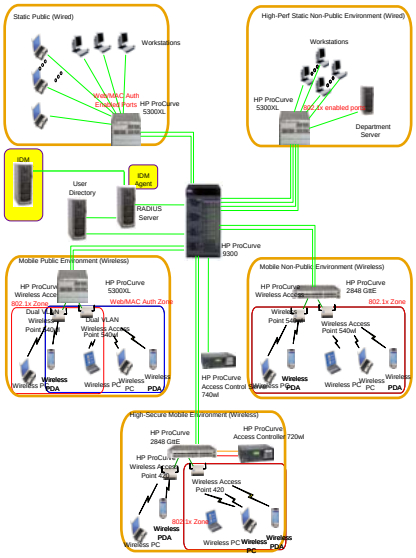
ProCurve Networking
HP Innovation

Access Control Architecture



14

Access Control Architecture



IDM 1.0

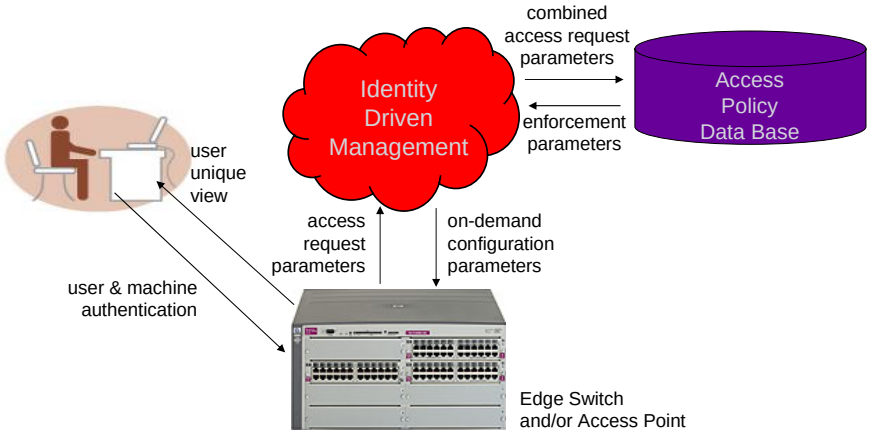
- ✓Built on existing Access Control Architecture
- ✓Adjusts VLAN, QoS, and BW at the edge (depending on device capabilities)
- ✓Works in wired and wireless environments
- ✓Works with existing user/enterprise directories
- ✓Works in a redundant RADIUS environment

Future

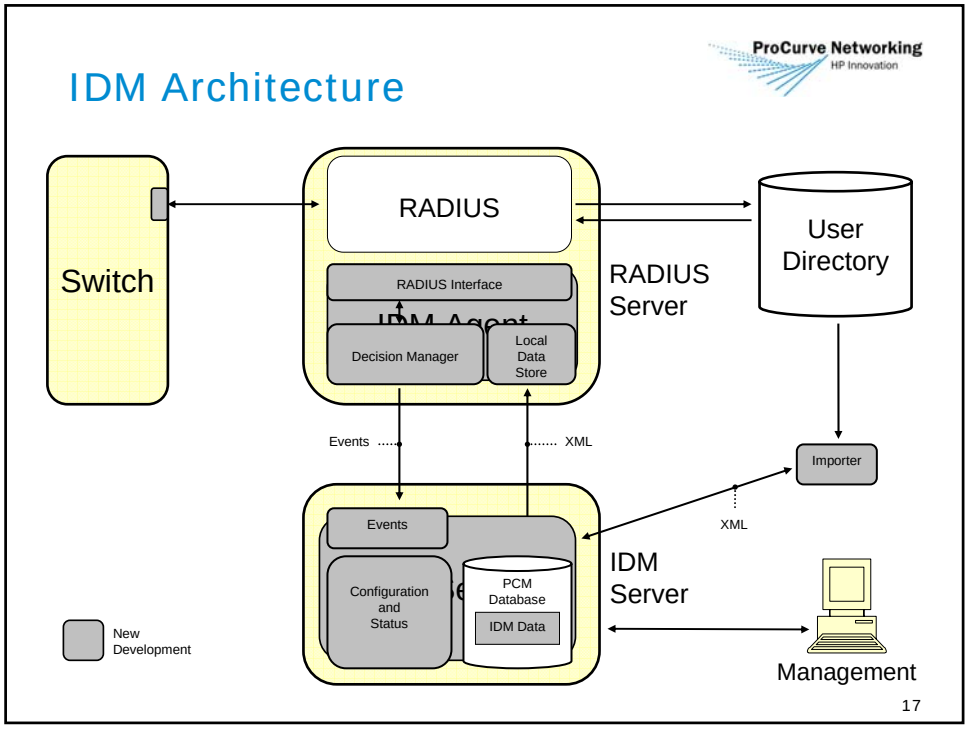
- IDM is designed to support future functionality such as ACLs and roaming.

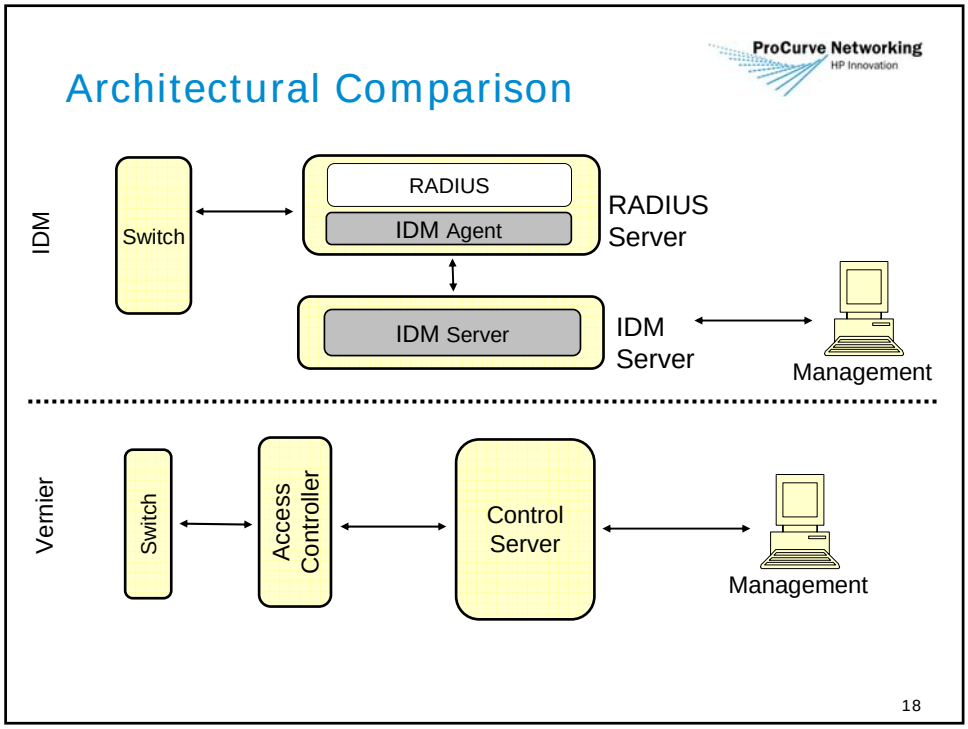
15

Deploying Access Rights

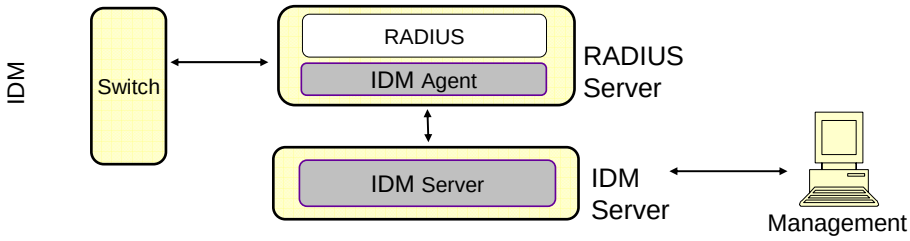


16


ProCurve Networking
HP Innovation
IDM Architecture
Switch
RADIUS
RADIUS Interface
Decision Manager
Local Data Store
RADIUS Server
User Directory
Events
XML
Importer
XML
Events
Configuration and Status
PCM Database
IDM Data
IDM Server
Management
New Development
17


ProCurve Networking
HP Innovation
Architectural Comparison
IDM
Switch
RADIUS
IDM Agent
RADIUS Server
IDM Server
IDM Server
Management
Vernier
Switch
Access Controller
Control Server
Management
18

Architectural Benefits



- Minimize impact on switch firmware
- Minimize cost of switches
- Support multiple types of RADIUS servers
- Support future RADIUS standards
- Single, integrated point of management

19

Some IDM Use Cases

- Guest VLAN, Lobby Access, Conference Room, Classrooms, Contractors
- Automatic separation of user groups (e.g. faculty and students, finance and everybody else)
- Automatic prioritization for VoIP phones
- Access rights for mobile users that follow them wherever they plug into the network
- Remediation VLAN for unregistered users

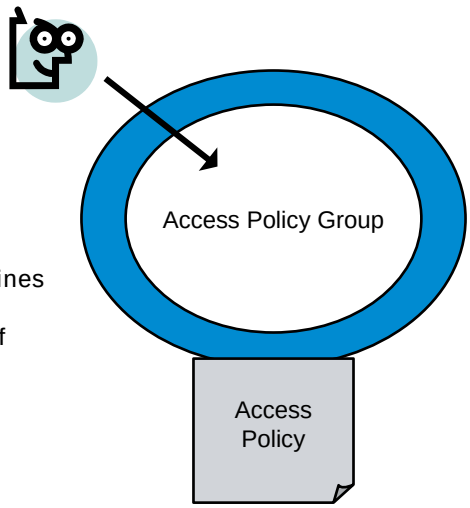
20

IDM Configuration Model

How do I put it together?

ProCurve Networking
HP Innovation

Configuration:
Users and Access Policy Groups



A ***User*** belongs to an ***Access Policy Group***

An ***Access Policy Group*** defines the access policy rules which determine the access rights of the connecting user.

22

ProCurve Networking
HP Innovation

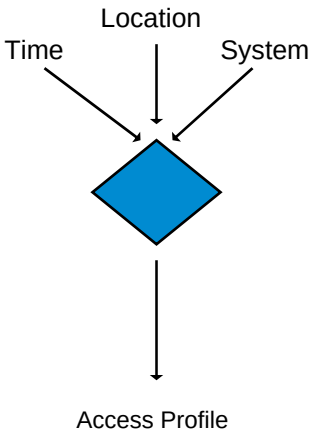
Configuration:
Access Policies

An Access Policy specifies the input conditions used to determine the access rights of the user.

The input conditions:

- Time
- Location
- System

The output access rights are defined in the Access Profile



23

ProCurve Networking
HP Innovation

Configuration:
Access Policy Rules

The ***Access Policy*** is defined in terms of a set of ***Access Policy Rules***

The rules are evaluated in order until a match is found

AccessPolicyGroup: PNB Guest

Location	Time	System	Access Profile
R3Lobby	Working Hours	<any>	Internet Only
<any>	<any>	<any>	Deny Access

24

ProCurve Networking
HP Innovation

Configuration:
Access Profile

An ***Access Profile*** defines a set of a access rights to the network, including:

- VLAN
- QoS
- Bandwidth Limits

AccessProfile:

Guest Level Access

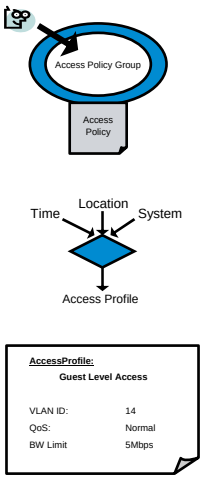
VLAN ID:	14
QoS:	Normal
BW Limit	5Mbps

25

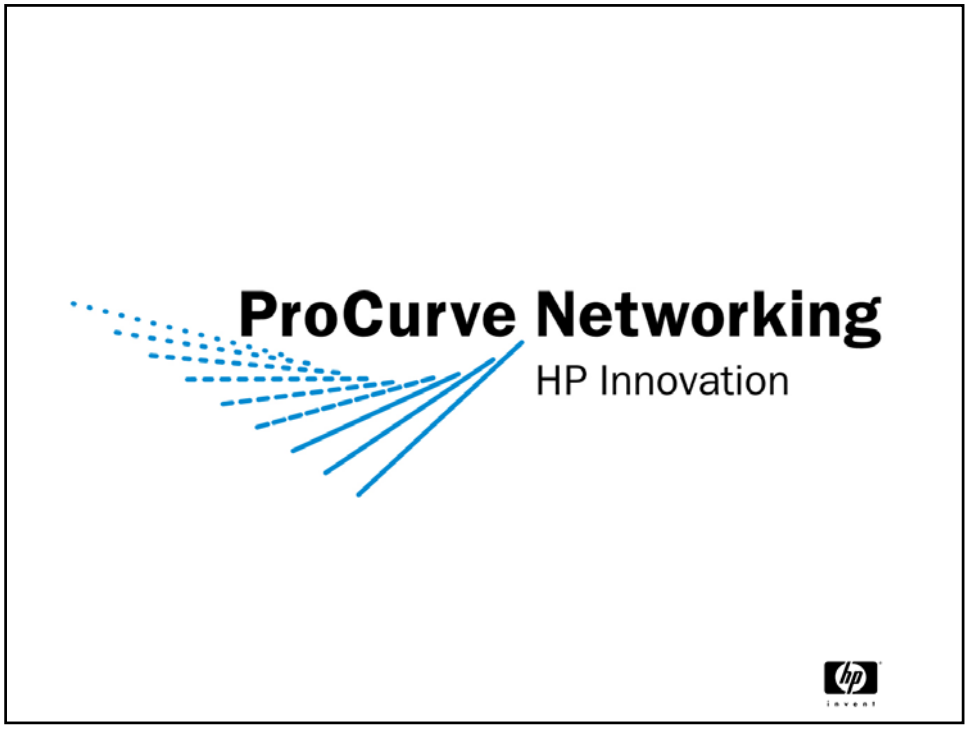
ProCurve Networking
HP Innovation

Configuration:
Putting It All Together

- The user logs in to the network.
- IDM determines the *Access Policy Group* for the user.
- IDM processes the *Access Policy*, analyzing the *Policy Rules* and determining the appropriate *Access Profile.*
- IDM sends the access rights defined in the *Access Profile* to the authenticating switch in the form of RADIUS attributes.
- The switch applies the access rights.



26


ProCurve Networking
HP Innovation