



CISCO SWAN AND WLAN SECURITY UPDATE

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Cisco Structured Wireless-Aware Network (SWAN) Framework

Infrastructure

Cisco switches and routers with wireless-aware Cisco IOS® Software



NEW: Wireless LAN Services Module (WLSM) for Catalyst® 6500 Series

Management

Cisco Net Management (WLSE) 802.1X AAA Server (ACS)



NEW: CiscoWorks WLSE 2.7

Access Points

Cisco IOS® Software APs/Bridges



NEW: Cisco Aironet® 1300 Series Outdoor AP/Bridge

Clients

Wi-Fi client adapters
Cisco and Cisco Compatible clients



NEW: Cisco Compatible Client form factors

Catalyst 6500 Series Wireless LAN Services Module (WLSM)

Cisco.com

Key Goals

Fast Secure L3 Mobility – Campus-wide

- Preserves existing subnets
- No Campus Spanning VLANs needed

Industry's First Mobility Groups

L2/L3 Non-Stop Forwarding, Stateful Switchover

Leverages all Catalyst 6500 Services
and Service Modules

Designed as Network Infrastructure

- Separate Control and Data Plane Forwarding

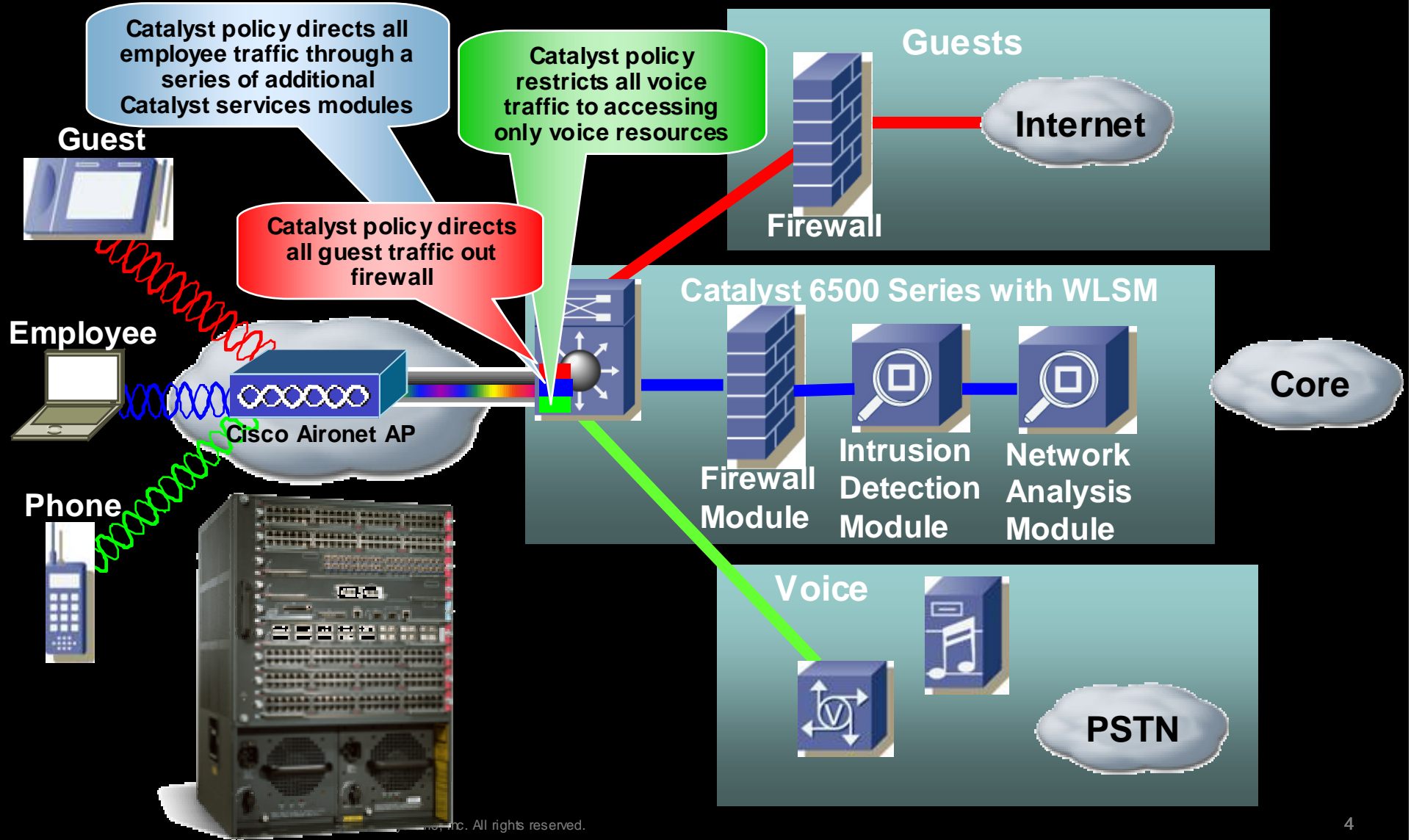
Unmatched Scalability

- Hundreds of Access Points, Thousands of Users



Catalyst 6500 Series Wireless LAN Services Module (WLSM)

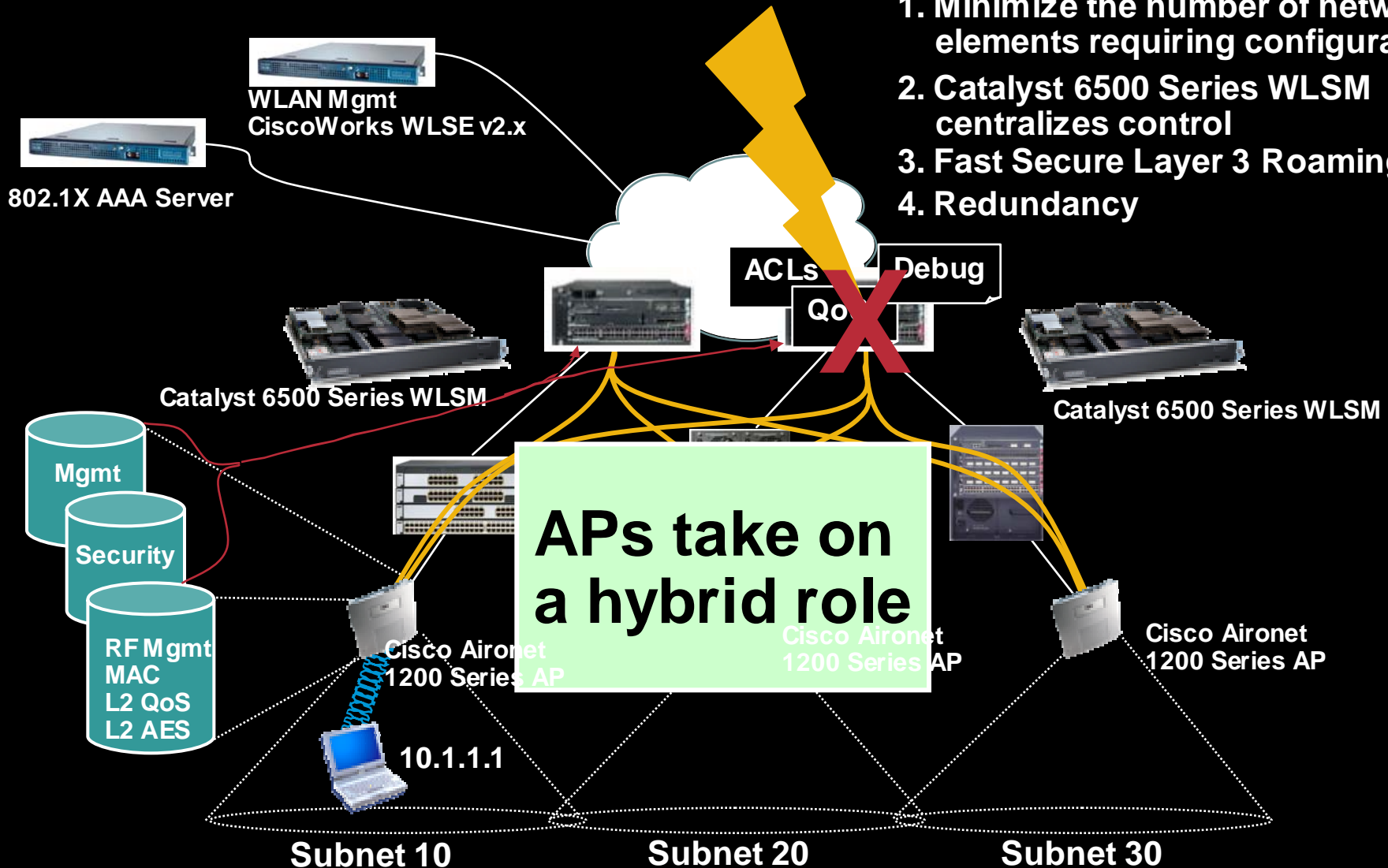
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Catalyst 6500 Series WLSM: The Architecture

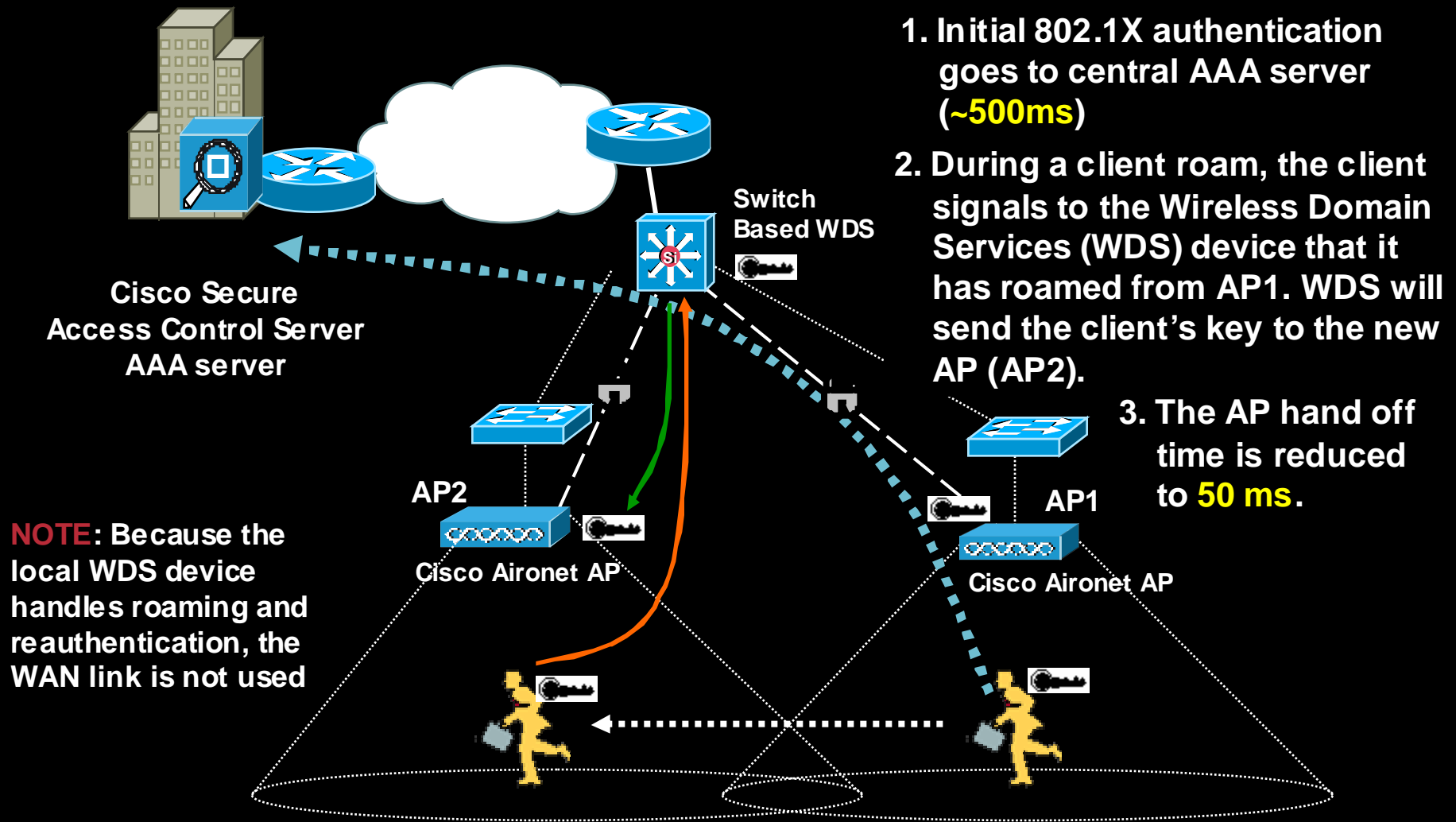
Cisco.com

1. Minimize the number of network elements requiring configuration
2. Catalyst 6500 Series WLSM centralizes control
3. Fast Secure Layer 3 Roaming
4. Redundancy



Cisco SWAN Fast Secure Layer 3 Roaming

Cisco.com



CiscoWorks Wireless LAN Solution Engine v.2.7

Cisco.com

Secure:

- Rogue AP detection
- Rogue AP suppression through port shutdown



RF and AP Management:

- Single point of management for AP images
- XML API support for radio management
- Real time troubleshooting reports
- Assisted site surveys and automated re-site surveys



High Availability:

- Cold Standby WLSE Redundancy
- Self-Healing WLANs



CiscoWorks Wireless LAN Solution Engine (WLSE) 2.7



Scalable to 2500 AP's

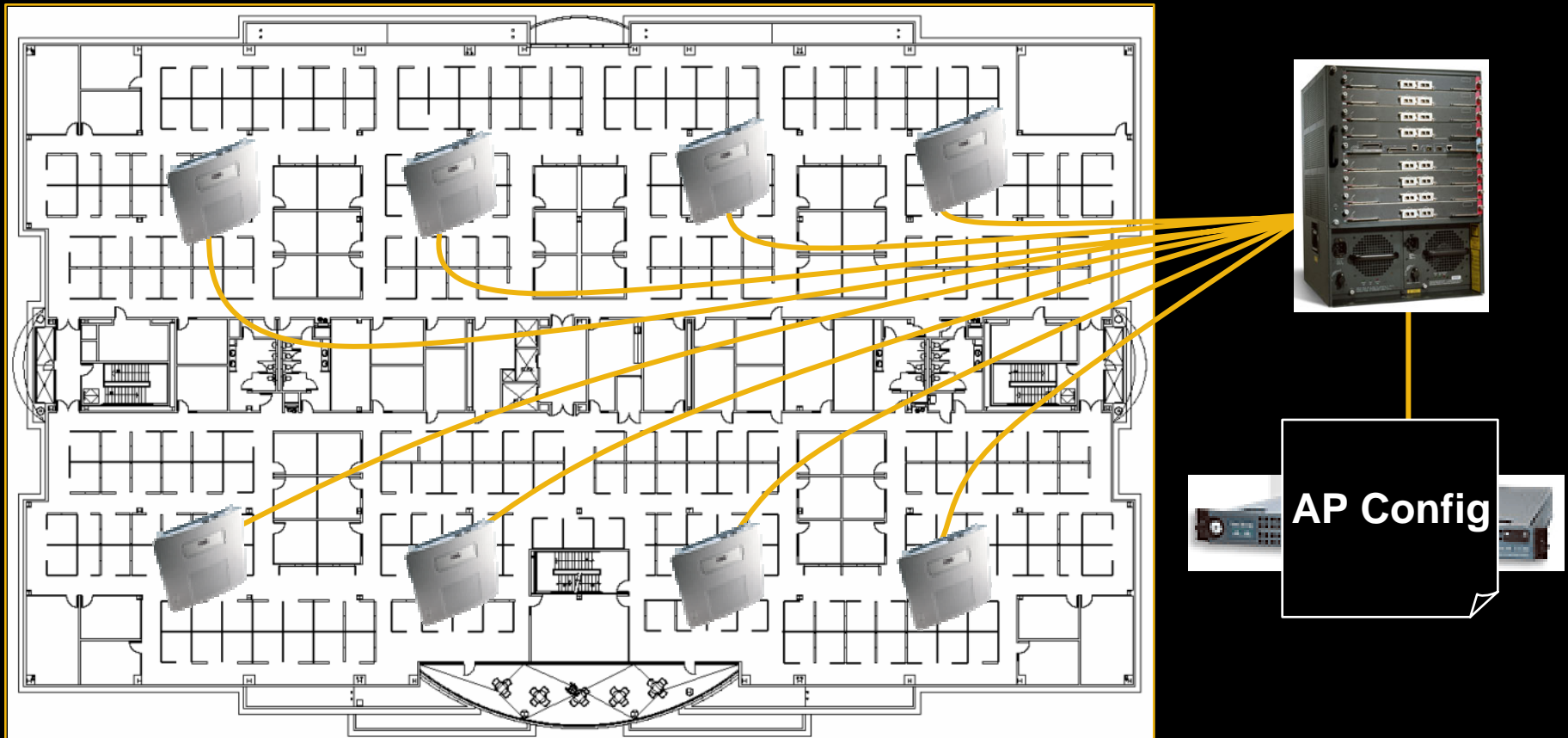
Supports:

802.11b, 802.11g and
802.11a radios

Cisco SWAN Out of Box Deployment: Access Point Configuration

Cisco.com

1. When Access Points (APs) are initially powered up, they will find and communicate with the CiscoWorks WLSE
2. The CiscoWorks WLSE loads each AP with its Cisco IOS Software configuration



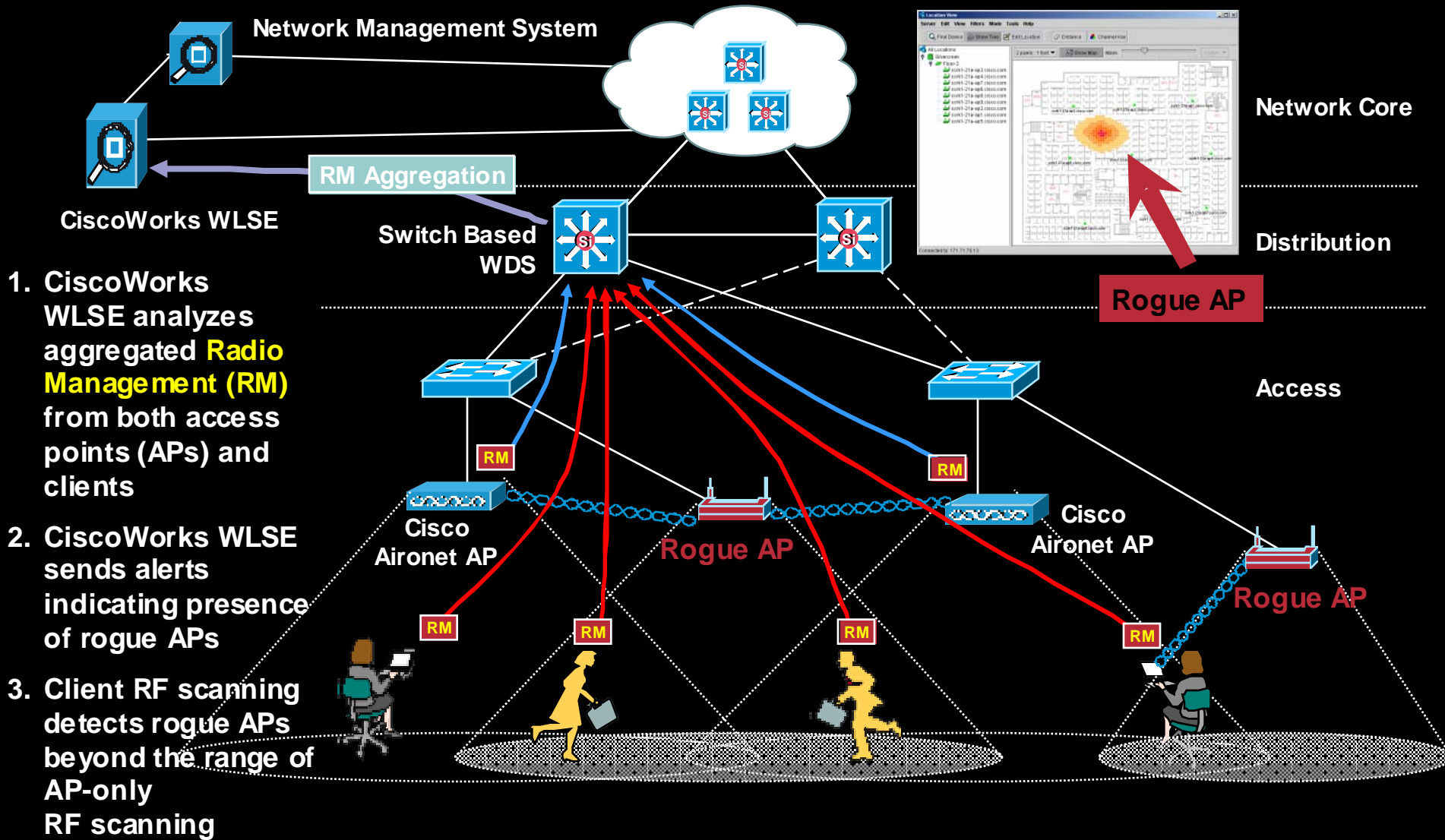
Cisco SWAN Out of Box Deployment: Assisted Site Survey

Cisco.com

1. CiscoWorks WLSE instructs APs to measure and report the Radio Frequency (RF) environment and pushes optimal RF configurations to APs
2. CiscoWorks WLSE uses measurements from a client as it walks the perimeter of the coverage area to further fine-tune RF coverage



Cisco SWAN Rogue AP Detection: AP and Client-Assisted RF Scanning

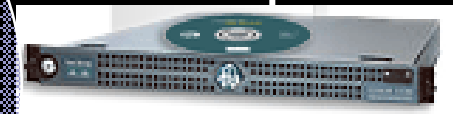
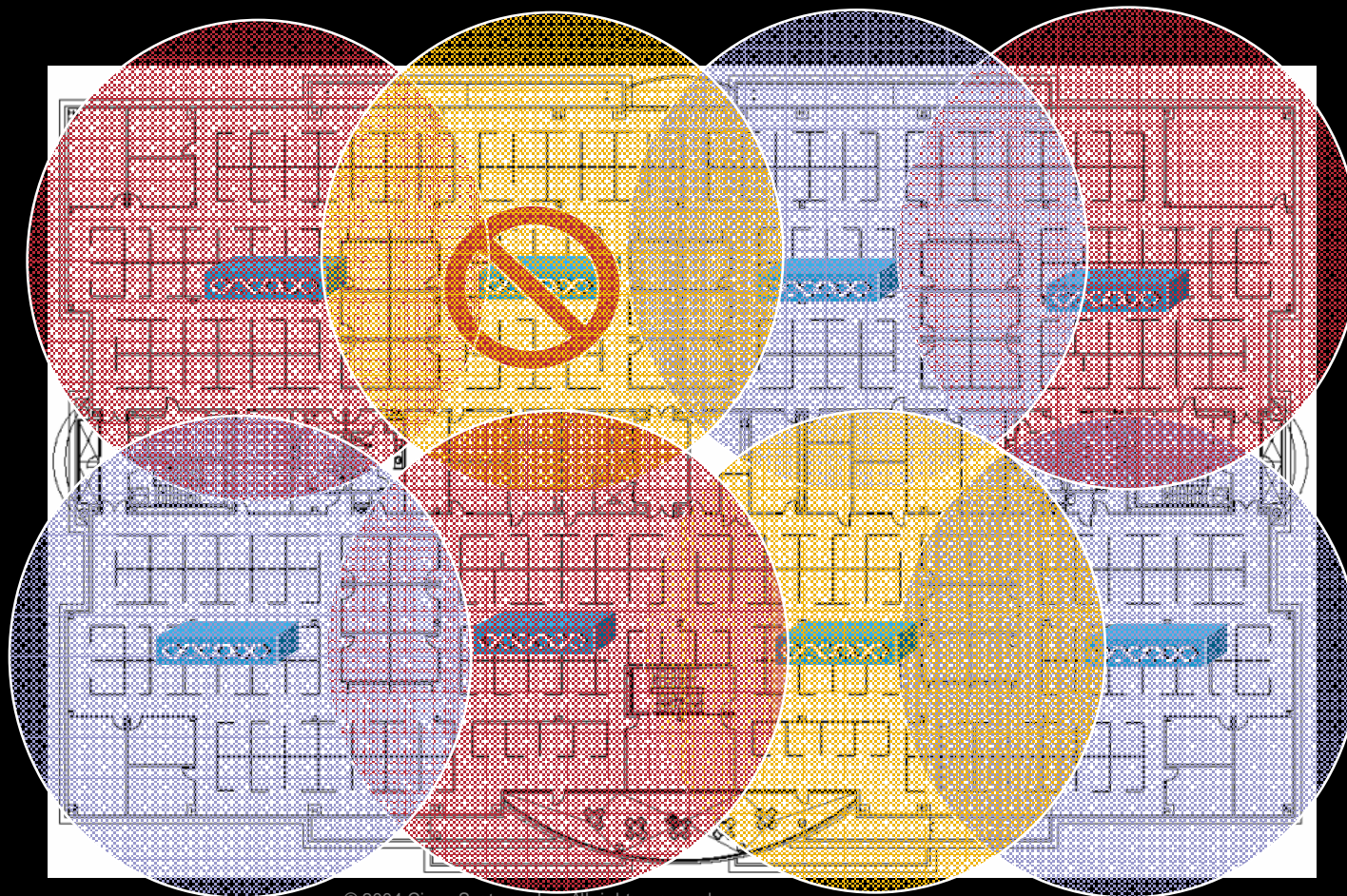


1. CiscoWorks WLSE analyzes aggregated **Radio Management (RM)** from both access points (APs) and clients
2. CiscoWorks WLSE sends alerts indicating presence of rogue APs
3. Client RF scanning detects rogue APs beyond the range of AP-only RF scanning

Cisco SWAN Self-Healing WLANs

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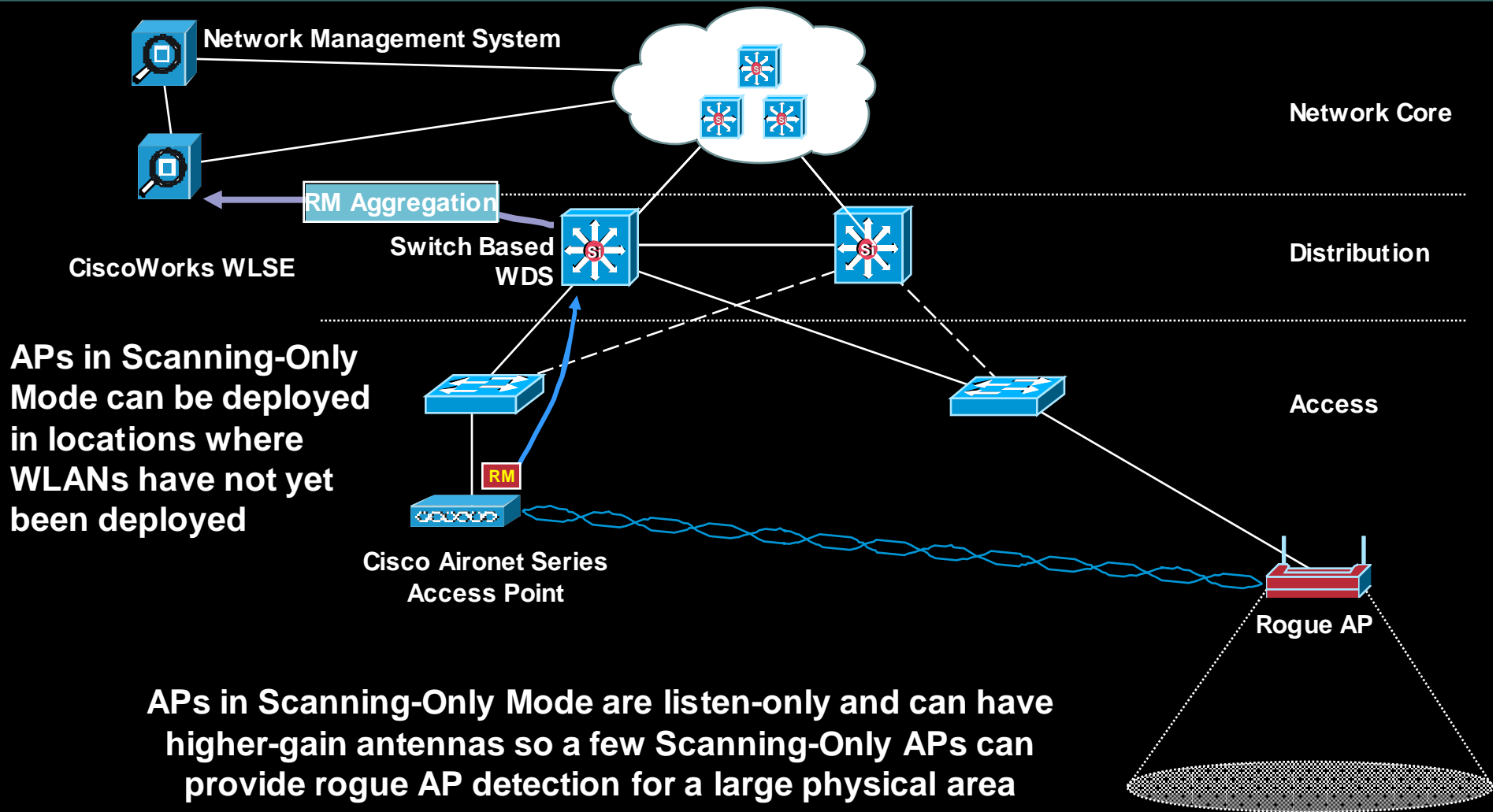
1. Timely response to loss of AP/Radio
2. Stable mechanism



CiscoWorks WLSE

Cisco SWAN Rogue AP Detection: AP Scanning-Only Mode

Cisco.com



Whitepapers

Cisco.com

Check these sites for excellent technical references on the Cisco Structured Wireless-Aware Network and Cisco WLAN Security:

Cisco SWAN:

<http://www.cisco.com/go/swan>

Cisco Aironet:

<http://www.cisco.com/go/aironet>

Cisco Catalyst 6500 Series WLSM:

<http://www.cisco.com/en/US/products/ps5865/index.html>

CiscoWorks WLSE

<http://www.cisco.com/go/wlse>

Cisco SAFE Blueprint:

<http://www.cisco.com/go/safe>

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