

# Remote Networks with Aruba Instant

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# Agenda



Key Applications & Verticals

Requirements & Challenges

Aruba Instant for Remote Networking



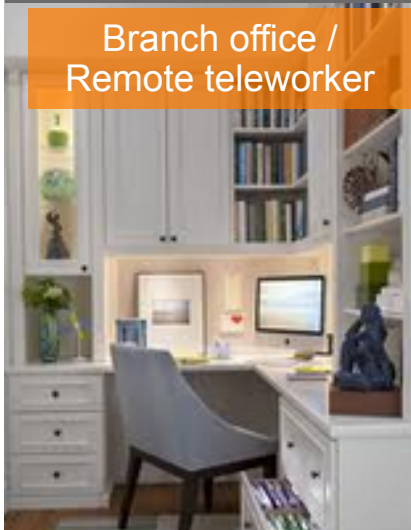


# Applications & Verticals

# Who should care?



Branch office /  
Remote teleworker



Retail



K-12



Healthcare








# Requirements & Challenges

# The Challenge of Mobility



The diagram illustrates the challenges of mobility. On the left, a collection of mobile devices (laptops, tablets, smartphones) is shown floating in a dark, cloudy space. Three lines extend from this cluster to three distinct icons on the right, each representing a challenge. The top icon shows a red puzzle piece and a yellow warning triangle. The middle icon shows a smartphone screen with a "Wifi Connection Lost" error and a yellow warning triangle. The bottom icon shows a smartphone with a padlock and a yellow warning triangle.

Complex to deploy and manage

Unreliable connection & poor app performance

Lack of security for employee & guest personal devices

# Remote Networking Requirements

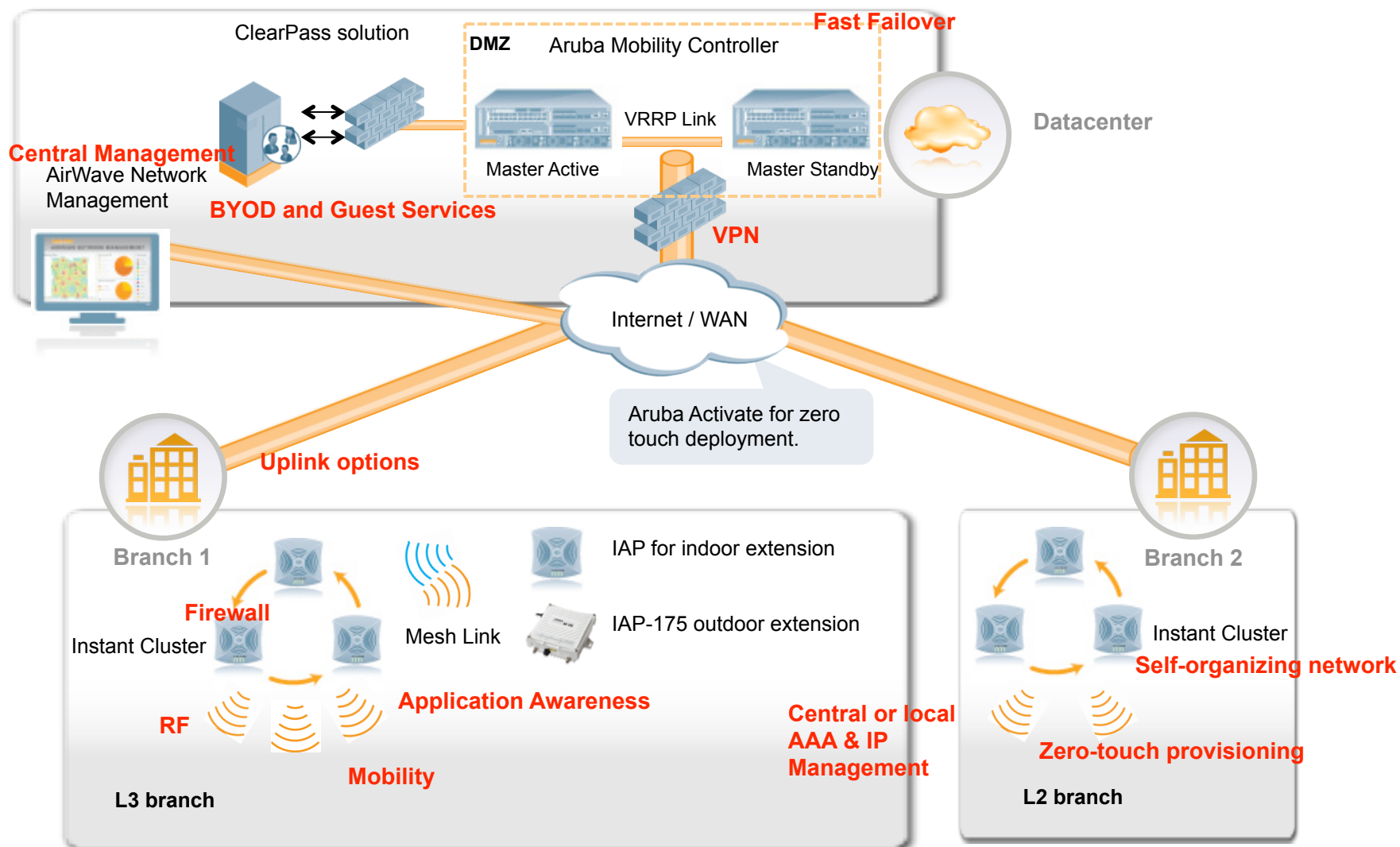


- Few components on-site
- No special expertise on-site
- Full functionality
- Resiliency
- Centralized management and debug-ability





# Instant – VPN Solution Architecture



# Instant – VPN Solution Components



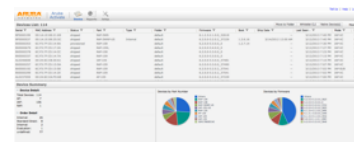
## Access Points



## AirWave



## Activate



## *Optional*

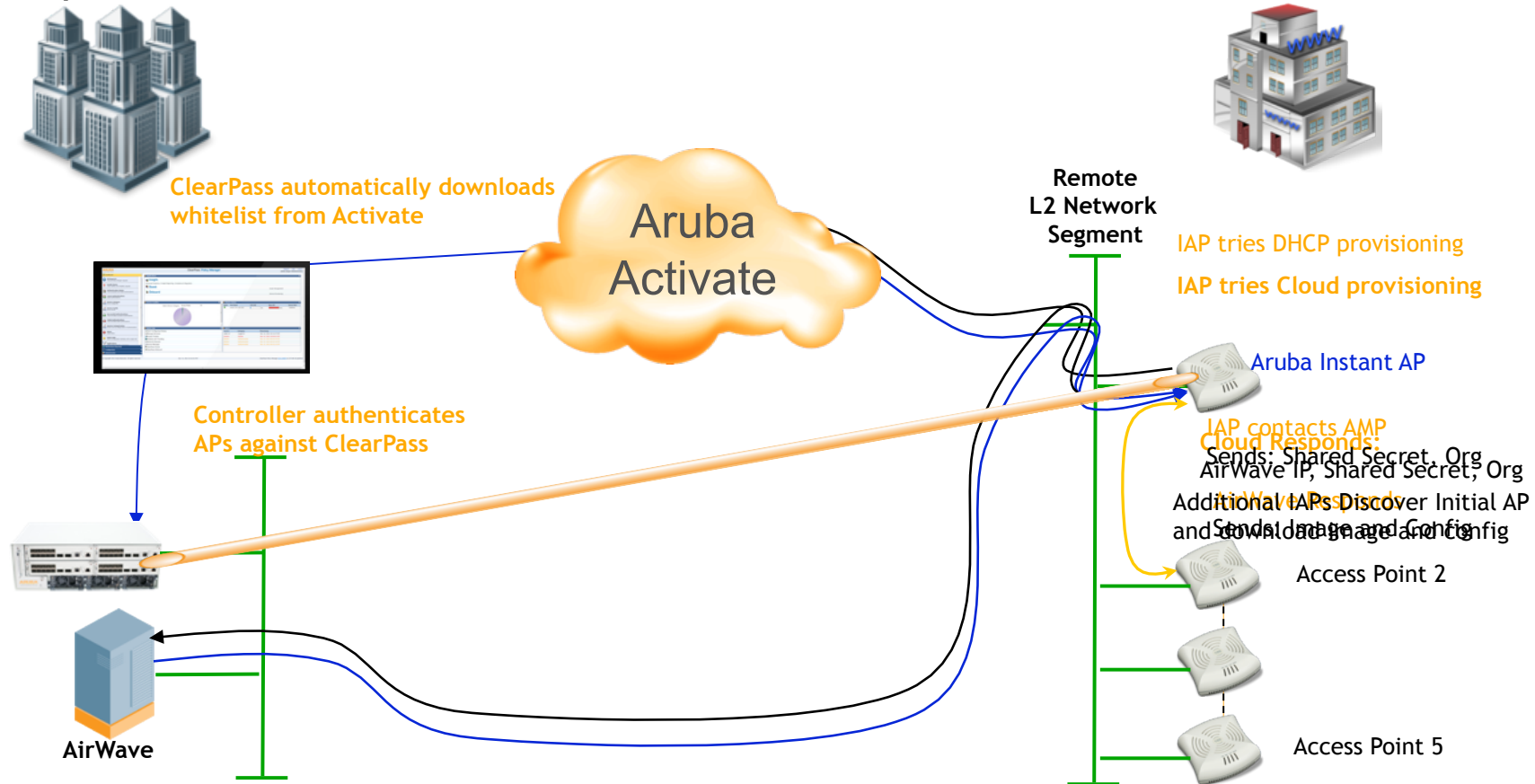
- **VPN – Aruba Mobility Controllers**
- **Whitelist Management - ClearPass**
- **Switching – Mobility Access Switches**

# Zero-Touch Provisioning IAP + VPN



## Campus Network

## Home/Remote Location

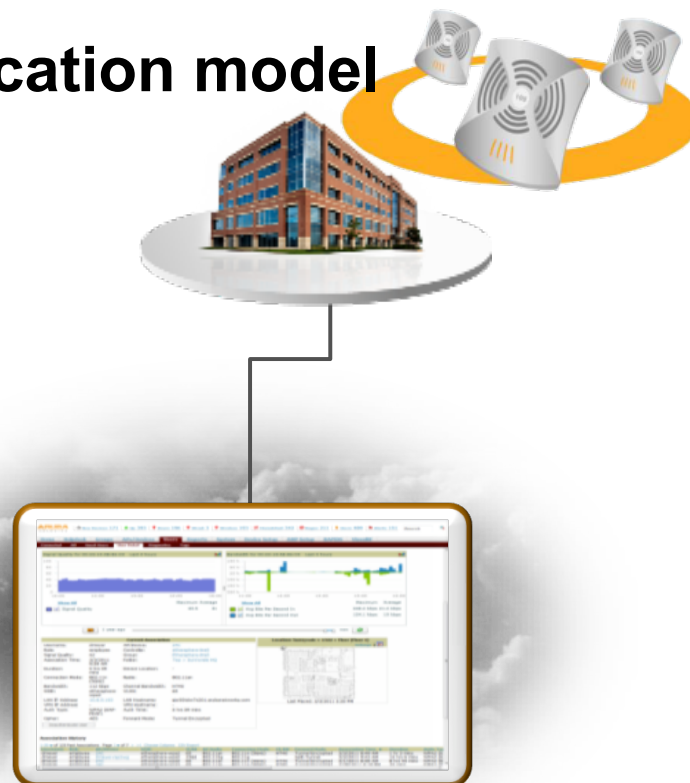


# Centralized Management



Demo

- New device-NMS communication model
- NMS Scalability
- Bulk configuration
- Remote troubleshooting



Private-cloud Management



# Instant VPN - Setup



Demo

## Key Features

- **Zero-touch (remote) VPN configuration**
- **Automatic whitelisting**
- **No controller licensing required**
- **Single IPSec tunnel per IAP network**
- **Scalability**
- **Site survivability**

## 802.1x Authentication

- Dynamic RADIUS Proxy
- External RADIUS & load-balancing
- Role-derivation
- Authentication Survivability

## Guest Authentication

- Centralized guest management – ClearPass Guest
- RADIUS accounting

# Instant VPN – client IP & data flow

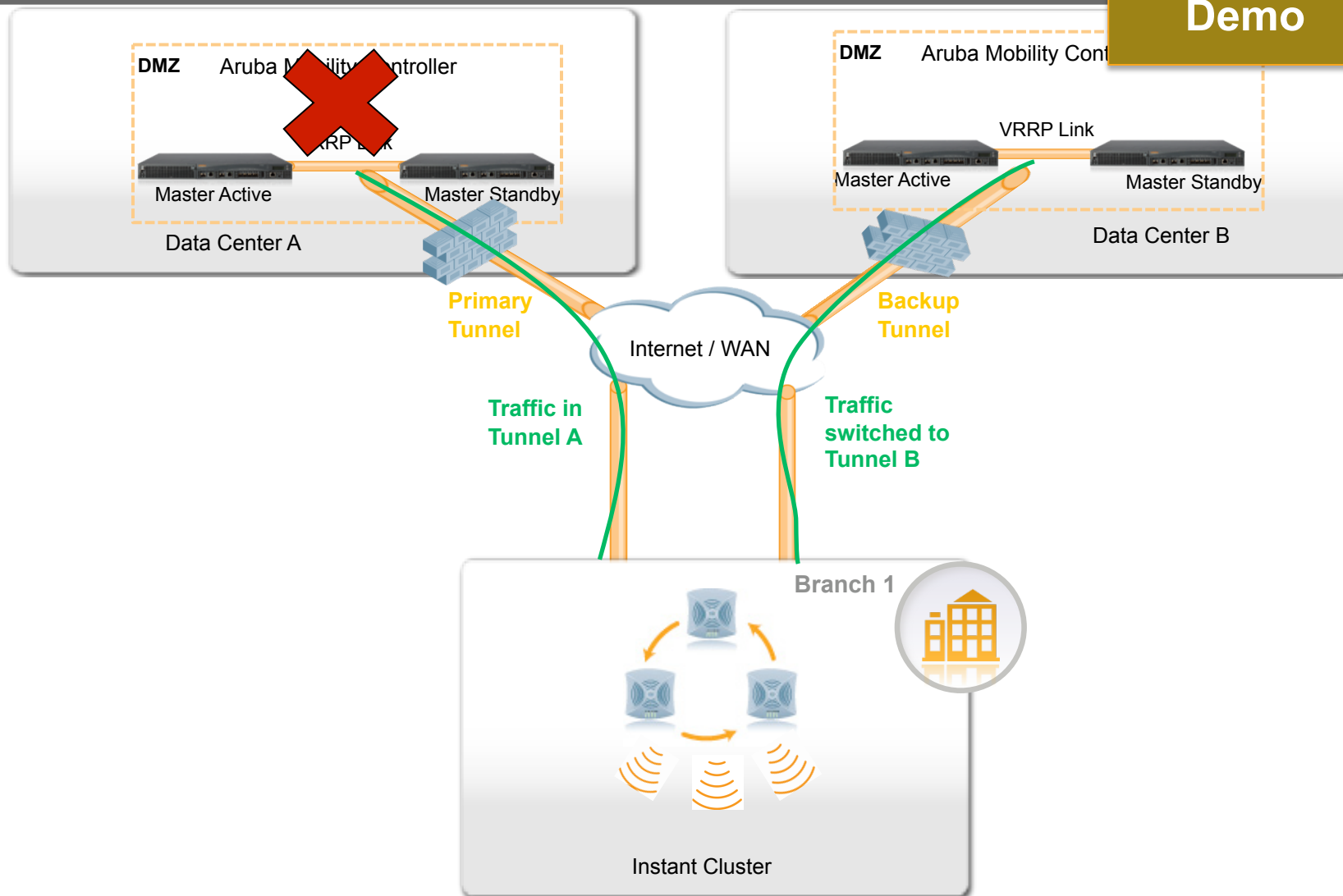


- **Local**
  - User traffic NATted, virtual-controller assigned IP
- **Centralized Layer-2**
  - User traffic bridged, IP assignment from datacenter
- **Distributed Layer-2**
  - User traffic bridged, IP assignment locally managed
- **Distributed Layer-3**
  - Layer-3 subnet on-site, routed to datacenter, IP assignment locally managed

# Instant VPN – Fast Failover



Demo







# Advantages of Instant-based solution



## Platform

- Independent regulatory domains
- Phased firmware upgrades
- Requires minimal head-end resources
- Local control-plane

## Traffic engineering

- Enables mobility in multi-AP branches
- Enables full site survivability
- Constrained broadcast domains

## Management

- Centralized troubleshooting
- Investment protection as branch grows into campus



# Roadmap



- **Uplink intelligence**
- **Secondary role-derivation**
- **Bandwidth management**
- **Aruba switch integration**
- **Cloud services**





Thank You



# AIRHEADS

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