Cisco DNA Service for Bonjour

Bonjour Services Use Cases

Various Use Cases for IT and Users

Bonjour enabled devices on the rise!

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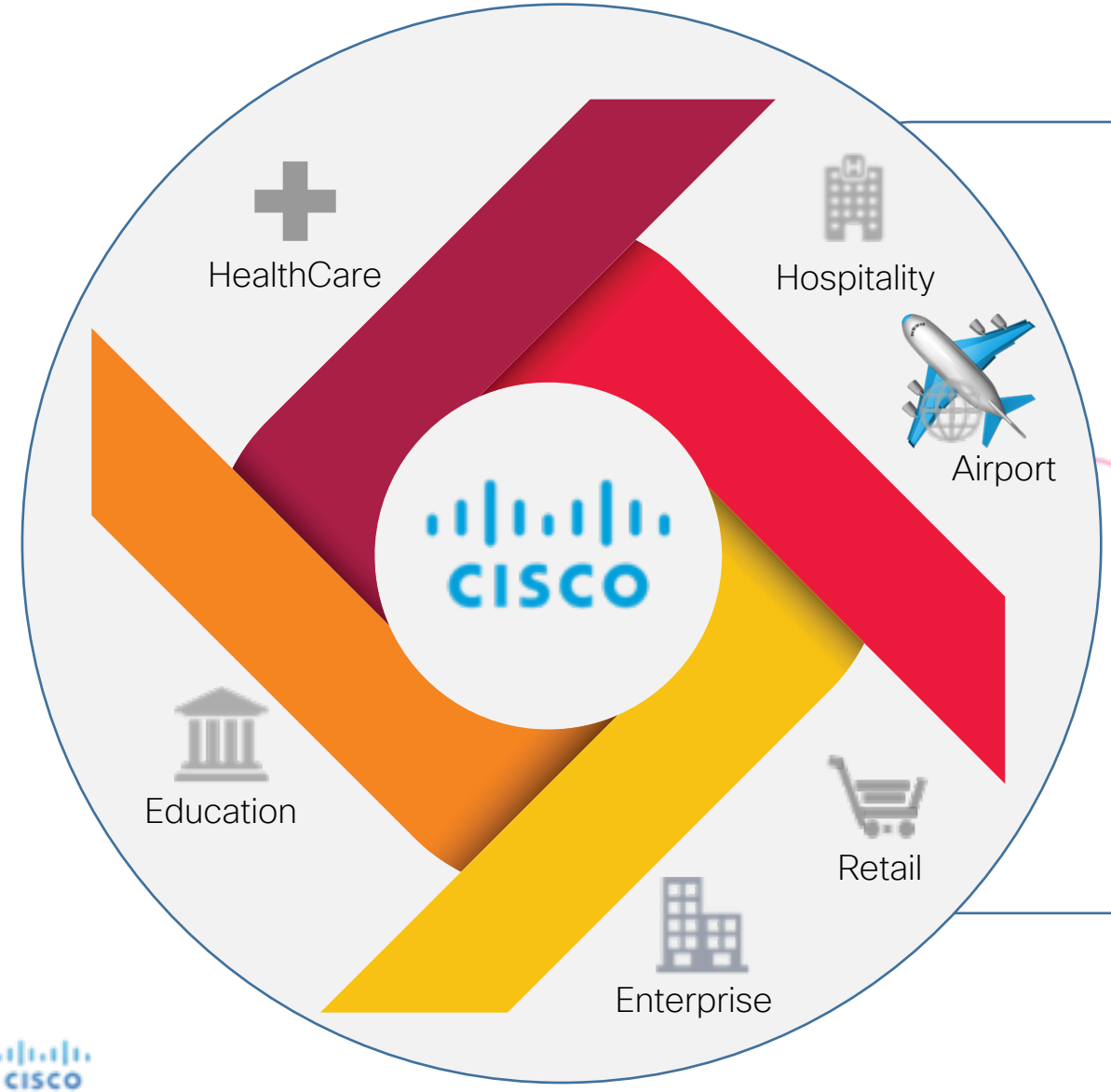
Enterprise-Class Zero-Conf Solution

Cross-Verticals common IT Requirements



IT Requirements

Service
High scale solution
No performance compromise

Access Control
BYOD Service Management
Role and Network Access Conrol Lists

Network
Wired & Wireless Service without boundaries

Secure
IT controlled service Access Controlled service distribution

Location
Location Proximity Service Wired and Wireless Mobility

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Current Limitations for Service Discovery

Technology

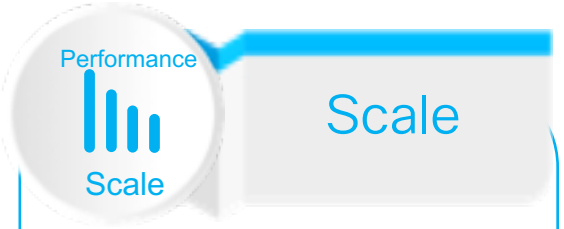
- Residential-class Technology
- Single network segment discovery
- Integration in Enterprise networks

Solution

- Fragmented Gateway Solutions
- Local System Bonjour Solution
- Not end-to-end solution

Boundary

- Single Device solution
- Unable to scale beyond single system
- Limited network discovery boundary



Scale

- Limited scale and performance
- Centralized architecture impact performance
- Sub-optimal mobility with scale

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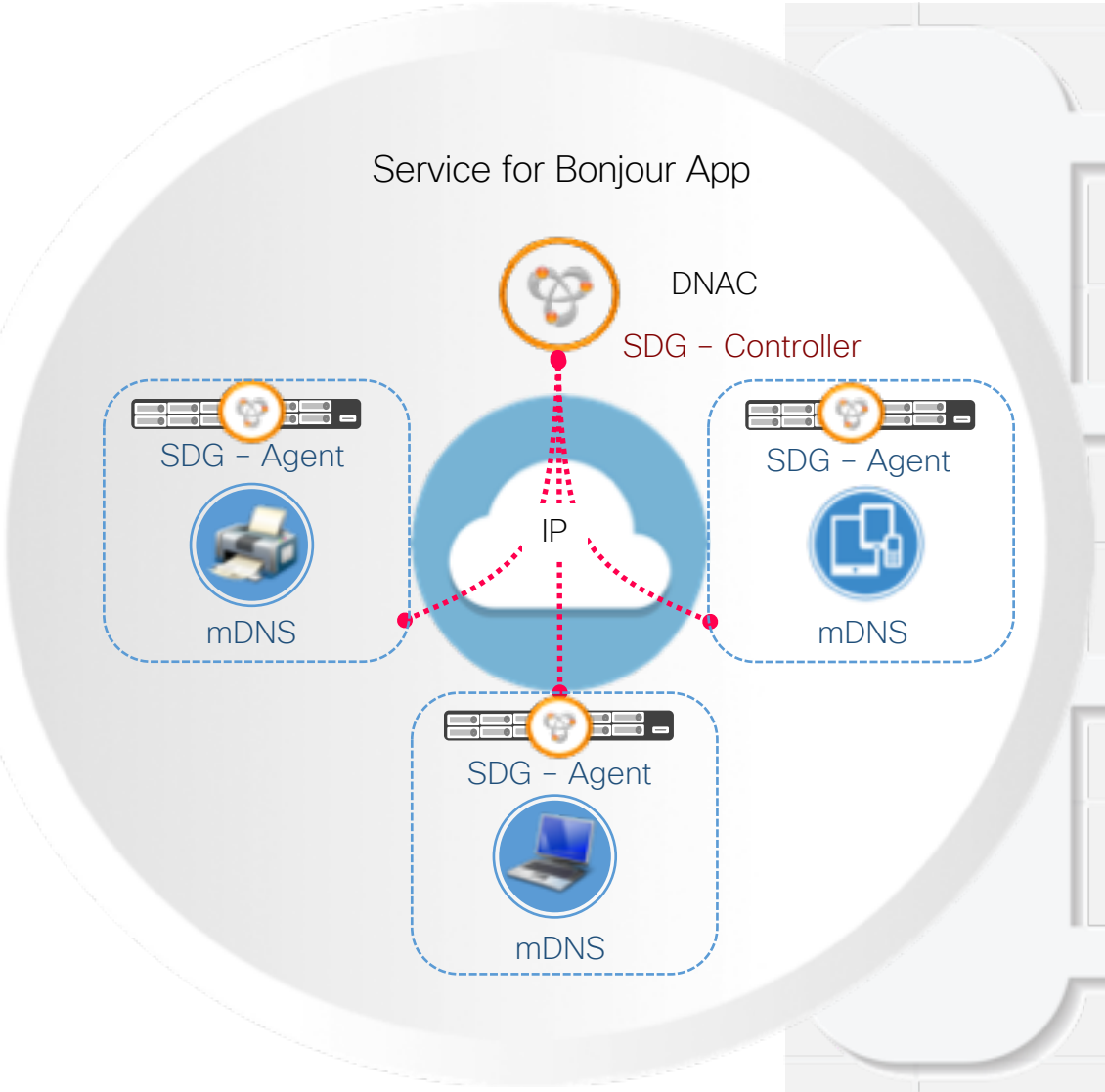
Distributed Architecture for “Service for Bonjour”



A Multi-Domain

- Two-tier Bonjour Domains
- Access conrolled end-to-end Services
- NB APIs for multi-domain SDG *

B Local Area Service Discovery

- SDG Agent and Endpoint communication
- Zero-touch Discovery and Distribution
- Distributed Service and cache management

C Wide Area Service Discovery

- SDG Controller and Agent communication
- Secured and reliable service management
- Centralized service distribution across IP network

D Seamless Integration

- Transparent User Experience
- Flexible for any network design
- Seamless WLAN integration

* = Roadmap

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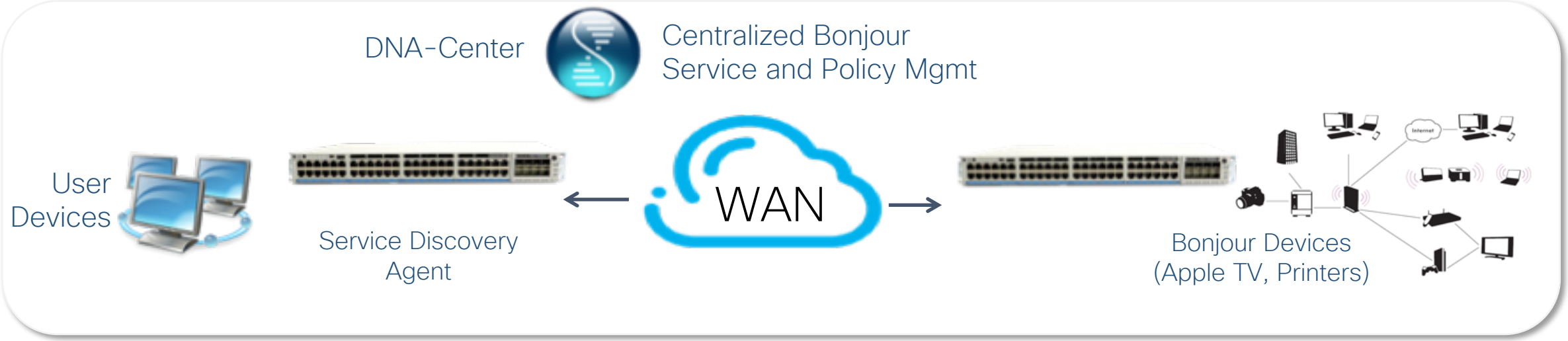
Bonjour Service Discovery Without Boundaries



Traditional Bonjour

- Single Gateway solution, cannot scale across enterprises
- No access control
- Limited Management capabilities

DNA Service for Bonjour

- **Enables** Discovery and service distribution across WAN
- **Access Controlled**
- **Simplified** Intuitive Controller Based Management

Simplified Education Experience

- Scalable LAN/WLAN architecture supporting distributed sites of an educational institution
- Access Conrolled Bonjour services discovery and distribution between Teachers, Students, Admins.
- Centralized IT administration and Policy control
- Transparent solution supporting Bonjour enabled devices or any Multicast DNS compliant end-points

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Interactive Healthcare Experience

- Interactive and digital communication between Healthcare professionals and patients
- High-tech patient rooms from managing room environments, connect care team and family
- Secure network and access conrolled service distribution protects privacy and compliance

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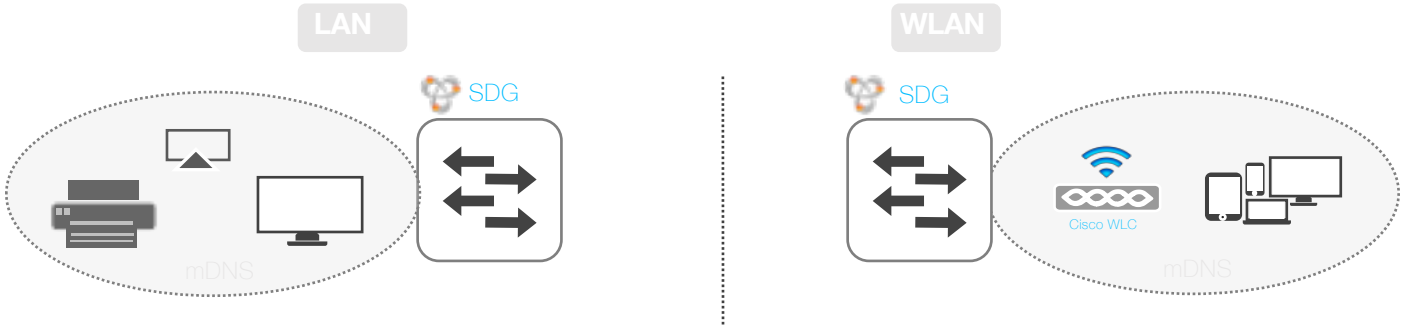
Local Area Bonjour Domain – Key Function



Policy

- First-Hop policy-Enforcement point for LAN and WLAN networks.
- Policy-Based Bonjour services discovery and distribution
- Granular and bi-directional policy control.

Cache

- Local Bonjour cache database.
- Each SDG Agent switch stores local Bonjour cache database.
- Distributed and scalable architecture for large scale environments.

Timer

- Distributed service time management providing better scale.
- Bonjour source end point maintenance to keep network updated.
- Scalable architecture to maintain and auto-refresh service entries.

Proxy

- Policy-Based Bonjour service distribution.
- Asymmetric proxy model support based on deployment scenarios
- Granular service classification support.

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Enterprise Class Bonjour Experience

- Seamless Wired and Wireless Integration
- Access Controlled Service Distribution
- Simplified Centralized Management
- Protect User Experience and limit Service Disruption
- Higher scale

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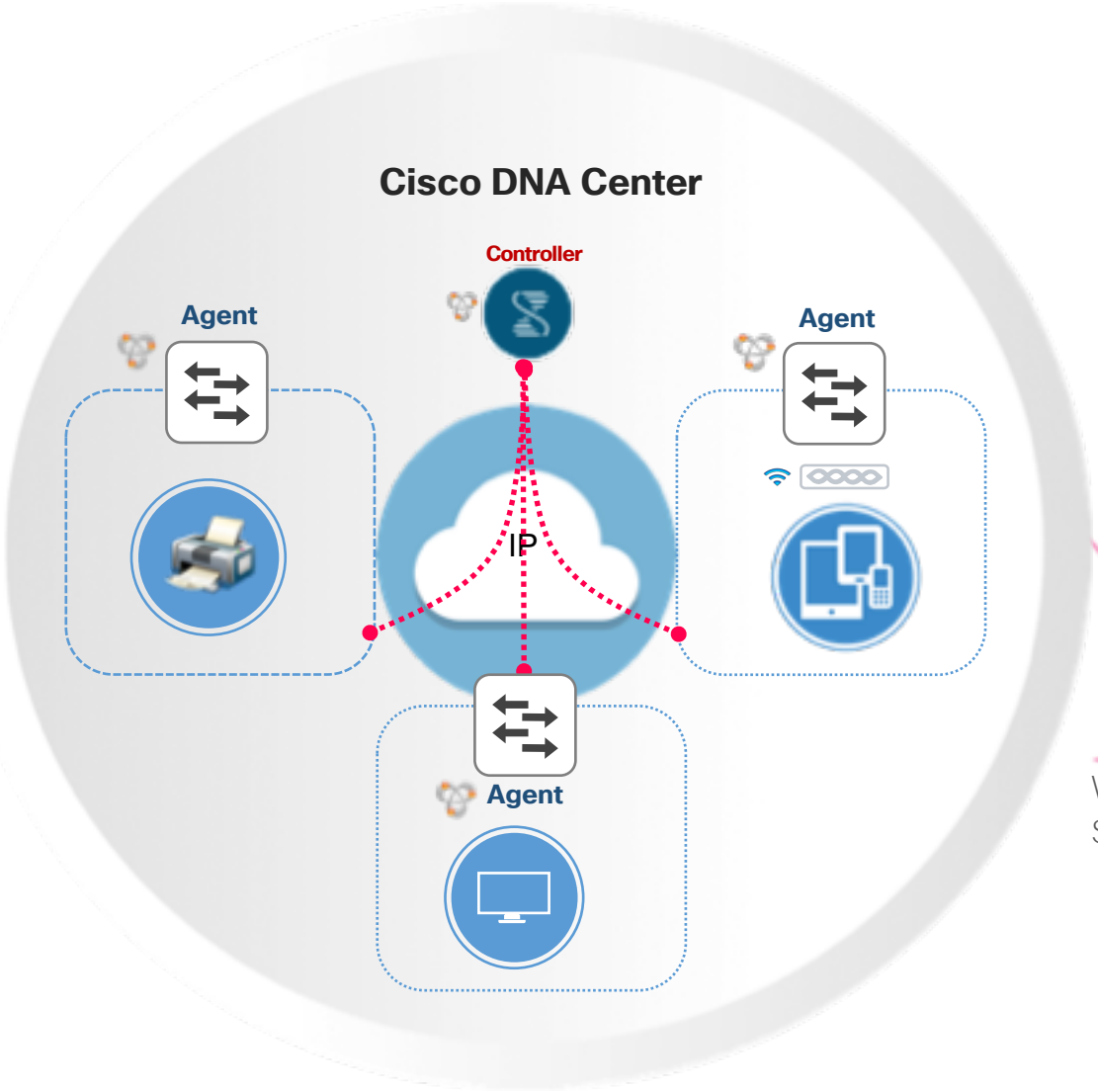
Cisco DNA Service for Bonjour



Scalable

High scale solution
No performance compromise

Resilient

Mission-critical service
Protect experience and disruption

End-to-End

Wired & Wireless
Services without boundaries

Secure

IT controlled service
Access controlled service distribution

Managed

Simplified Operation
Central Service Management

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What's needed to implement at the UofU

- Create policies to define management
- Technical updates
  - Controller Deployment
  - Network design
  - Routing protocol changes (Cisco Bonjour Control Policy)
- What should we do until then?
  - Bluetooth discovery

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Thank you.