

# BYOD

## Threat or Opportunity?

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# Bring Your Own Device

Trends

Cisco-On-Cisco

Cisco Solution Specifics

Use Cases

Summary



# Trends

# Market Transitions

## 5 Billion Mobile Users by 2016

Mobile Devices

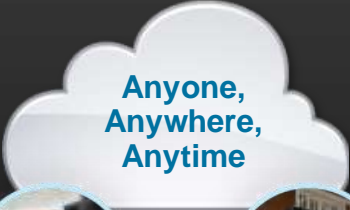


IT Resources

MOBILITY

## Blurring the Borders

Consumer ↔ Workforce  
Employee ↔ Partner  
Physical ↔ Virtual



WORKPLACE EXPERIENCE

## Changing the Way We Work

71% of the World's Mobile Data Traffic will be Video in 2016



VIDEO

# BYOD – An Enterprise-Wide Project



# Security Considerations

Threat?

## Visibility & Context are Critical



Mobility

Enabling  
BYOD  
Transformation



Escalating  
Threats

Protecting  
Network  
Edges



Collaboration  
& Social Media

Authorizing  
Content  
Usage



Virtualization  
& Cloud

Securing  
Cloud  
Transition

# A New Approach is Required



An **integrated** and **holistic**,  
network-based approach



# BYOD at Cisco

# Cisco-on-Cisco Client Mix



# Cisco-On-Cisco Realized Gains



**59%**  
**more** devices



**32%**  
**more** users



**20%**  
**fewer** cases



**30 minutes**  
per day  
**more** productivity



**25%**  
per year **savings**  
using VXi



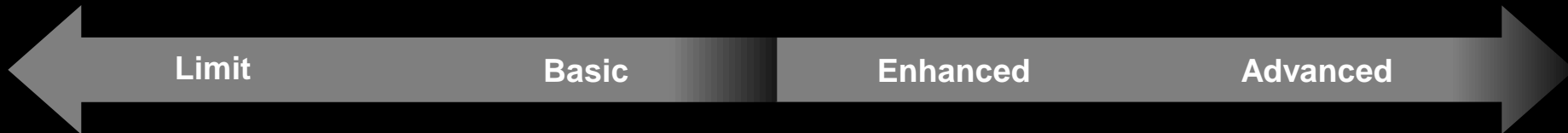
**17 weeks**  
**faster** acquisition  
integration



# Cisco Secure BYOD Solution Specifics

# BYOD Spectrum

Where are you on your BYOD journey?



**Limit**

**Basic**

**Enhanced**

**Advanced**

**Environment requires tight controls**

**Corp Only Device**

- Mfg Environment
- Trading Floor
- Classified Gov Networks
- Traditional Enterprise

**Focus on basic services, easy access, almost anybody**

**Broader Device Types But Internet Only**

- Edu Environments
- Public Institutions
- Simple Guest

**Enable differentiated services, on-boarding with security – onsite/offsite**

**Multiple Device Types + Access Methods**

- Healthcare
- Early BYOD Adopters
- Contractor Enablement

**Corp native apps, new services, full control**

**Multiple Device Types, Corp Issued**

- Innovative Enterprises
- Retail on Demand
- Mobile Sales Services (Video, Collaboration, etc.)

# Cisco BYOD Solution Elements



Applications

Virtualization



Contextual Policy

Management



Network

Security



**SecureX Building Blocks**

SecureX Building Blocks



# Unified Infrastructure: Wired Access

Cisco Switches scale to meet diverse deployment scenarios

Core



Distribution



Access



Lead Platforms

## Cisco Switching Differentiators

Uniquely supports the next generation workspace populated by smart phones, tablets and virtual desktops

Cisco's Universal PoE 60W capabilities support the widest range of devices

Prevents eavesdropping and facilitates regulatory compliance with regulations with MACsec encryption

Device Profiler and IOS Sensor deliver consistent policy and device mobility

Monitor mode greatly simplifies 802.1X deployments

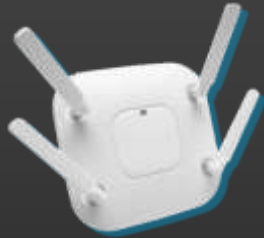
Offers comprehensive and fully functional QoS capabilities and Energy Management



# Unified Infrastructure: Wireless Access

Cisco Mobility Technology for High Performance Wireless Network

## Best-of-Breed Mobility Technology



### AP 3600 Access Point Innovation

The Tablet AP, Enhanced throughput and coverage targeting advanced applications for tablets and smart devices



### CleanAir Improved Performance

Proactive and automatic interference mitigation



### ClientLink 2.0 Improved Performance

Proactive and automatic beamforming

For 802.11n and legacy clients



### VideoStream Improved Performance

Wired multicast over a Wireless network

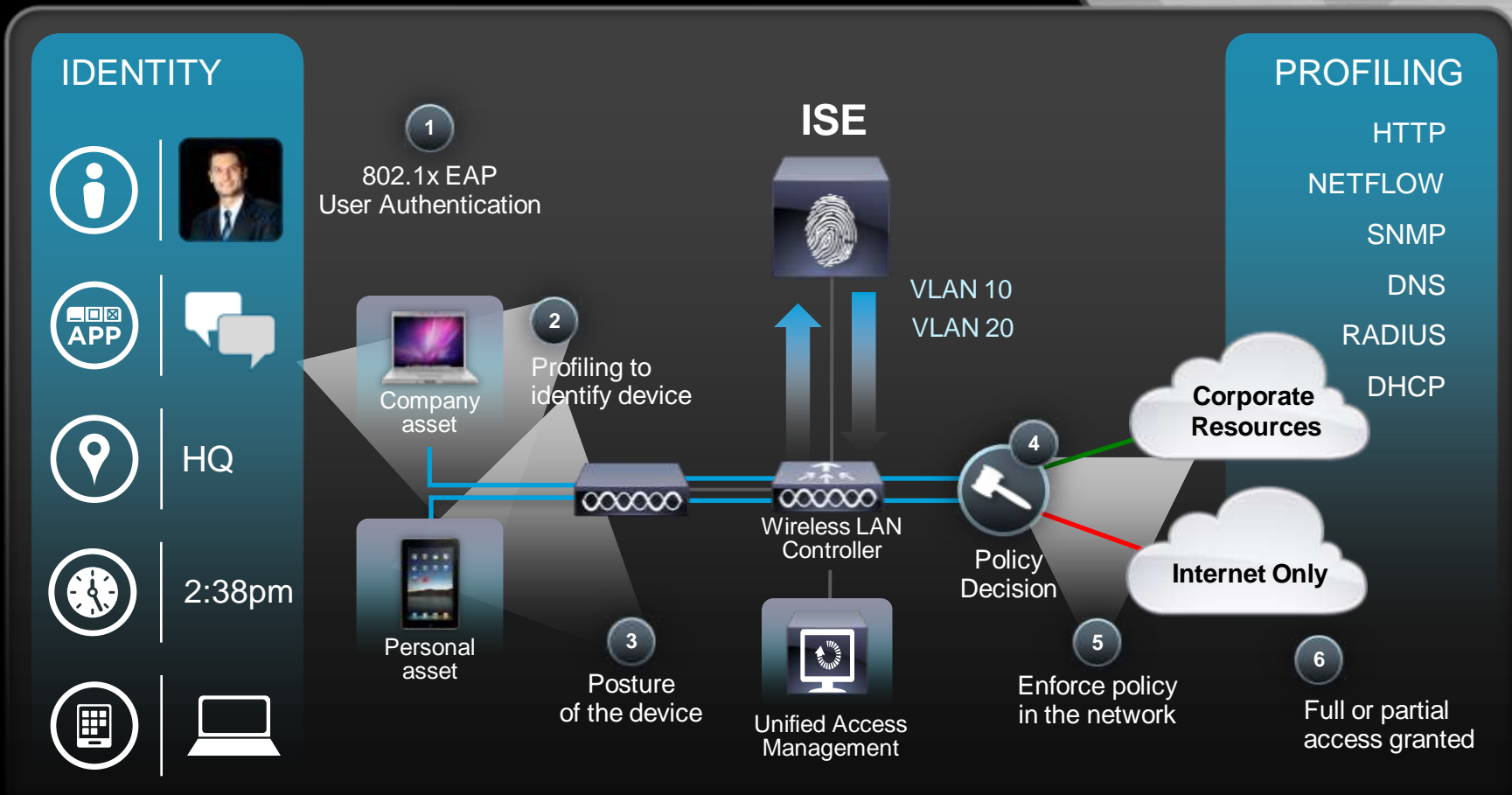
Identity Services Engine (ISE) - Unified Policy Management

NCS Prime – Central Network Management



# Policy: Who, What, Where, When, How?

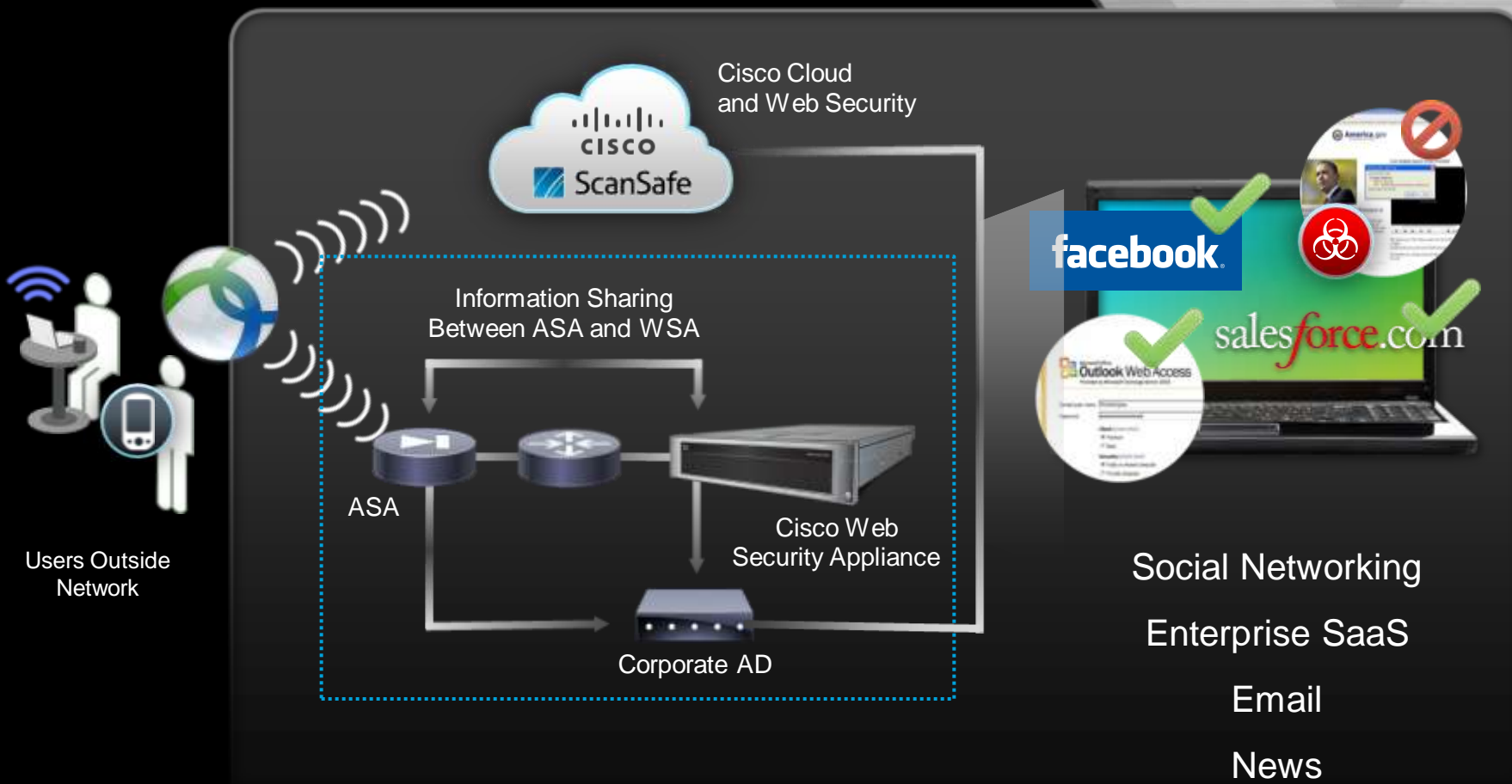
## Identity Services Engine (ISE) for Advanced Policy Management





# Security: Remote Access & Threat Defense

AnyConnect, ASA, WSA, ScanSafe



# Cisco's Security Intelligence is World Class

**More Data**   **More Methods**   **More Visibility**   **More Linkages**

## SensorBase

**750K+**

GLOBAL SENSORS

**100M+**

ENDPOINT CLIENTS

**35%**

WORLDWIDE EMAIL TRAFFIC

**30B**

WEB REQUESTS

**4TB**

DATA RECEIVED PER DAY

## Threat Operations Center

**24x7x365**

OPERATION

**\$100M**

SPENT IN DYNAMIC RESEARCH  
AND DEPLOYMENT

**500**

ENGINEERS, TECHNICIANS  
AND RESEARCHERS

**40+**

LANGUAGES

**80+**

PH.D.S, CCIE, CISSPs, MSCEs

## Dynamic Updates

**3 to 5**

MINUTE UPDATES

**6,500+**

IPS SIGNATURES PRODUCED

**200+**

PARAMETERS TRACKED

**20+**

PUBLICATIONS PRODUCED

**8M+**

RULES PER DAY



# Device Management

MDM is a key element but there is more



## MDM Partners

- ✓ Device inventory
- ✓ Device provisioning/de-provisioning
- ✓ Device data security
- ✓ Device application security
- ✓ Cost management
- ✓ Full or selective device remote wipe

## Cisco

- ✓ User/device authentication
- ✓ Posture assessment
- ✓ Policy enforcement
- ✓ Context aware access control
- ✓ Threat defense
- ✓ Web usage policy
- ✓ Web application DLP
- ✓ Secure remote access



ISE



ScanSafe



WSA



AnyConnect

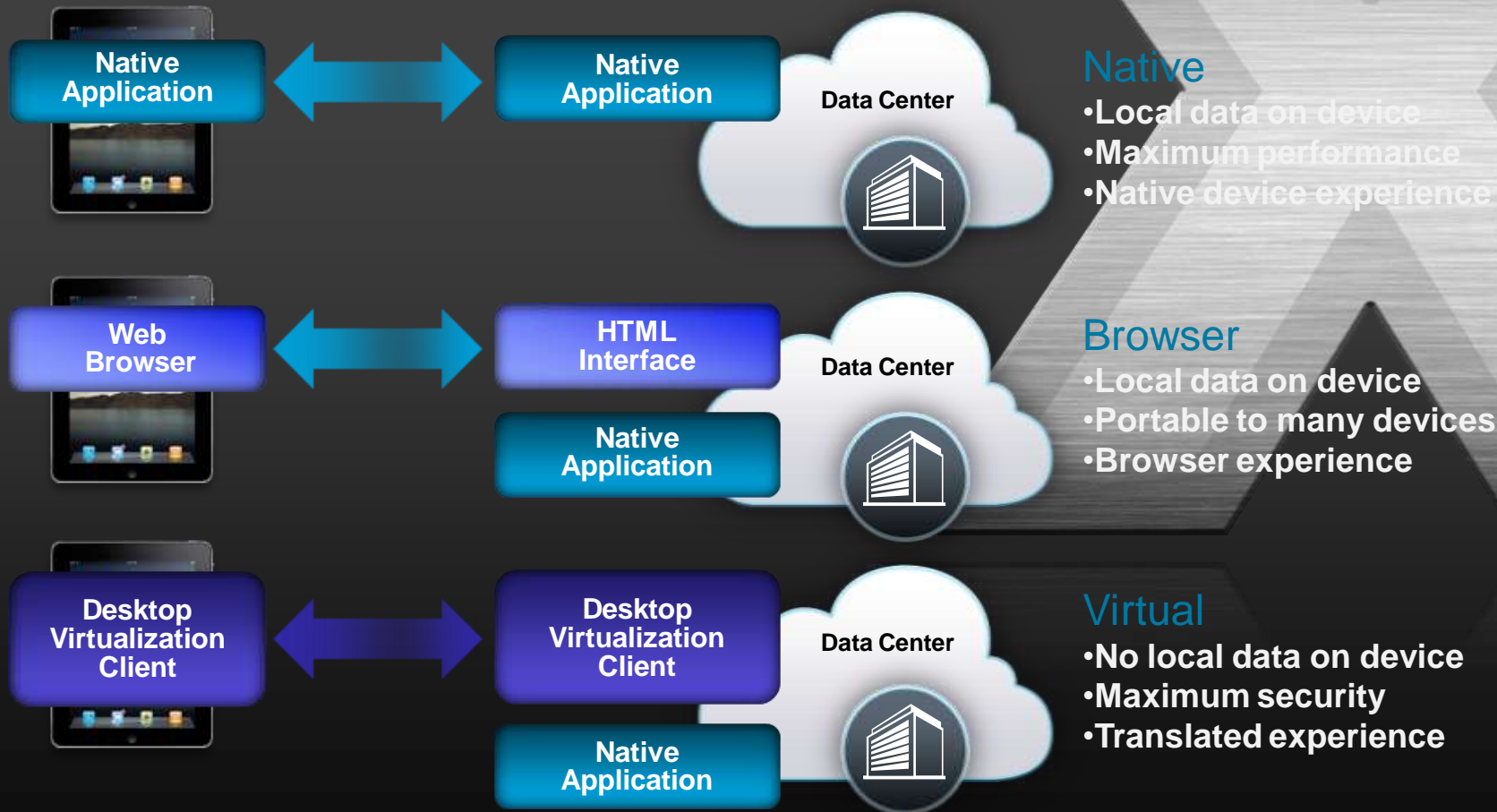


ASA



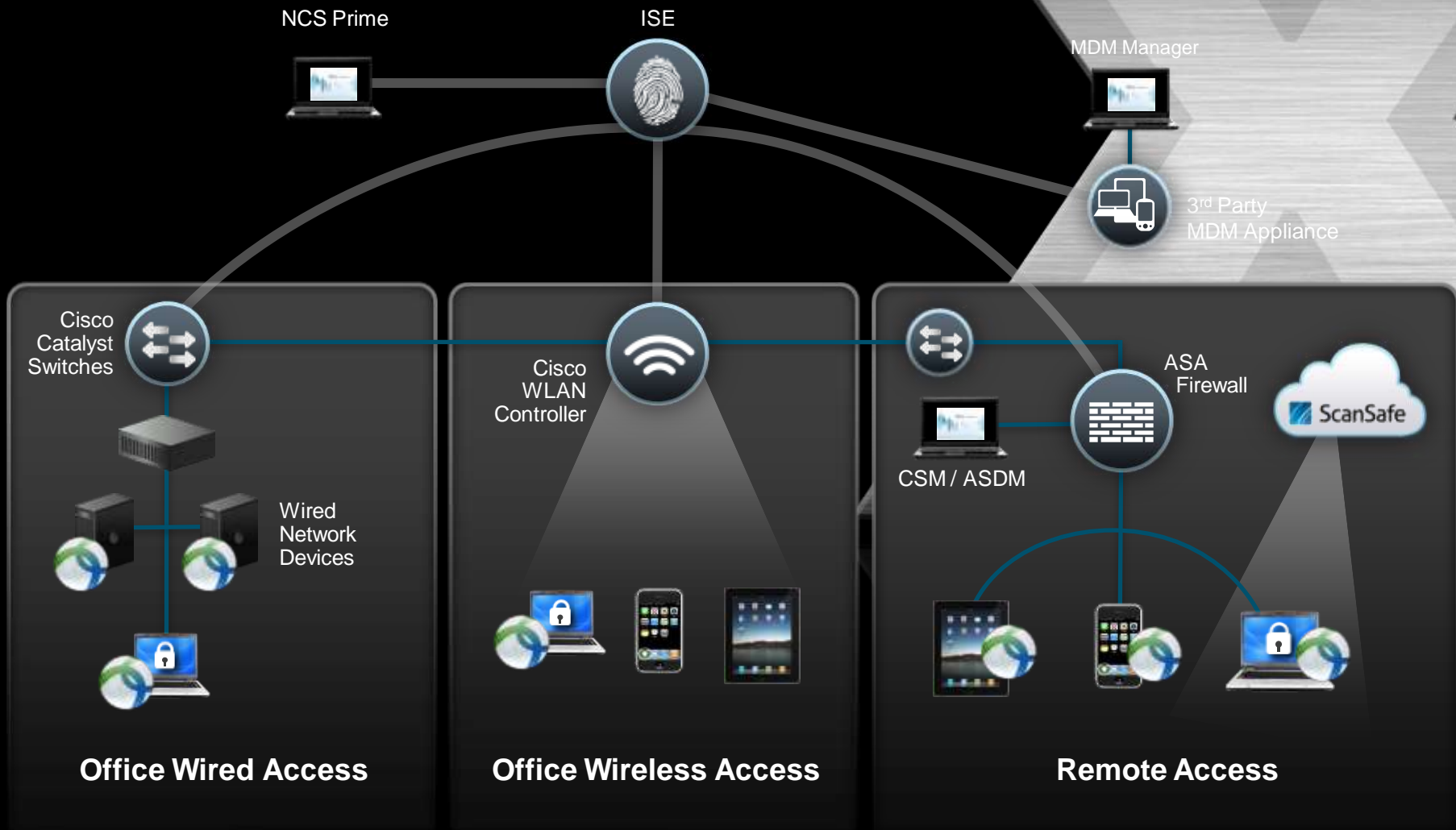
# Native vs. Virtual Approach to BYOD

Native, Browser and Virtual Modes



# Some Components of Cisco BYOD Solution

Backed by Cisco SecureX





# Use Cases

# BYOD Use Case: Basic Implementation

Business policy is enable wired and wireless access for corporate and personal devices

## Unified Policy-based Management

- Identity-aware networking, and data integrity
- Universally and effectively control user and device access

## Uncompromised Security

- Secure, scalable guest access solutions
- Authenticate users and endpoints via wired, wireless with consistent policy across the enterprise network

## Simplified On-Boarding

- Zero touch device registration and provisioning of employee/guest devices



Wireless



Wired



ISE



NCS Prime

Smartphones



Tablets



Game, Printer



Thin/VirtualClients



Desktop/Notebooks



**Devices Layer**

# BYOD Use Case: Advanced Implementation

Business policy is to provide granular access to a full corporate workspace, both on and off site

## Enable a Full Mobile and Collaboration Experience

Integrated policy management with mobile device management, deliver granular endpoint controls, provide layered security, and enforce network security policies for BYOD deployments.





# Summary

# Embrace Mobility While Ensuring Security

## Some Questions to Answer

- ✓ Do I have the WLAN capacity and reliability to support increase in mobile devices and future applications?
- ✓ How do I enforce security policies on non-compliant devices?
- ✓ How do I grant different levels of access to protect my network?
- ✓ How do I ensure data loss prevention on devices where I don't have visibility?
- ✓ How do I minimize emerging threats targeted at mobile devices?
- ✓ How do I monitor and troubleshoot user and client connectivity issues on my access (wired/wireless) network?
- ✓ Is my network capable of delivering the scalability and performance required to realize the benefits of a BYOD strategy?

# Network Scalability

## Is the Network Ready for Next Generation Applications?



Networks must be able to scale to support the growth of applications  
= High Bandwidth Use

Mobile BYOD clients drive advanced applications for Voice, Video, and VDI

- 802.11n at the edge for performance, requires WiG connectivity in the core

Next Generation Applications require more bandwidth and performance

- QoS throughout the network to support Voice and Video
- VDI Applications are sensitive to network delays
- “Good Enough” networks won’t be able to handle time sensitive, high performance, high density applications.
- WAN acceleration to assist performance sensitive “cloud” applications

# Enabling Transformations with SecureX

## Secure Unified Access

-  - AnyConnect
-  - Web Security Appliance
-  - Cloud Web Security
-  - WLAN Controller

## Threat Defense

-  - Adaptive Security
-  - Email | Web Security
-  - Intrusion Prevention
-  - Router Security

## Application Visibility & Control

-  - Adaptive Security (CX)
-  - Web Security
-  - Router Security

## Virtualization & Cloud

-  - Adaptive Security
-  - Virtual Security Gtw
-  - Nexus 1000v
-  - VPN

Threat Intelligence:

SIO

Contextual Policy:



- Identity Services Engine



- Security | SMX



- Network | NCS Prime

Network:



- Router



- Switch



- Appliance



- Cloud



- Virtual

Services:



- Cisco Advanced Services



- Partner Shared Services

## Secure BYOD Solution

Thank you.

