



Cisco IIN (Intelligent Information Network) 전략 및 Application Networking Solution 소개

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목차

- Application과 Networking 동향
- Cisco IIN전략
- Cisco Application Networking Service Solution
 - AON (Application Oriented Network)
 - Application delivery Service
- 요약 및 Q&A

Application과 Networking 동향



프라임

파일(E) 편집(E) 보기(V) 즐겨찾기(A) 도구(I) 도움말(H)

디지털 시대, 디지털 리더 디지털타임스 - 시스코, 애플리케이션 가속장치 발표 - ...

파일(E) 주소(D) 경제의

파일(E) 주소(D) [2006. 1. 17.]

주소(D) http://www.etnews.co.kr/news/detail.html?id=200601170090

이동 Links

프라임

전체가

HOME> 시스 코

최신뉴스

시스템즈코리아

업무 살피기

'시스 코' 케이션 제공해 뛰어난 완료

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ENGLISH PDF 로그인 회원가입

VIP50 공정을 통한 시

LMP7711 LMP7701 LMV651 LMV791

뉴스 블로그 박람회 취업정보 게임 쇼핑저널 Buzz W기업전용 쇼핑몰

오늘의뉴스 | 뉴스속보 | 종합 | 통신방송 | 컴퓨팅 | 디지털문화 | 국제 | 경제과학 | 디지털산업 | 사설·칼럼 | 게임뉴스 | 영

검색

기사검색 검색

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시스코, 웹 가속기 시장 진출

AD 전자부품 EMI/EMC/ESD 적합성대책기술

시스코시스템스가 웹 가속기 시장에 진출했다.

시스코시스템즈코리아(대표 손영진 <http://www.cisco.co.kr>)는 17일 웹 기반 애플리케이션 성능 가속기 '시스코 AVS(Application Velocity System)'을 선보였다.

이 장비는 웹 서버가 있는 시스템 중앙에 설치해 응답속도 개선·대역폭 절감·서버부하 감소 등 웹 애플리케이션의 성능을 향상시킬 수 있다. 또 웹

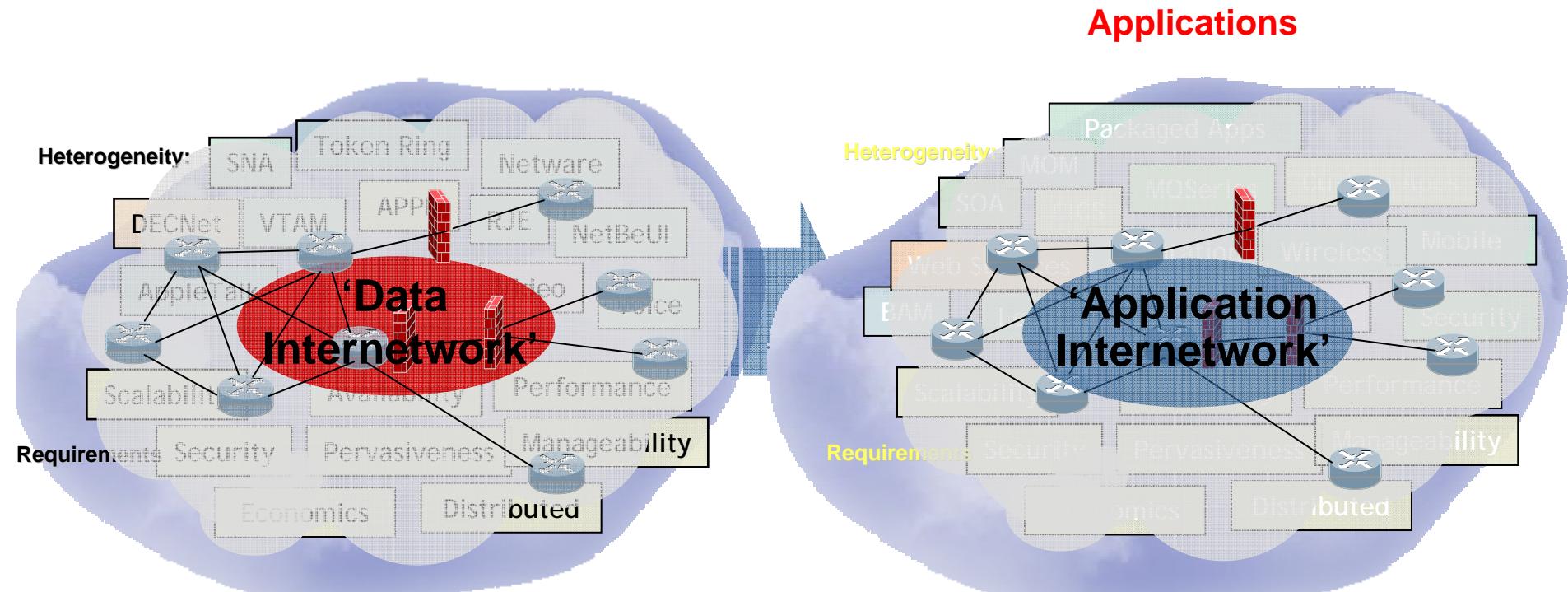
Application Delivery 시장 규모

Data Center and Wide Area



Source: Gartner Group, 2005

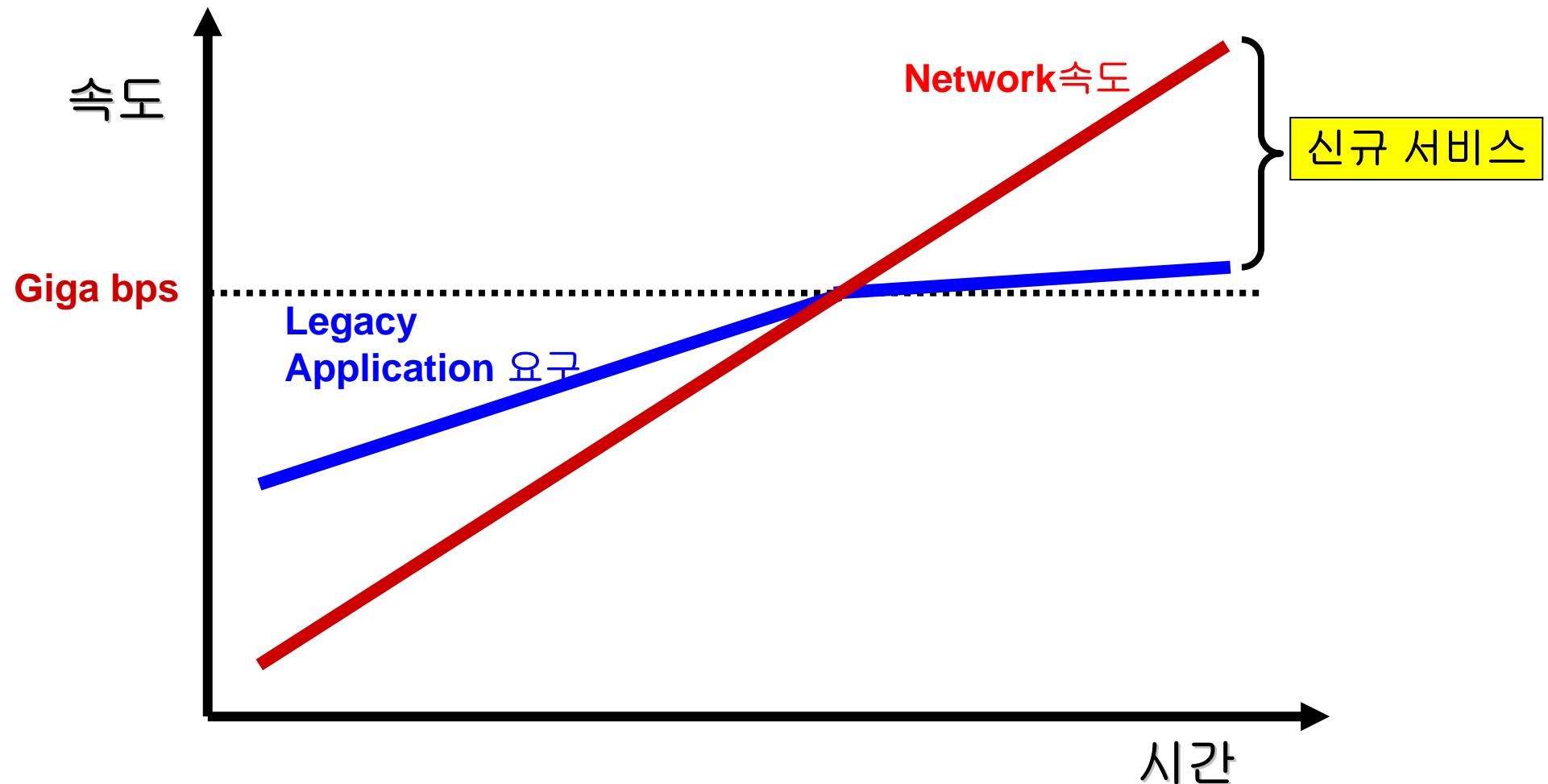
InterNetworking 대상의 변화



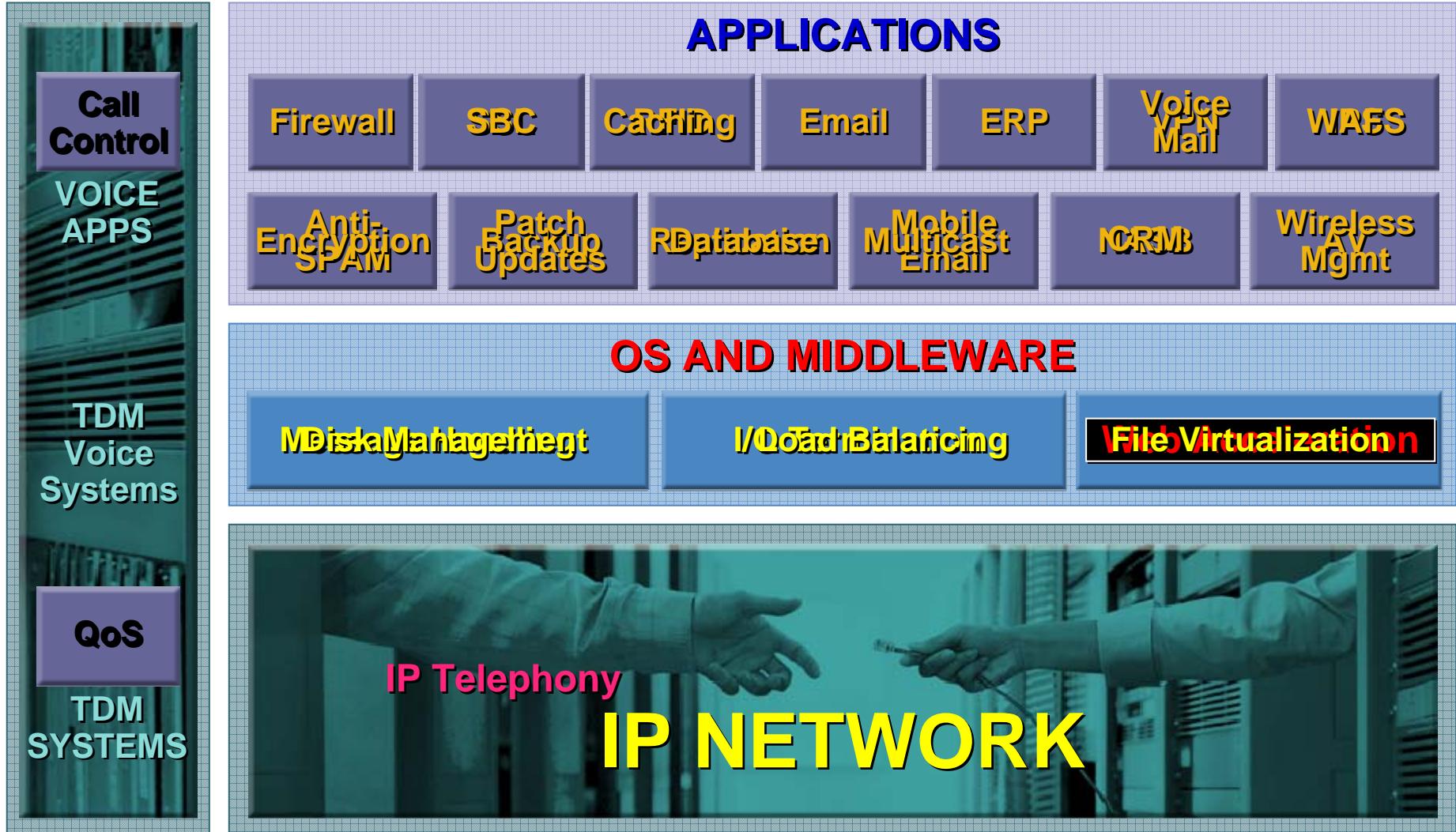
- 20 years ago: *Network heterogeneity*
- Internet changed both the physics and economics of *communication*
- Step function in cost, ease of use

- Applications**
- Today: *Application heterogeneity*
 - ‘Application Internet’ will change the physics and economics of *collaboration*
 - Step function in cost, flexibility

네트워크 속도 증가와 서비스의 확대



Application 영역의 IP Network으로의 수렴

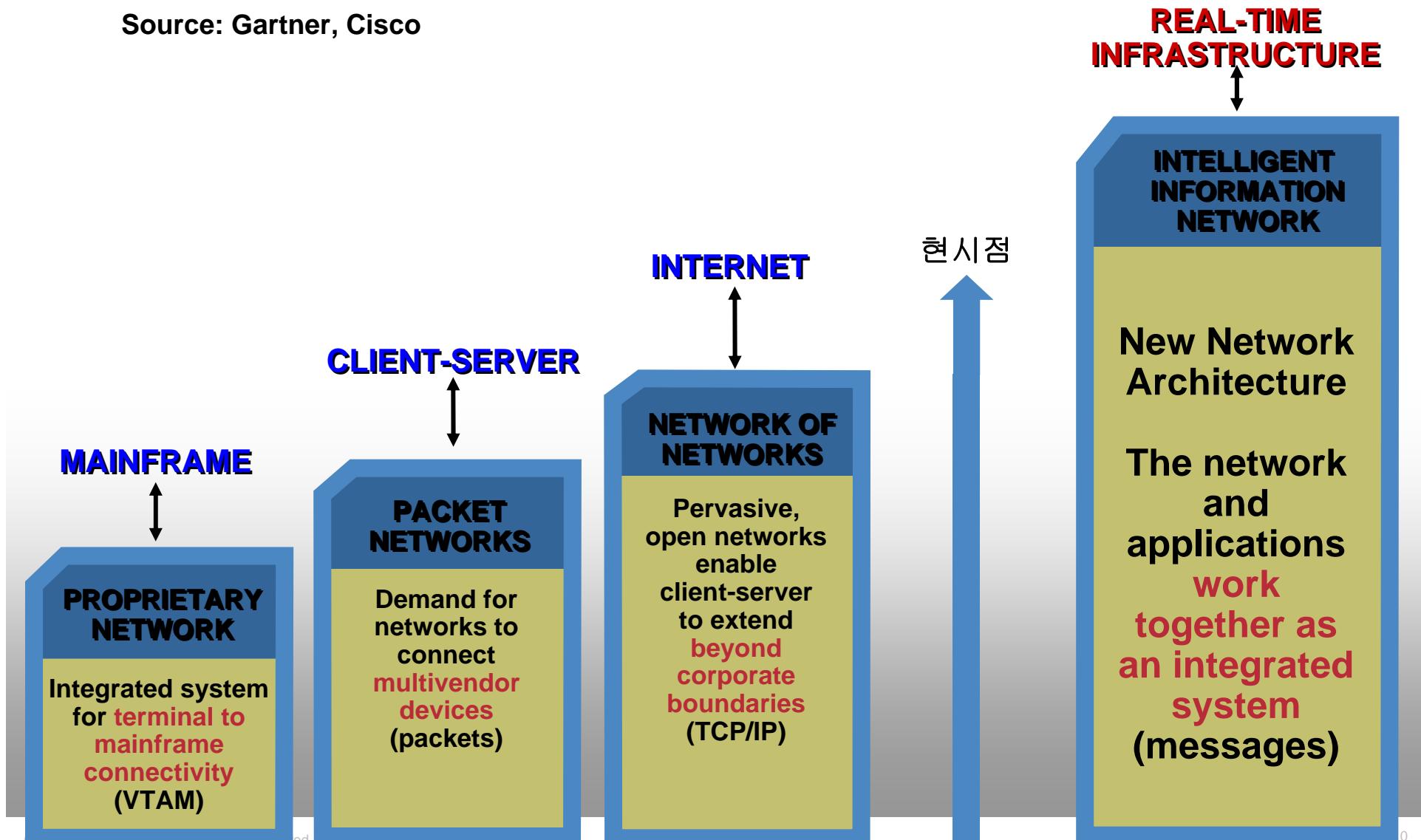


Cisco IIN 전략



Intelligent Information Network의 등장

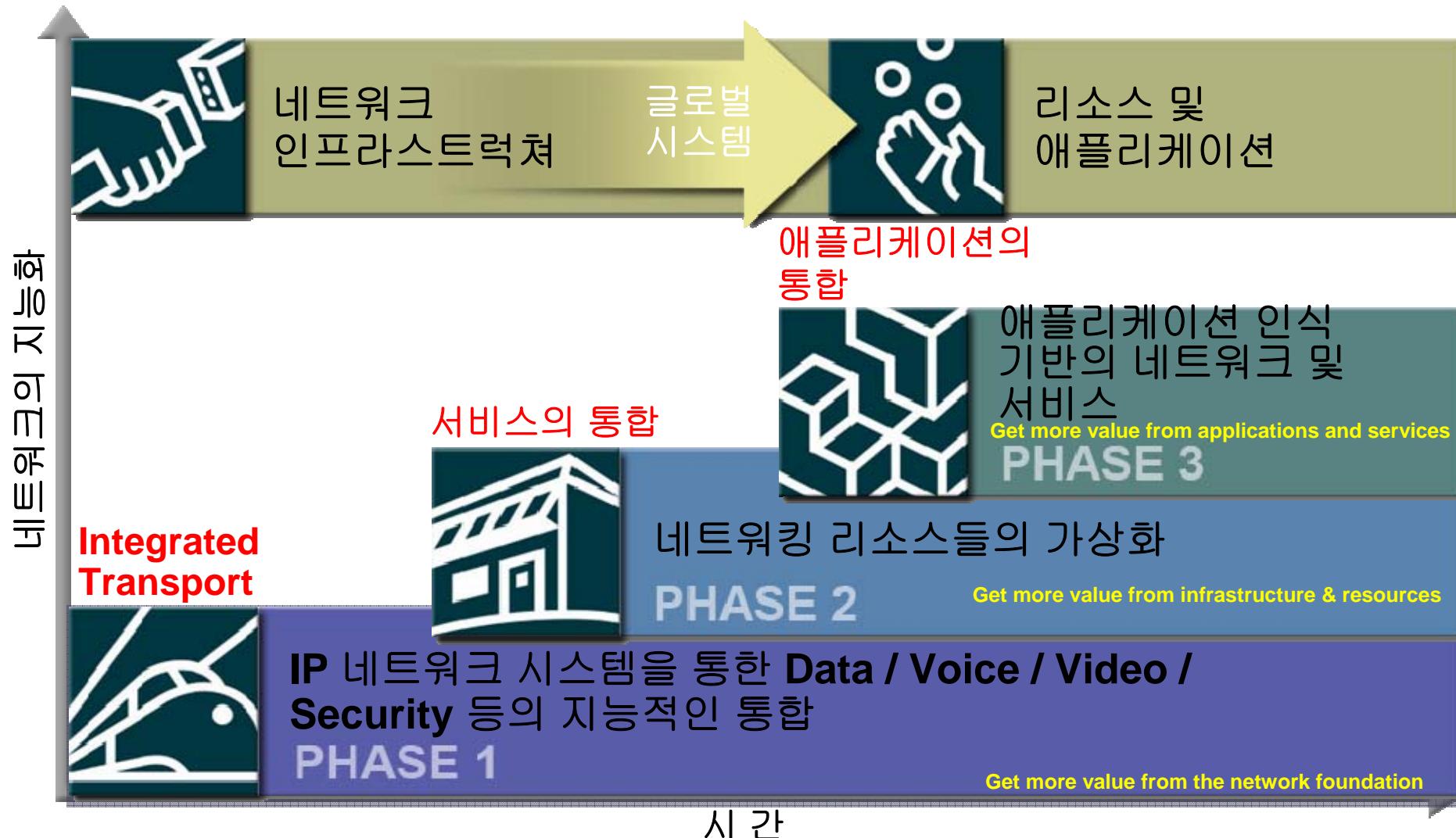
Source: Gartner, Cisco



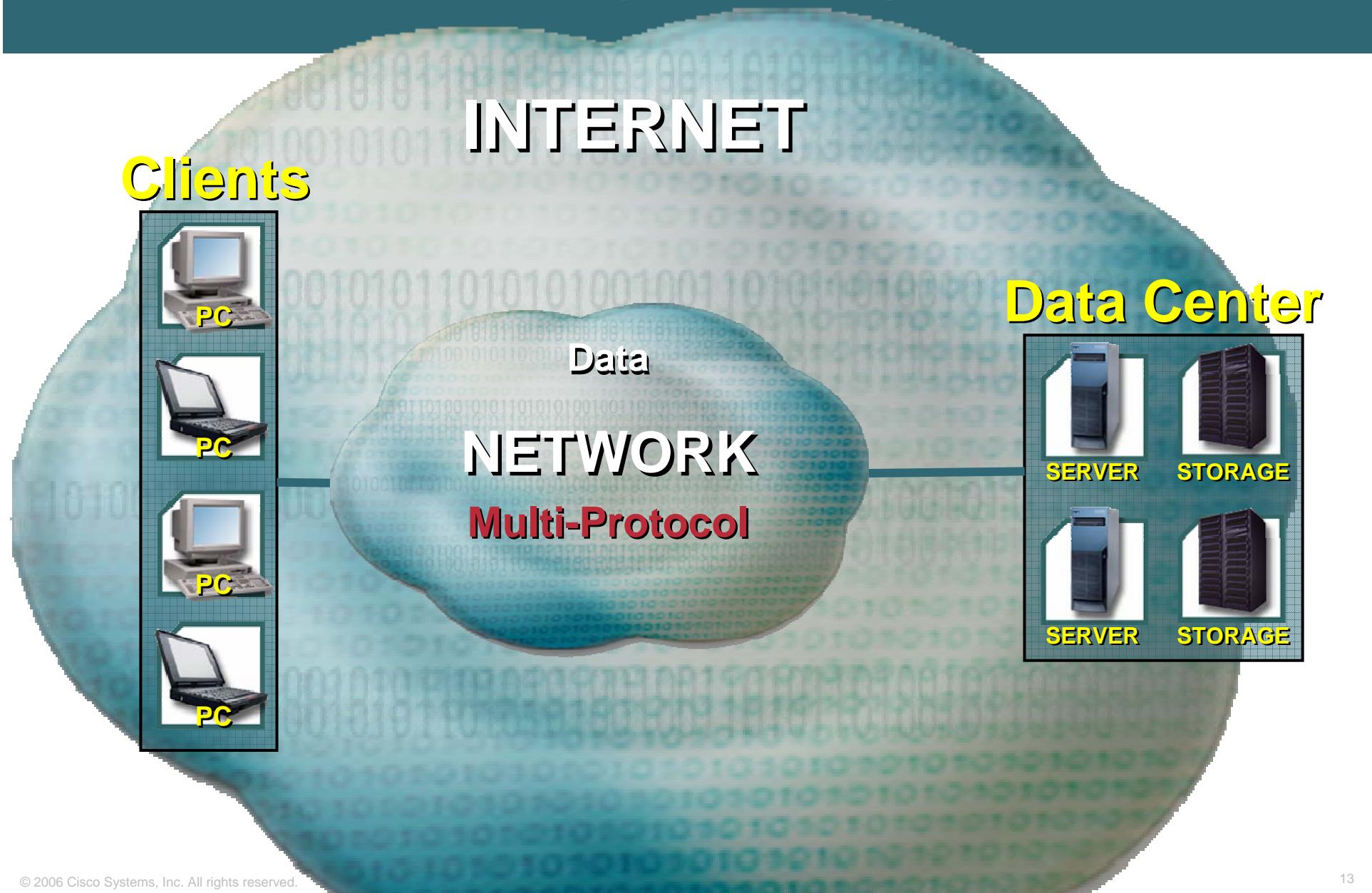
현재의 Intelligent Networking 예

- **Network Admission Control** – enforces security policies during network admission, preventing reintroduction of security threats
- **Network Infection Containment** – contains anomalous, destructive traffic, preventing “day zero” infection
- **Rich Media Services** – applications like Cisco Meeting Place integrate scheduling, conferencing, and collaboration from your PC or IP phone
- **Application & Content Network Services** – optimizes application and network utilization

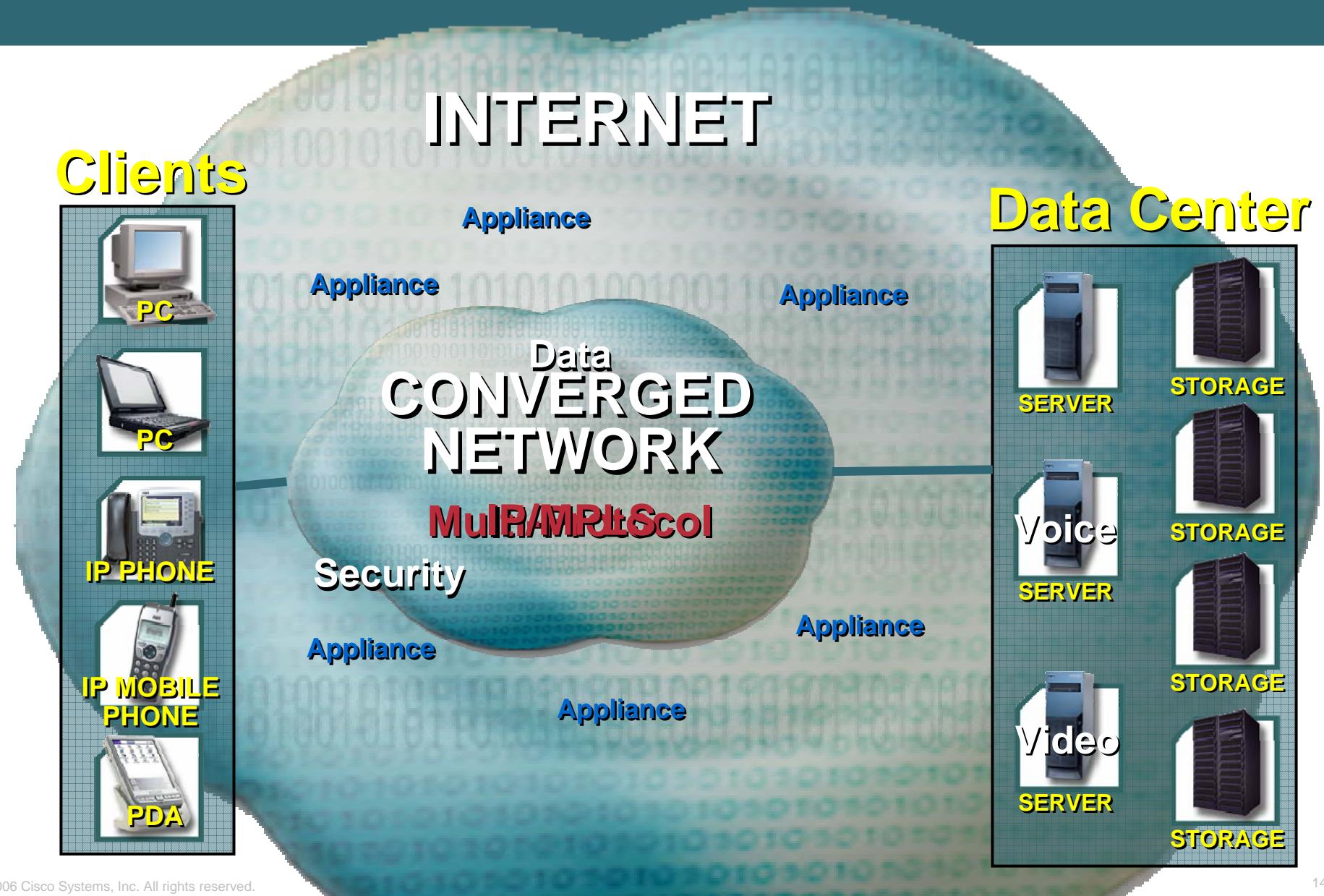
Cisco IIN (Intelligent Information Network)



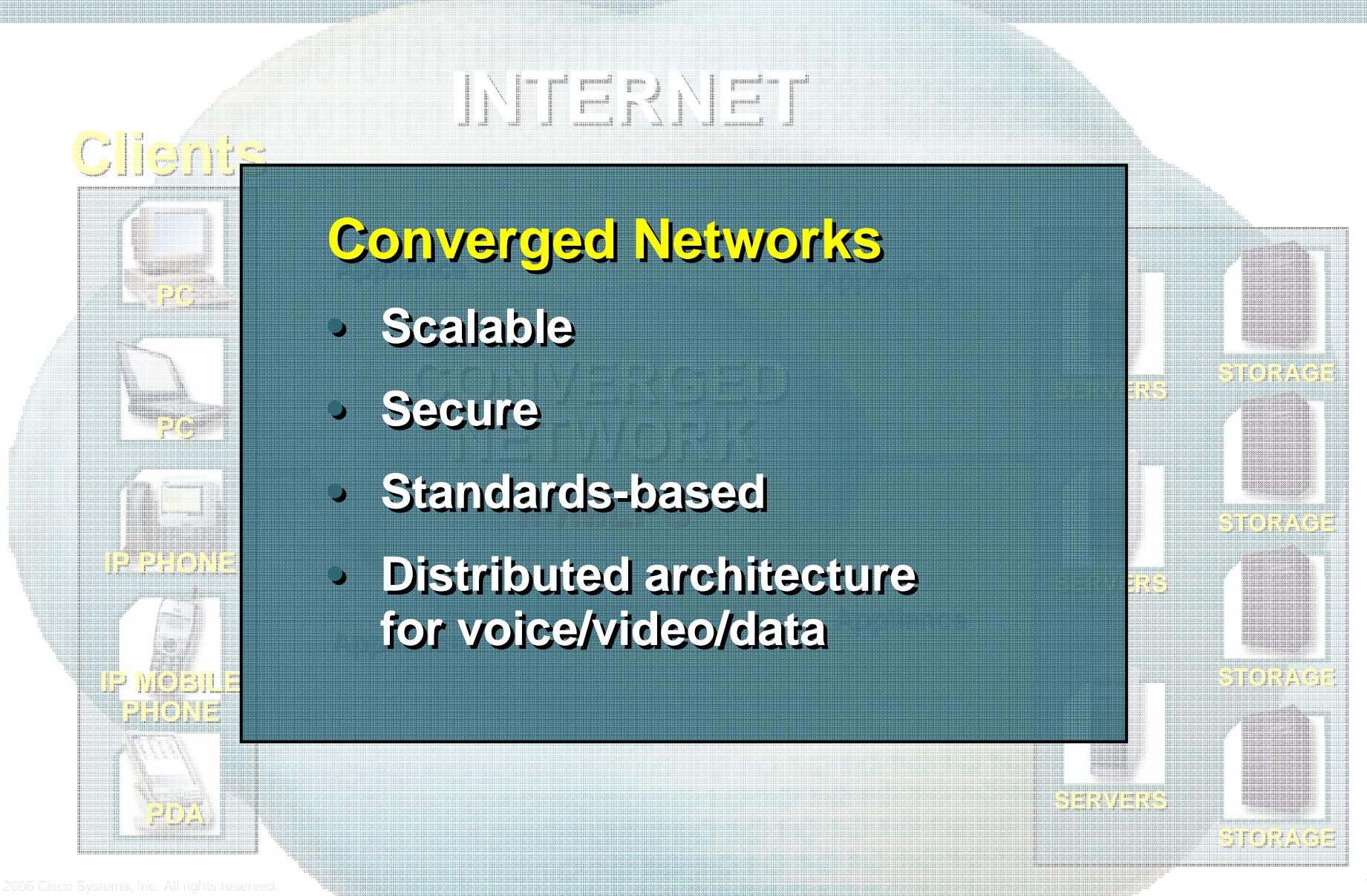
Client/Server 시대 (80-90년대)



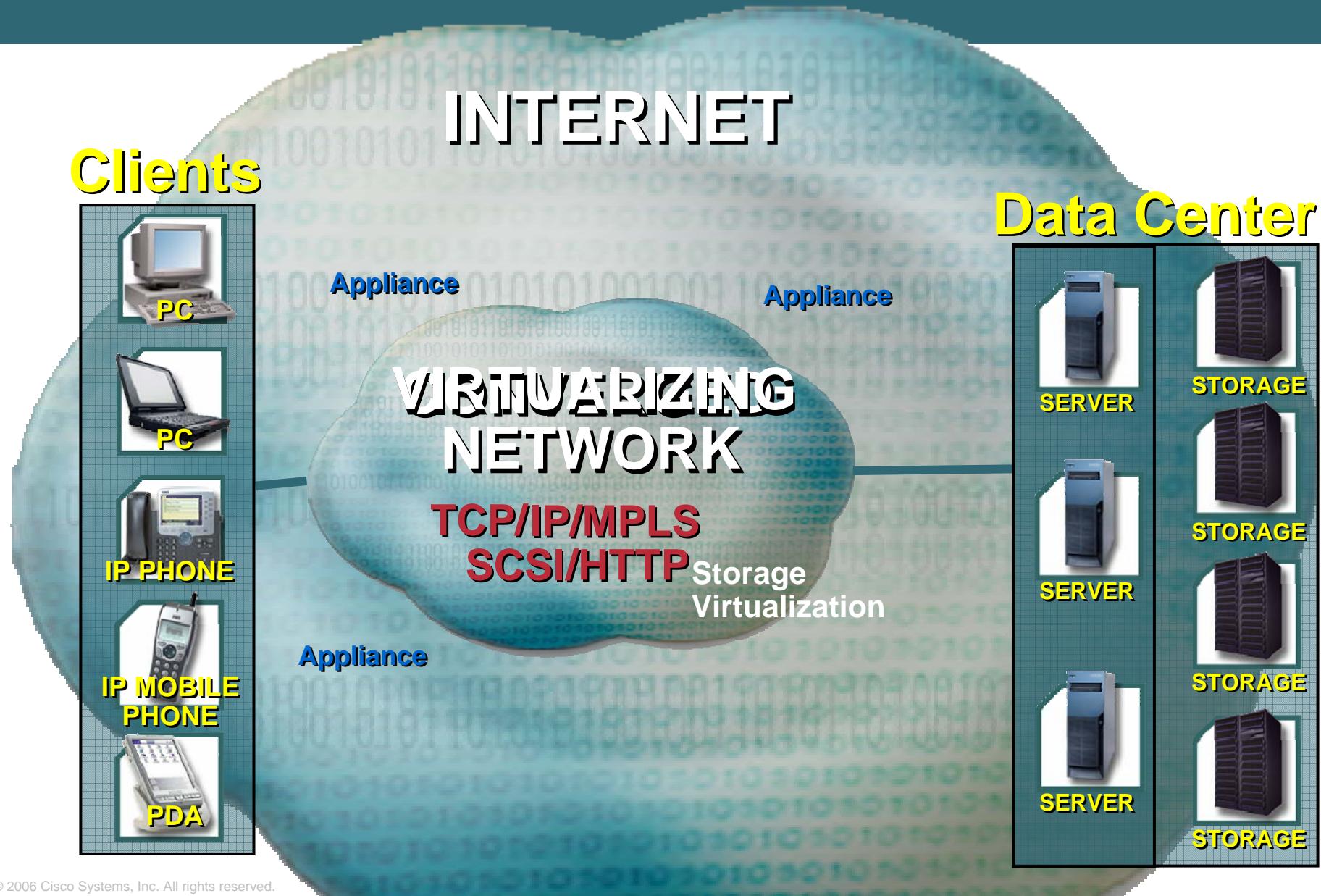
Phase One: Converged Networks



Phase One 특성



Phase Two: 자원의 가상화



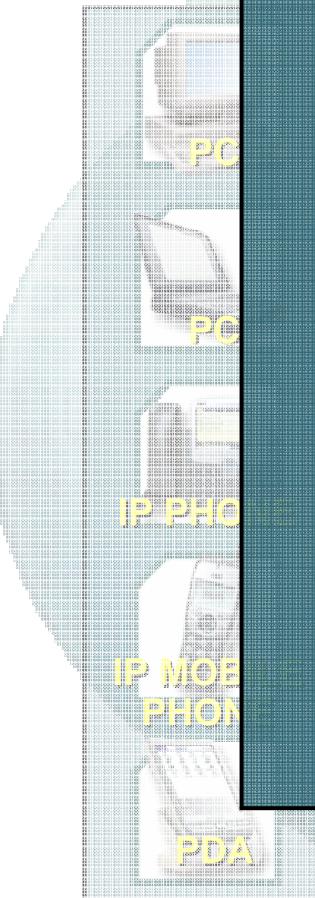
Phase Two 특성

Resource Virtualization

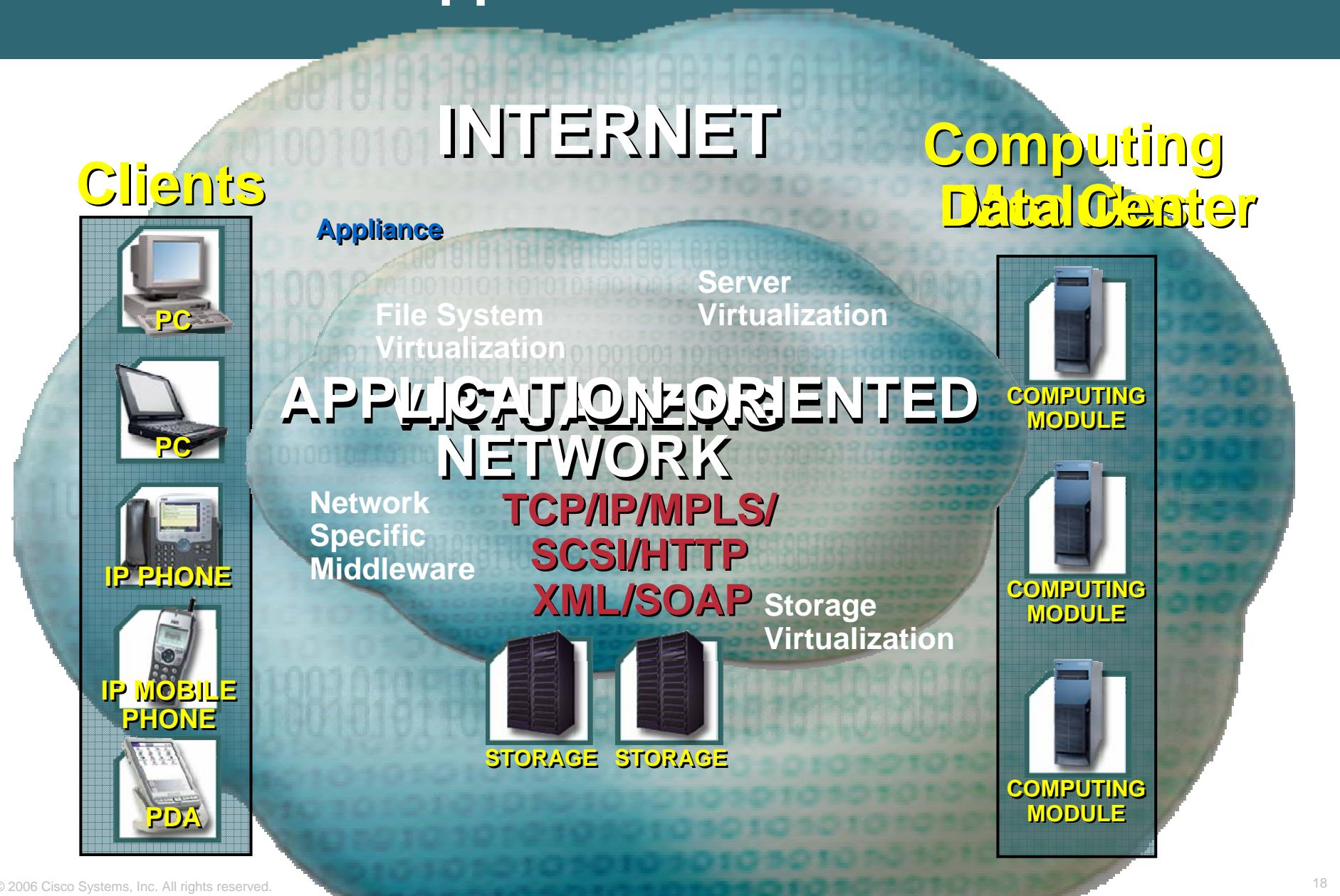
- Intelligence balanced between network and end points
- Network mediates and validates resource allocation
- Virtualized assets

enter

SERVERS



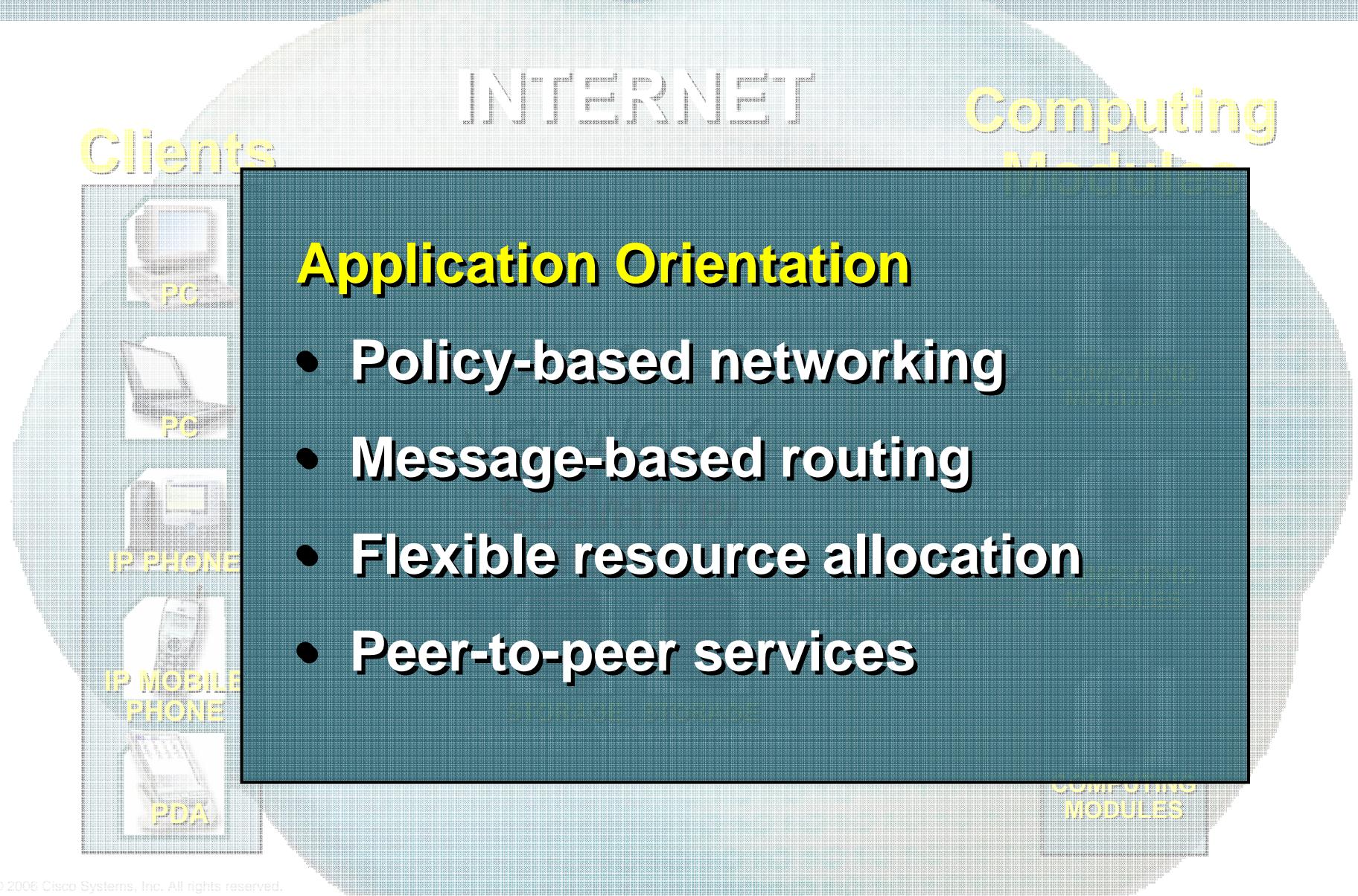
Phase Three: Application-Oriented Networks



Phase Three 특성

Application Orientation

- Policy-based networking
- Message-based routing
- Flexible resource allocation
- Peer-to-peer services



Packet Forwarding 넘어서 ...

Simple Forwarding Paradigm with Optimized Performance...



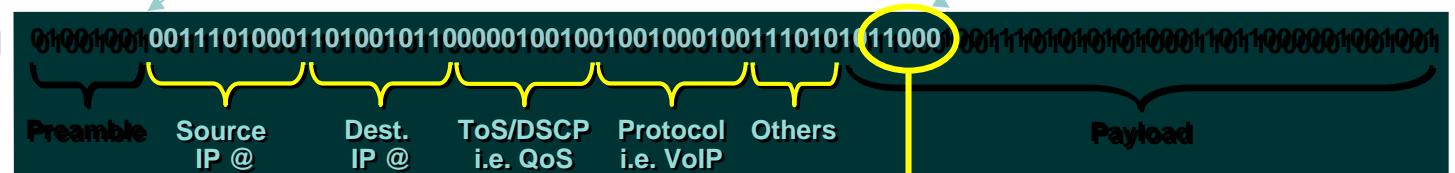
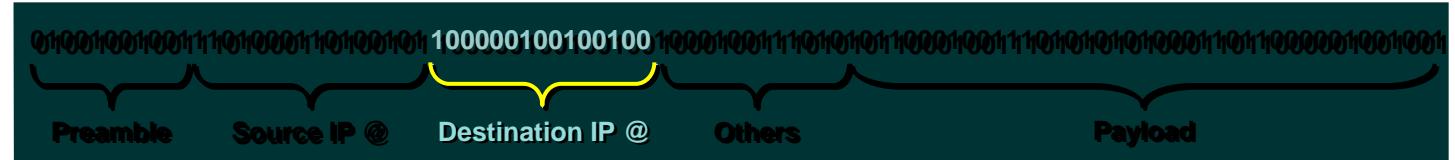
Intelligent Forwarding Paradigm, Optimized for Service Creation



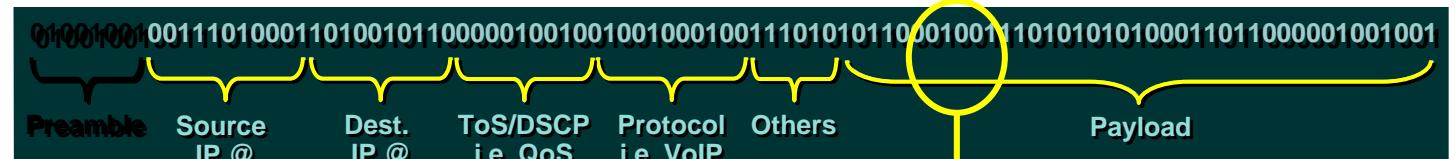
Deep Payload Inspection

Aggregating Message-Level Information

Applying Policies and Security



e.g., HTTP/NBAR

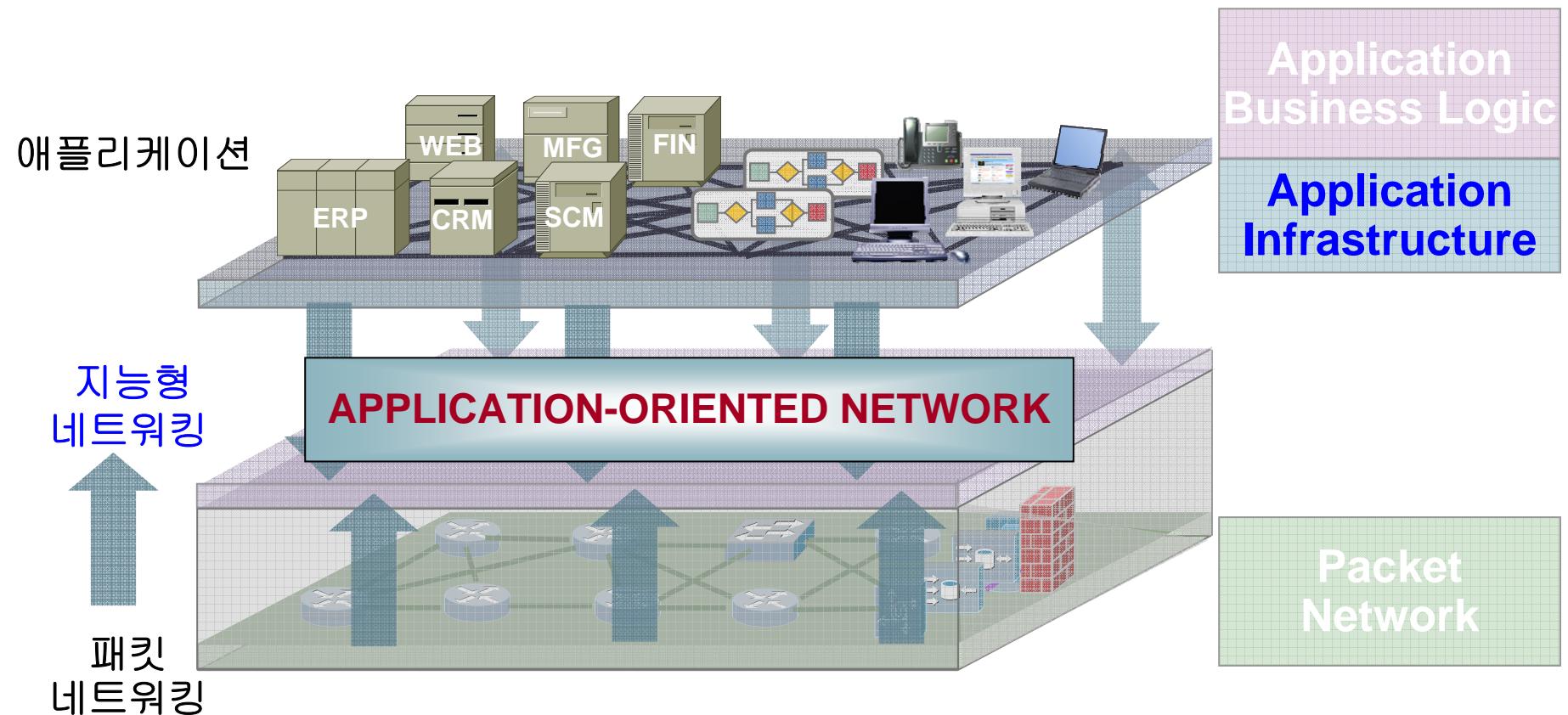


Network Enforces Rules Automatically and Transparently According to Business Policy

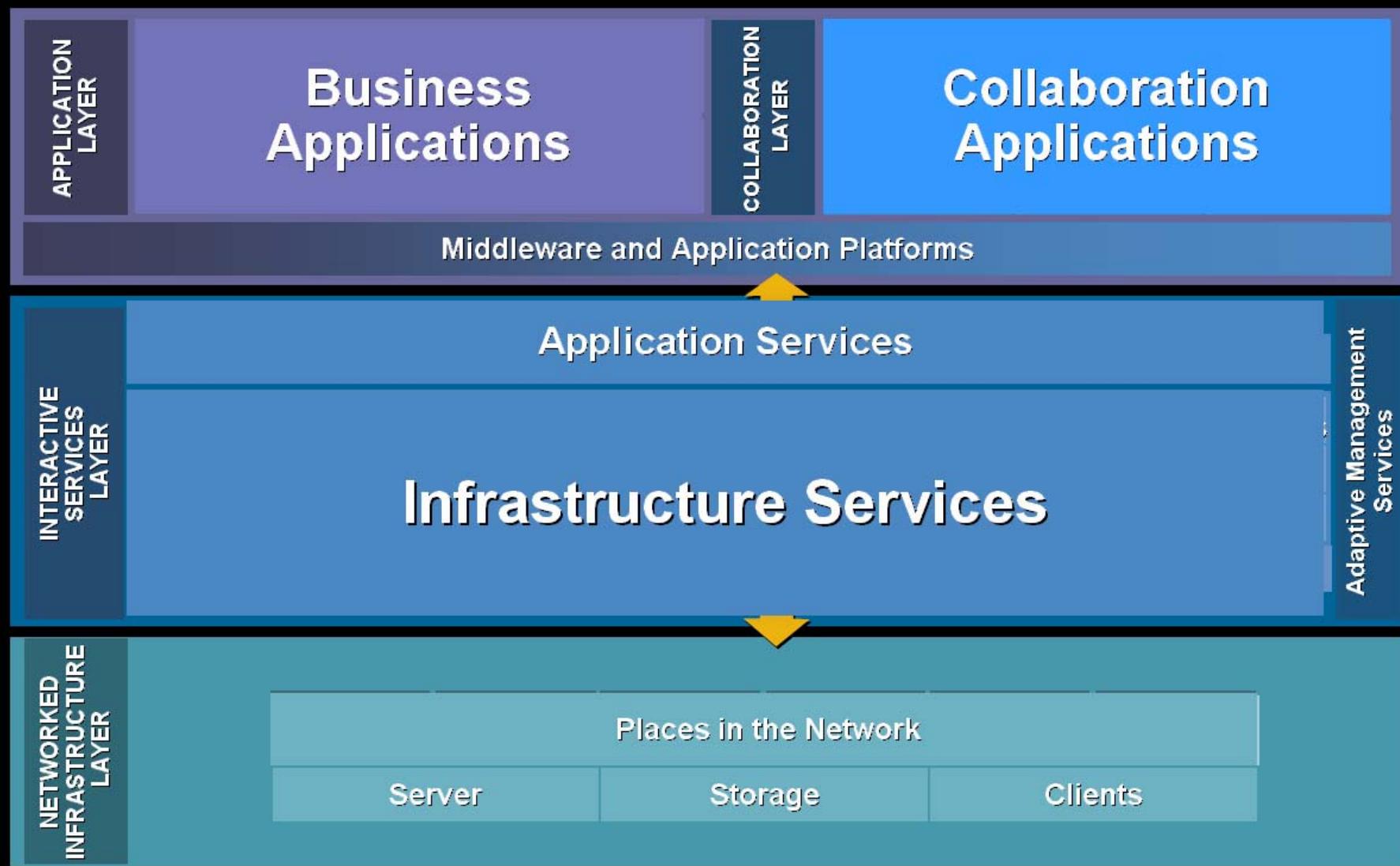


Application Oriented Networking

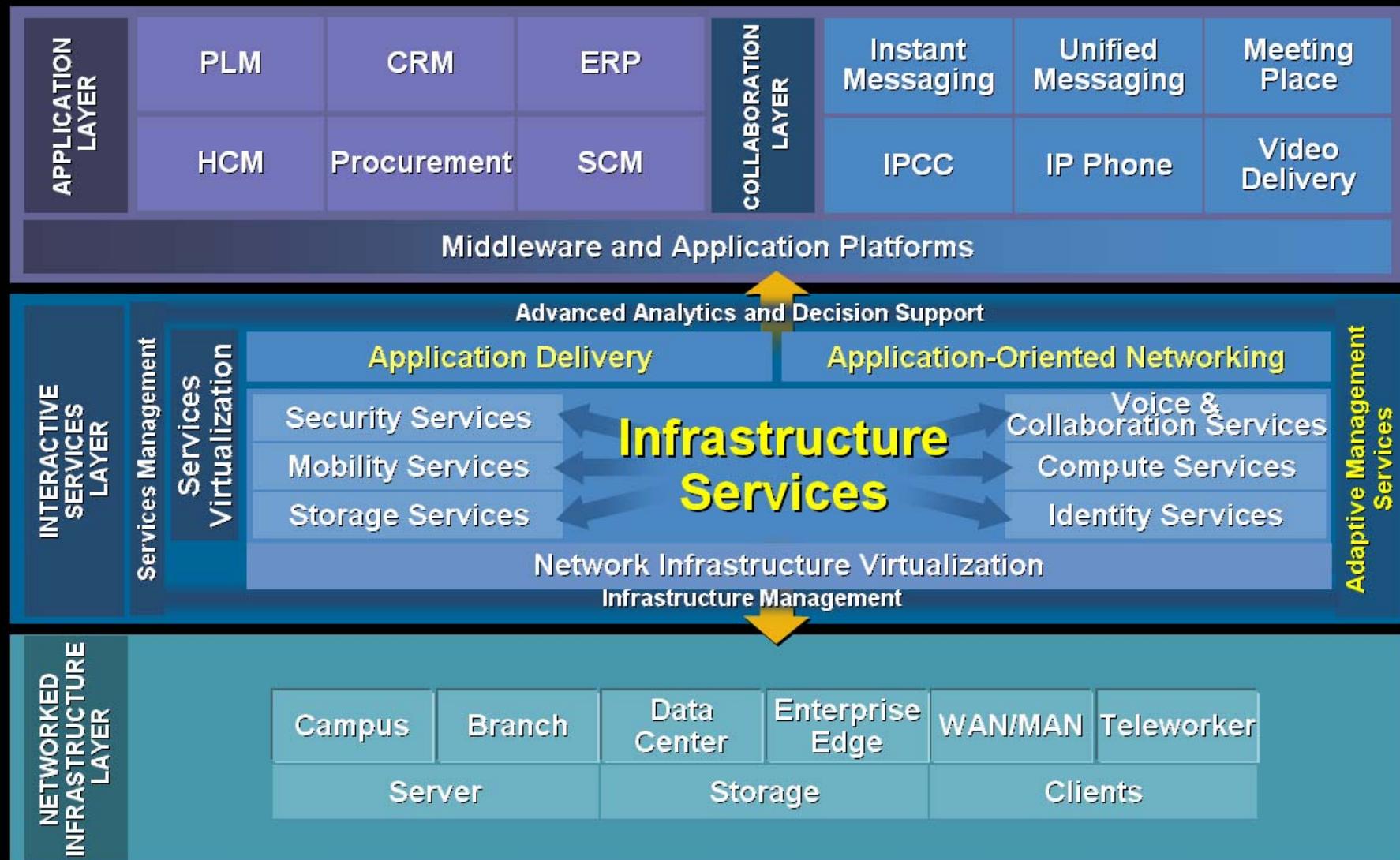
The Network Speaks the Language of Applications



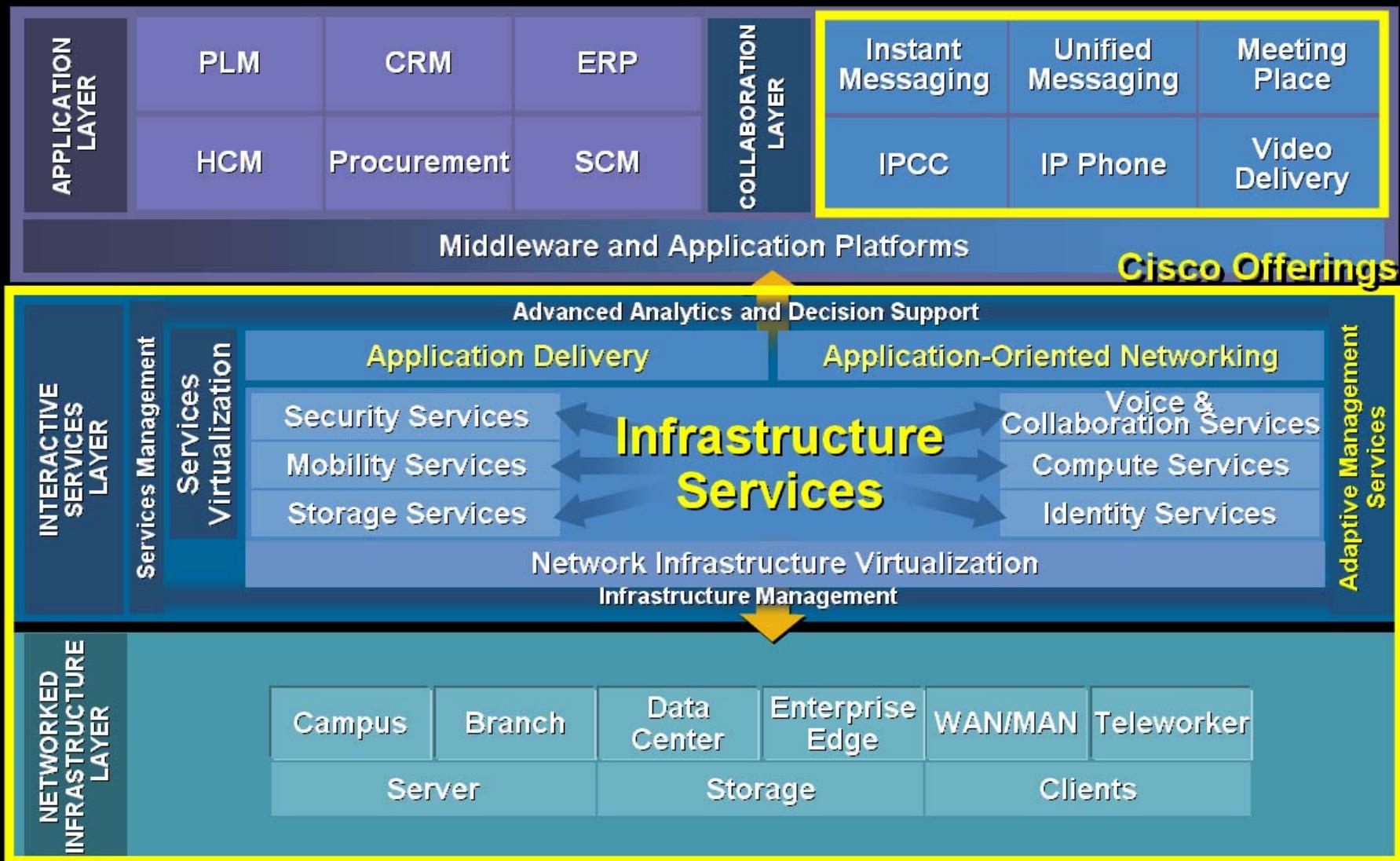
Cisco Service-Oriented Network Architecture (SONA) Framework



Cisco Service-Oriented Network Architecture (SONA) Framework



Cisco Service-Oriented Network Architecture (SONA) Framework



Cisco Application Networking Service Solution



- **AON (Application Oriented Network)**
- **Application delivery Service**

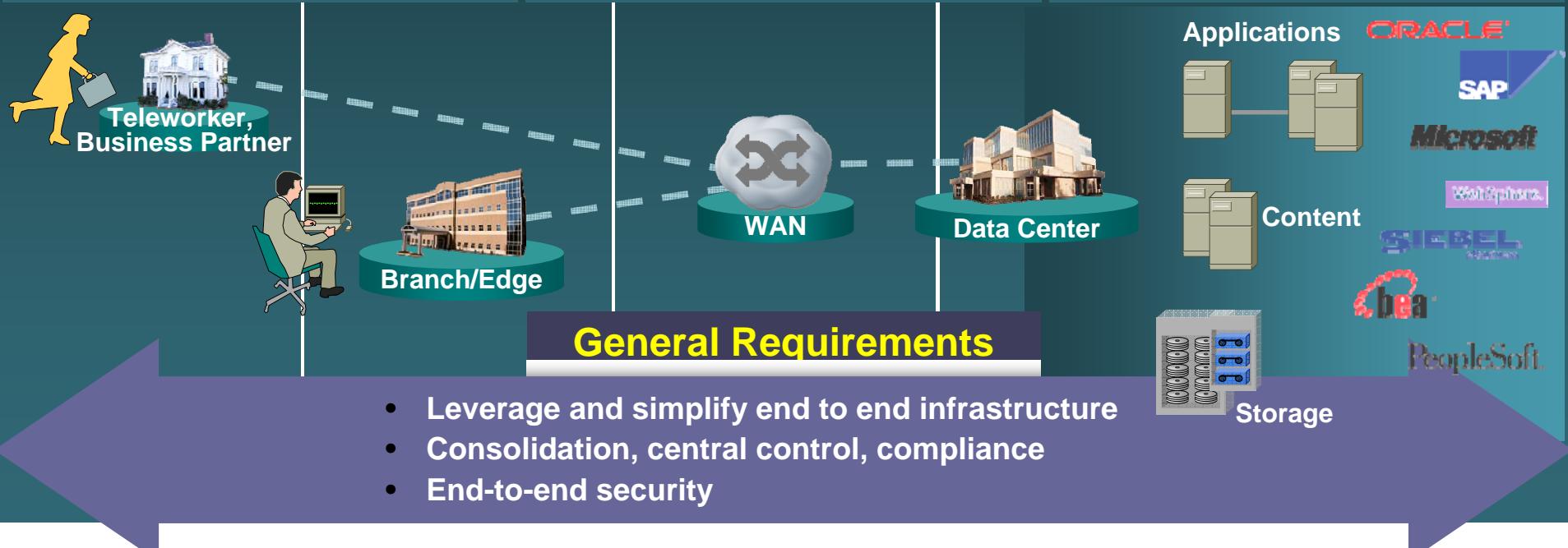
IT Infrastructure의 문제점과 요구사항

Remote and End-Point Issues

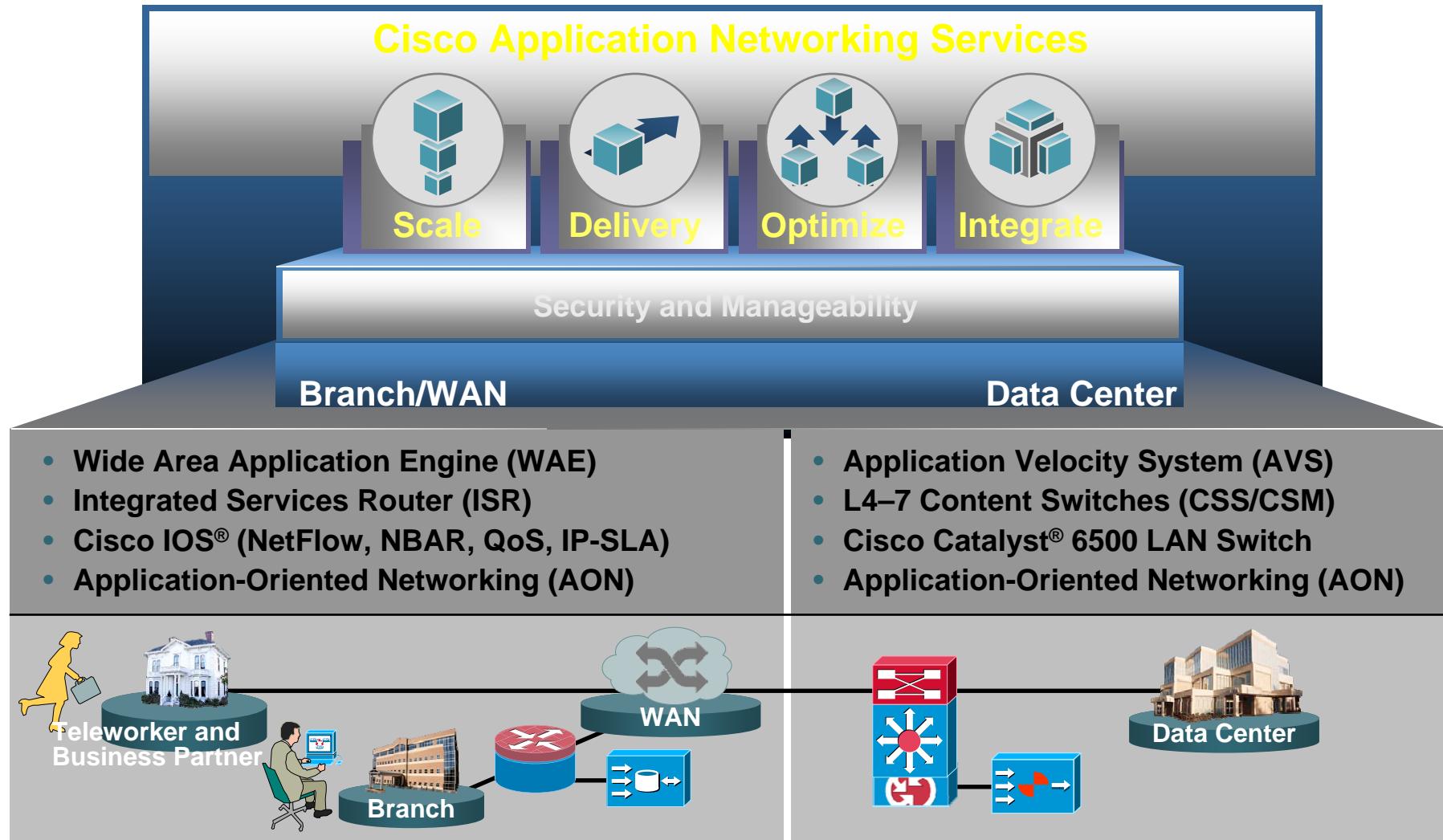
- Wide variety of endpoints
 - Applications not written for WAN
 - Inefficient use of bandwidth
-
- Network latency
 - Low control

Data Center and Central Issues

- Servers process too many common functions
 - Silos compete for infrastructure resources
 - Applications inflexible to modification
-
- Congested networks
 - Bandwidth limits
-
- Congested servers
 - Complex infrastructure



Cisco Application Networking Services 범위



AON 이란 ?

- Application Oriented Networking (AON) is
 - ✓ the next stage in the evolution of the network - from processing at the packet level to **processing of application messages**
 - ✓ able to **natively understand the content and context of application messages** (e.g. Purchase Orders, Stock Trades), and act intelligently on them in support of business processes
 - ✓ a **new architectural alternative**: Applications can now focus on business logic and user interaction, and offload application infrastructure aspects to the network with no changes to the existing systems

네트워크에서의 Application Message

Data Packets managed by the L2/L3 Network:



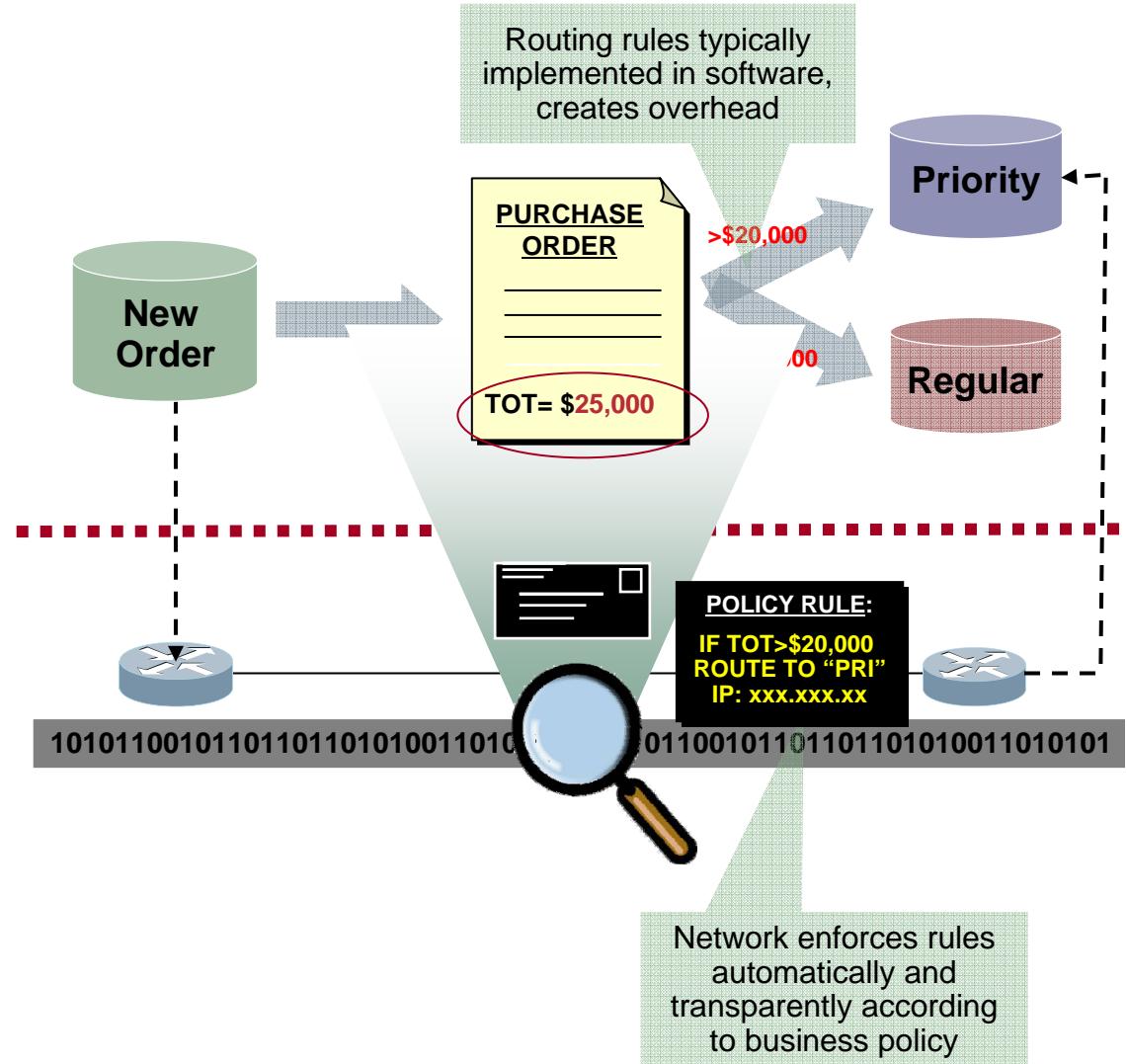
Application Messages managed by AON:



(e.g., purchase order, stock trade, HR record update)

AON 의 메시지 처리

- AON messaging functions:
 - Routing
 - Security
 - Translation
 - Validation/Policy
- Legacy or web services apps
- Visibility into business process detail
- No changes required to existing applications
- Synergy with packet network for unique interactions
- Full extensibility to allow partners and customers to “program the network”



AON 제품군

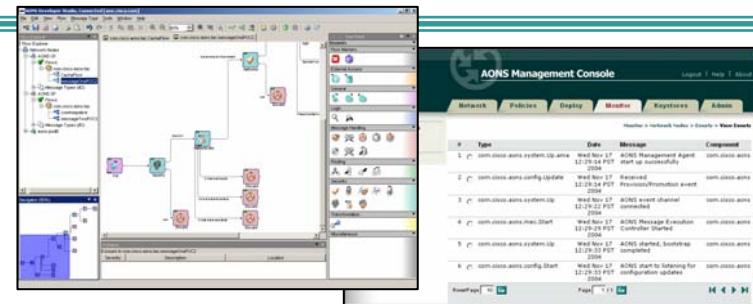
Hardware

- Data Center/Enterprise
 - ✓ Standalone Data Center Appliance
 - ✓ Blade within Cat6K
- Branch Office
 - ✓ Branch Appliance
 - ✓ Network Module within 26xx/37xx Series
- Stand-Alone Appliance (8340)
 - ✓ Highly Scalable
 - ✓ Flexibility of deployment



Software Tools

- Design message policies
- Deploy policies to the network, ongoing mgt.



- AON Development Studio

- AON Management Console

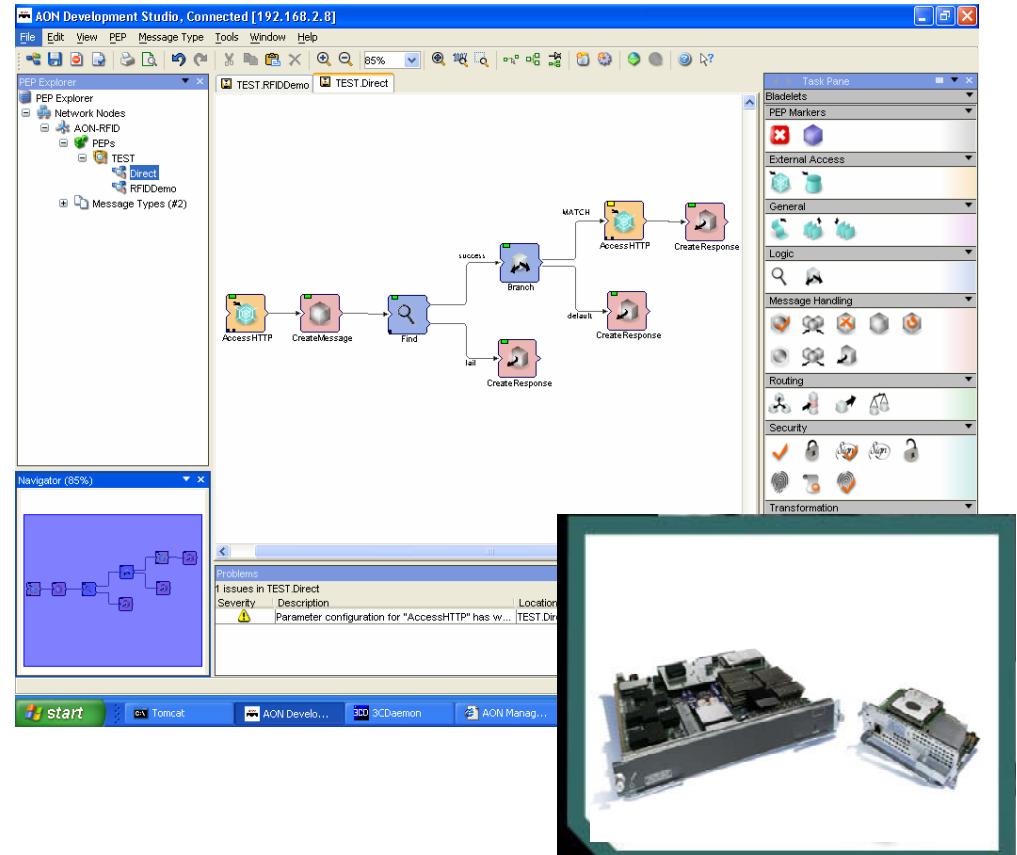
RFID 를 위한 Cisco AON 솔루션

News!

An AON Solution comprised of Cisco hardware and software designed especially for RFID deployments

Capabilities

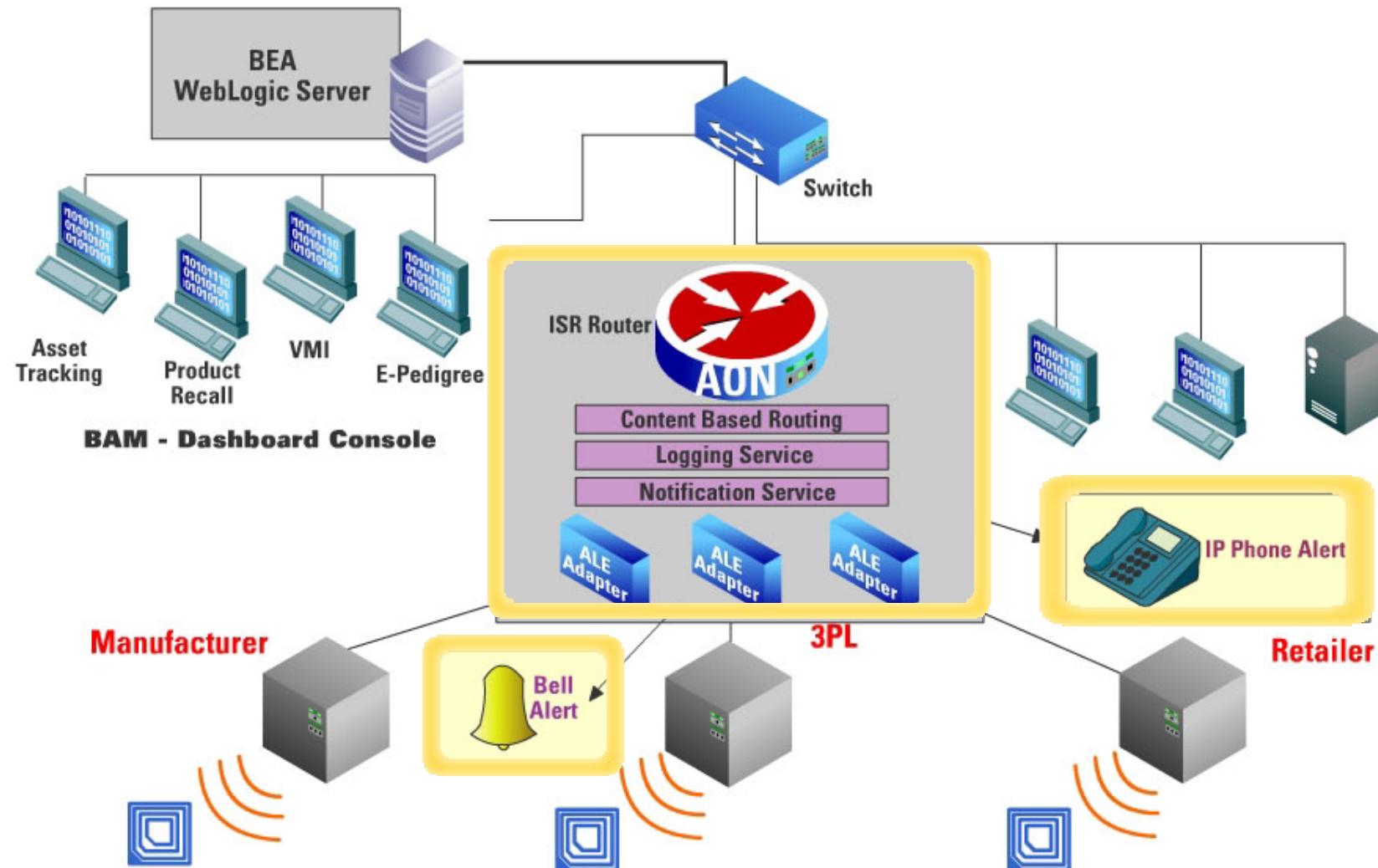
- RFID filtering, collection and exception notification
- RFID reader virtualization
- RFID reader management
- RFID message security
- RFID intelligent message routing



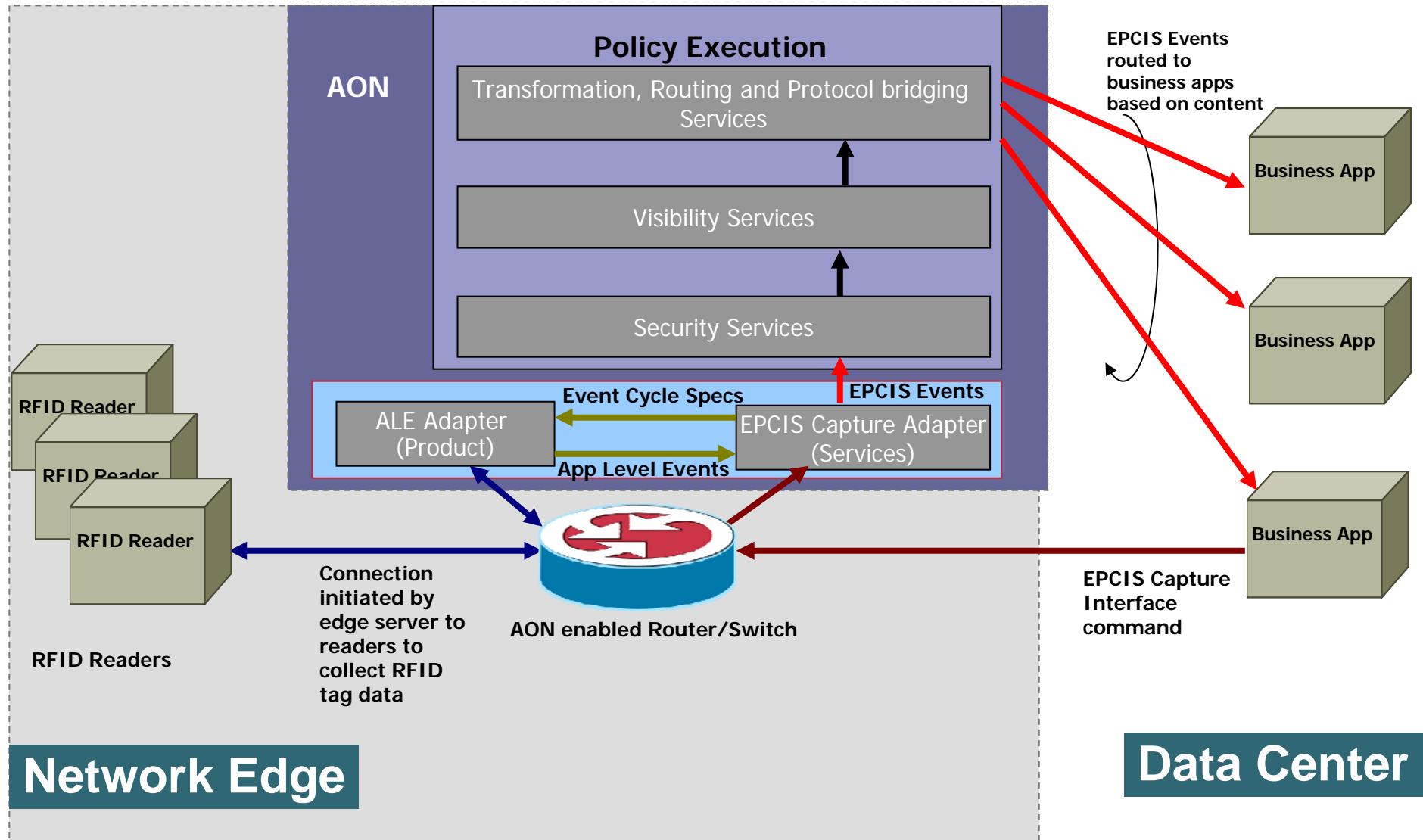
The Only Network-Embedded Edge Solution for RFID

- Lowers the cost to deploy RFID infrastructure
- Increases flexibility in adapting to business needs

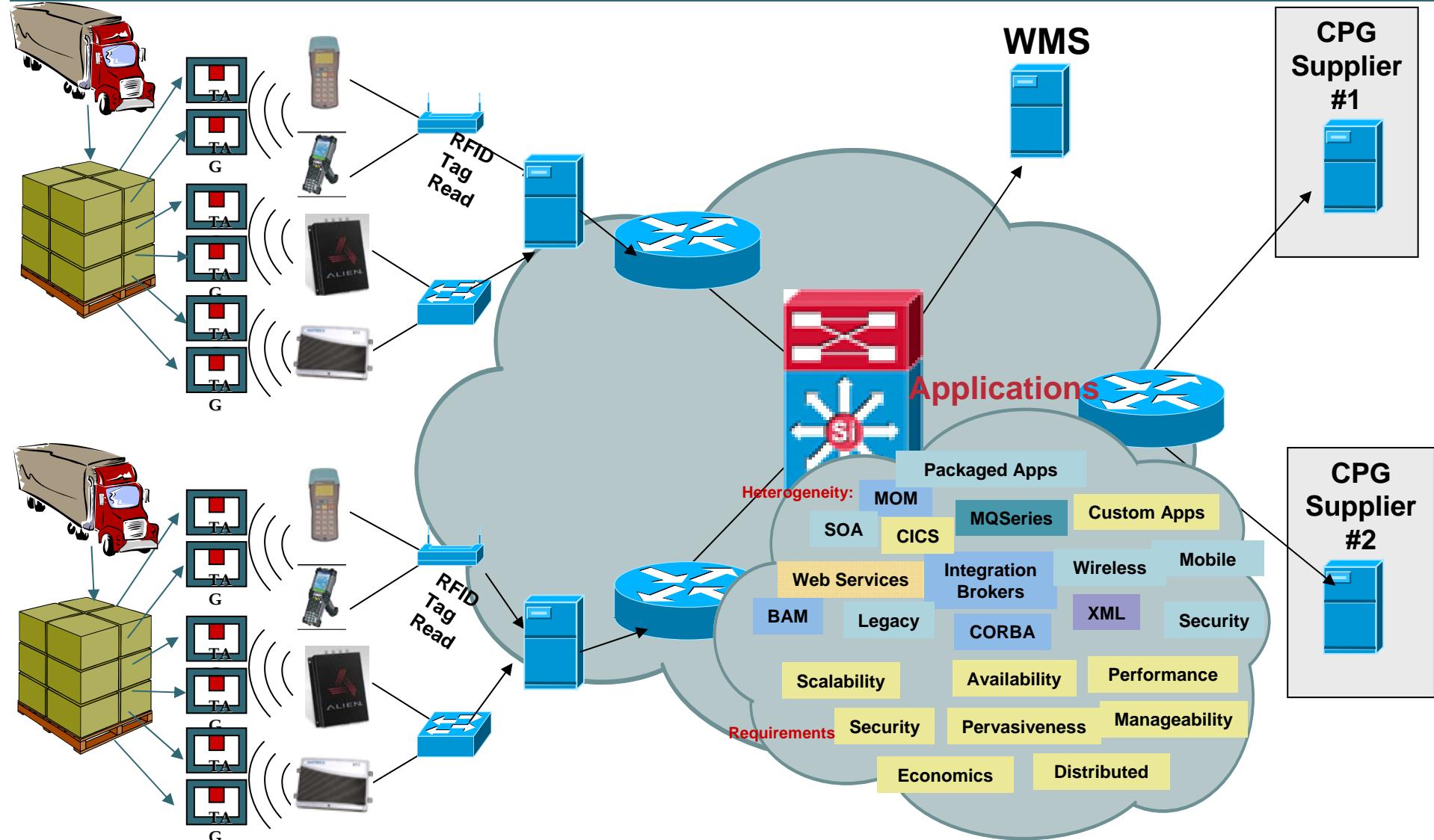
RFID 를 위한 Cisco AON 솔루션



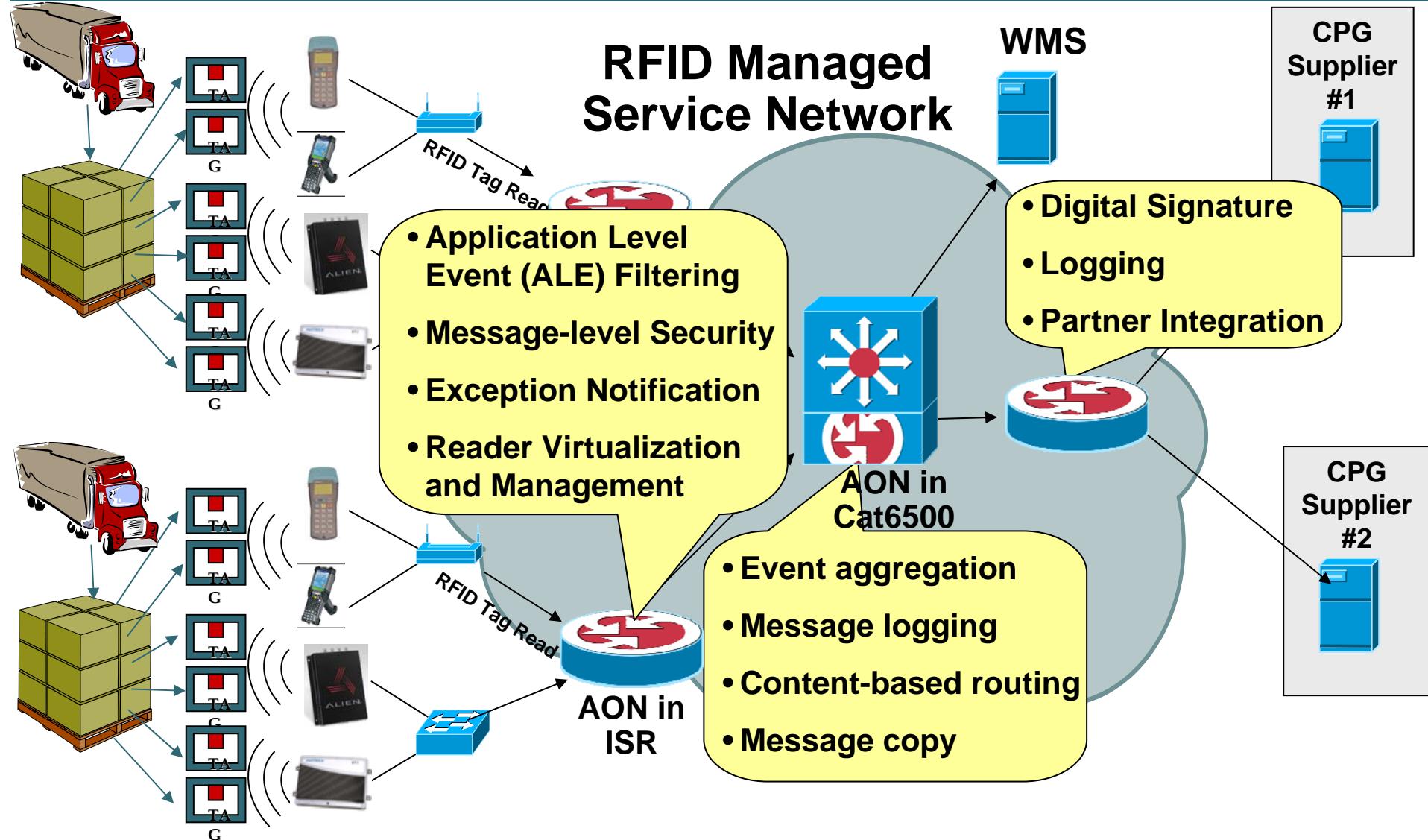
AON RFID 솔루션 구조



RFID 솔루션 : without Cisco AON for RFID



RFID with Cisco AON for RFID

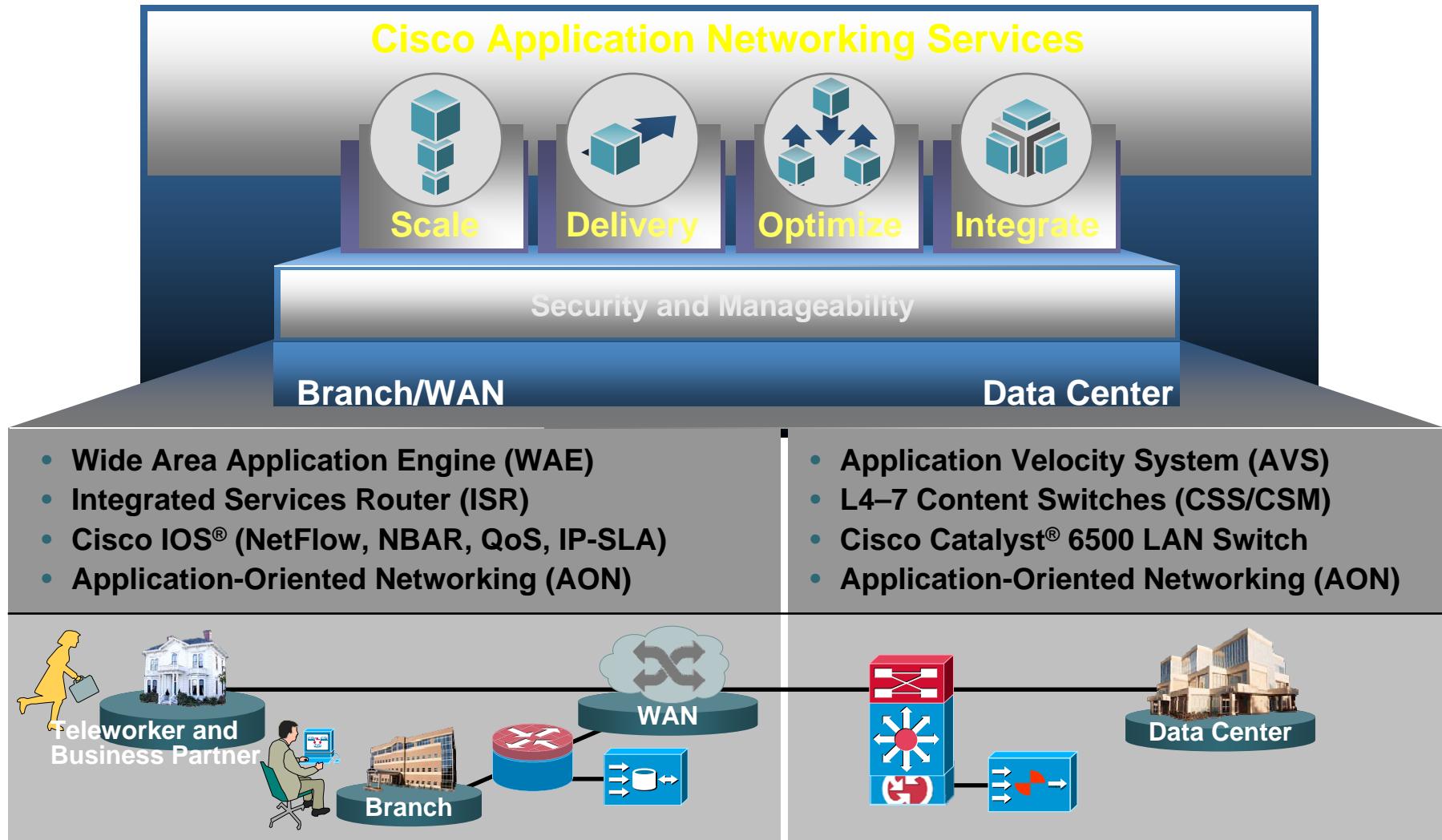


Cisco Application Networking Service Solution

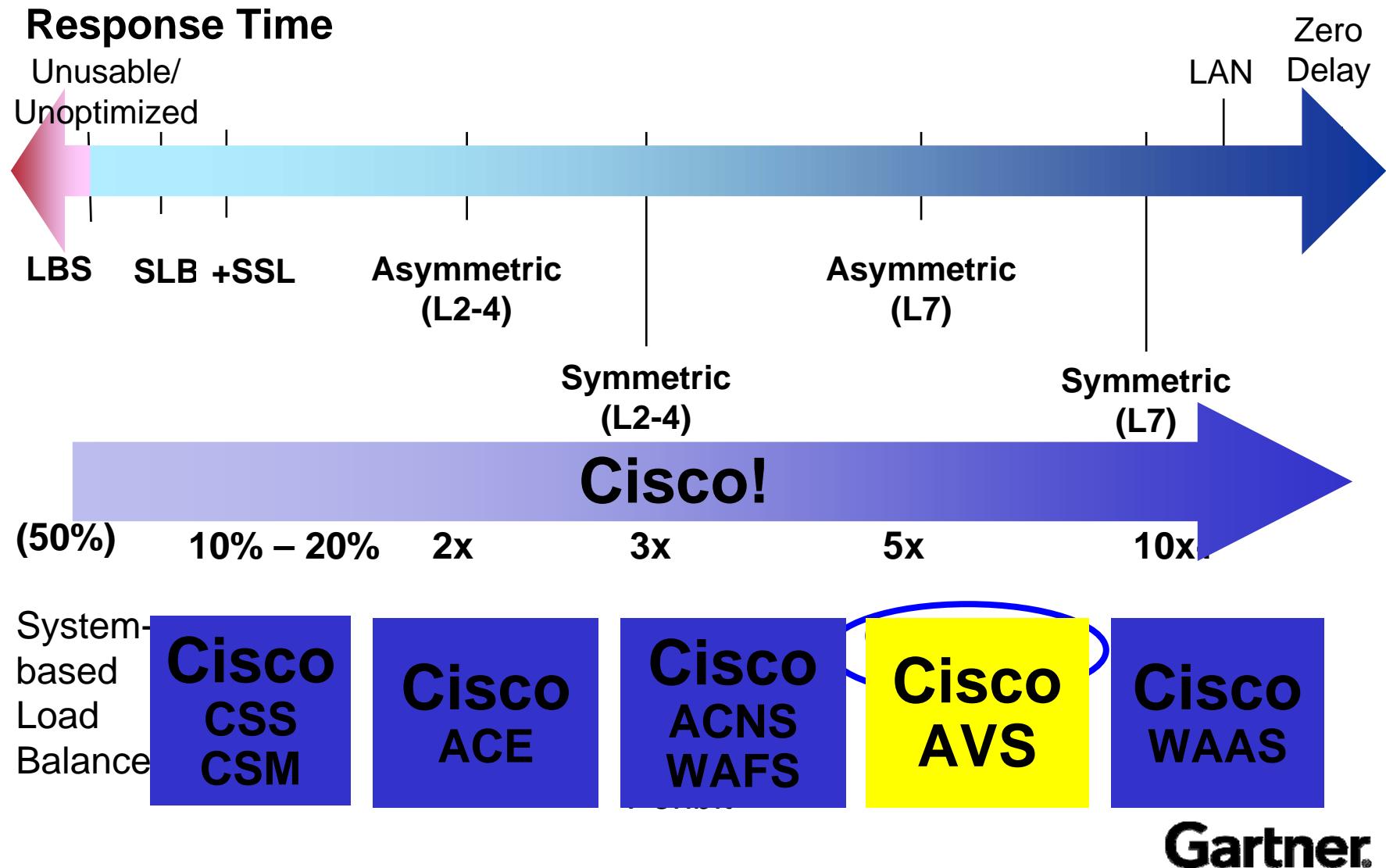


- AON (Application Oriented Network)
- Application delivery Service

Cisco Application Networking Services 범위



Application Delivery Services 기술



Cisco L4-7 Switching 제품군

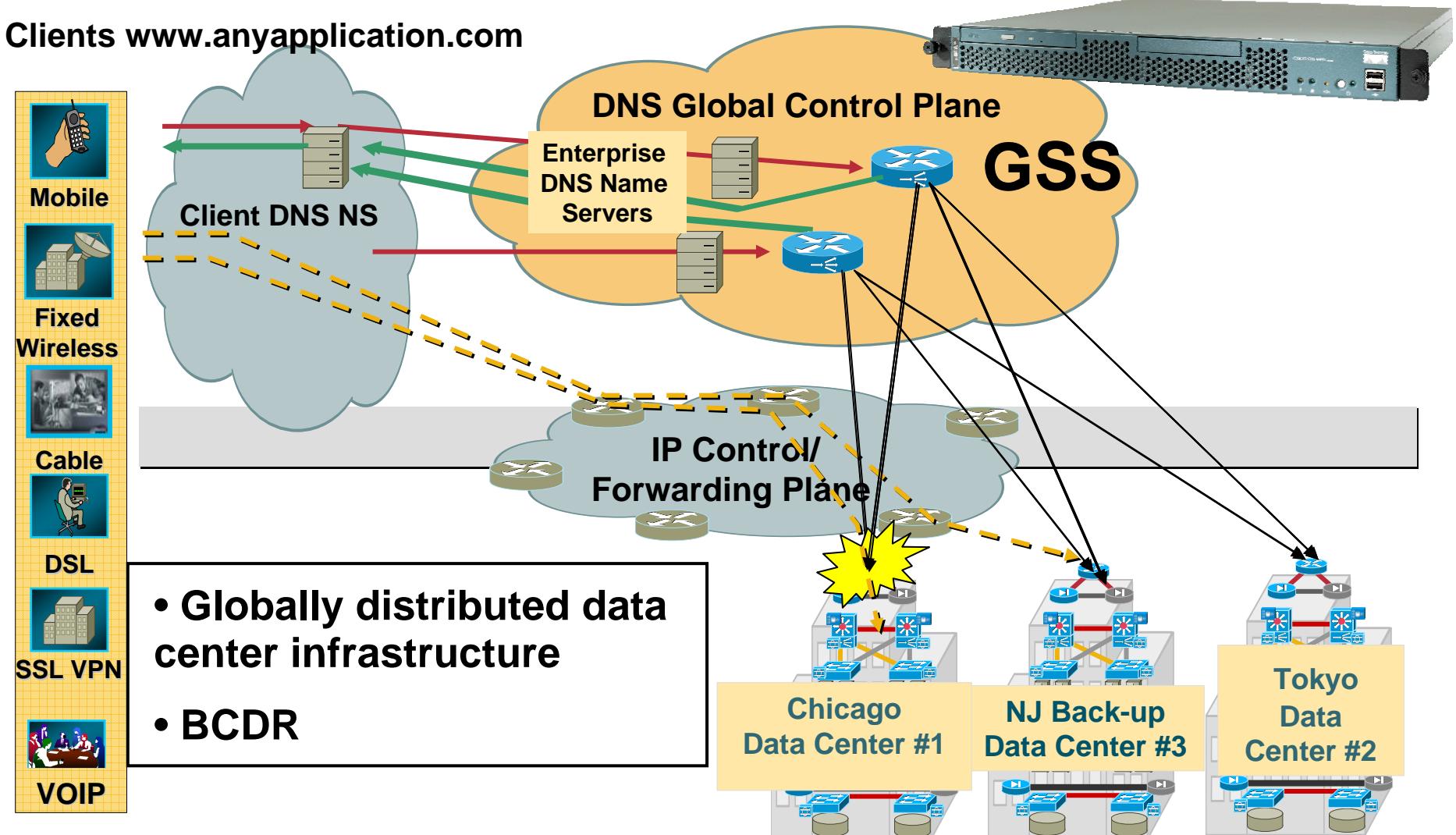
Appliances

Module

Decision points	Cisco CSS 11501	Cisco CSS 11503	Cisco CSS 11506	Cisco CSM for Catalyst 6500
Form factor	Appliance Fixed Config	Appliance Modular	Appliance Modular	Module Integrated In Catalyst 6K
Port density	Fast Ethernet (FE) Gigabit Ethernet (GE)	8 FE 0 - 1 GE	0 - 32 FE 2 - 6 GE	0 - 80 FE 2 - 12 GE
Site activity	Low	Medium	High	Highest
Hardware redundancy	No	No	Yes	Yes
Session redundancy	Yes	Yes	Yes	Yes

Global Site Selector (GSS 4491)

Clients www.anyapplication.com



Application 성능향상을 위한 기존의 Silo식 접근 방법

Network

- More bandwidth
- Lots of point products
- Replicated data centers

Operations

- More Servers
- More management tools
- Re-architect infrastructure

Applications

- More testing
- Rewrite Applications
- Security patching



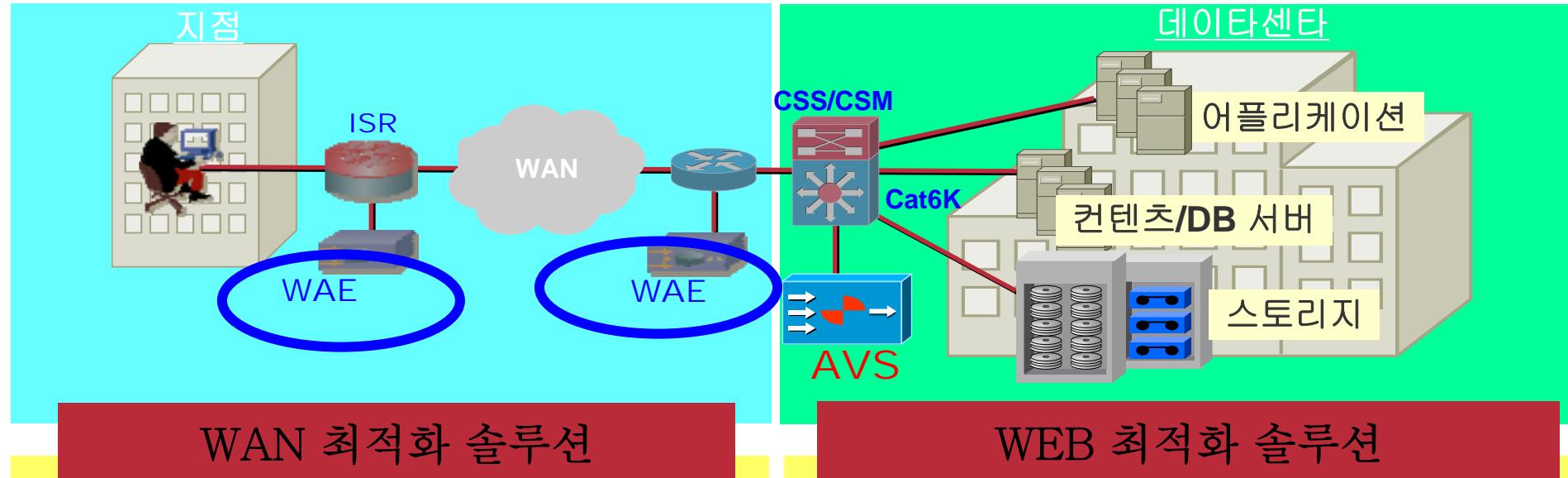
WAN Latency:
100 ms

?



비용?(Expensive), 관리?(Complex), 효과 ? (Ineffective)

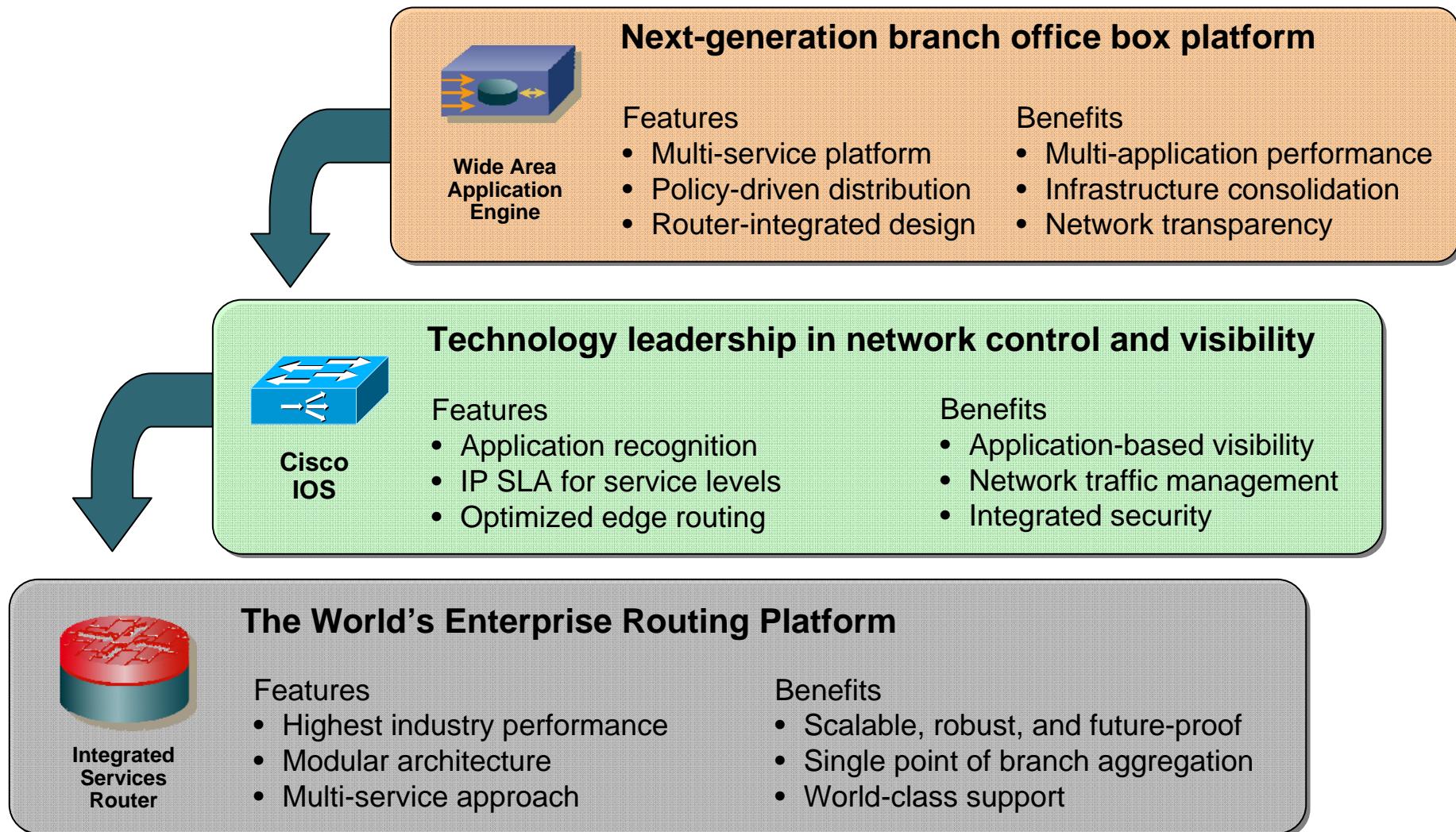
Cisco Application Service (Delivery) 솔루션



- WAAS (Wide Area Application Service)
- 단독 Box형 / ISR 모듈형
- Data Caching / TCP Session Control / 압축등을 통한 응답속도 향상 및 B/W 사용량 절감
- 센터와 지점 양단간 구성

- AVS(Application Velocity System)
- 단독 Box형
- Latency 축소 / 동적캐싱 / TCP Offload / 압축등을 통한 응답속도 향상 및 B/W사용량 절감
- 센터에만 구성(서버 앞단)

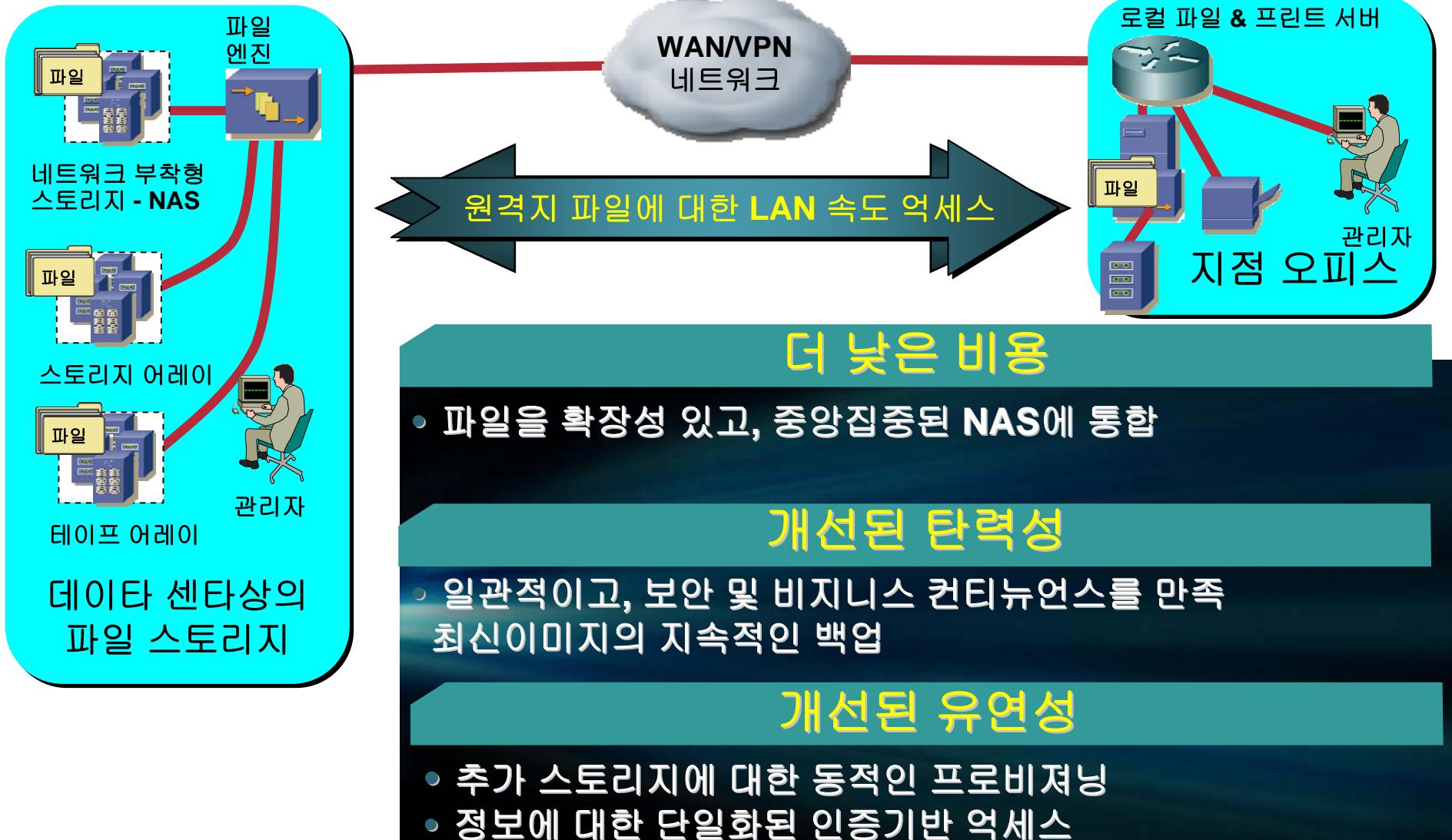
원격지와 WAN을 위한 Application Delivery 솔루션



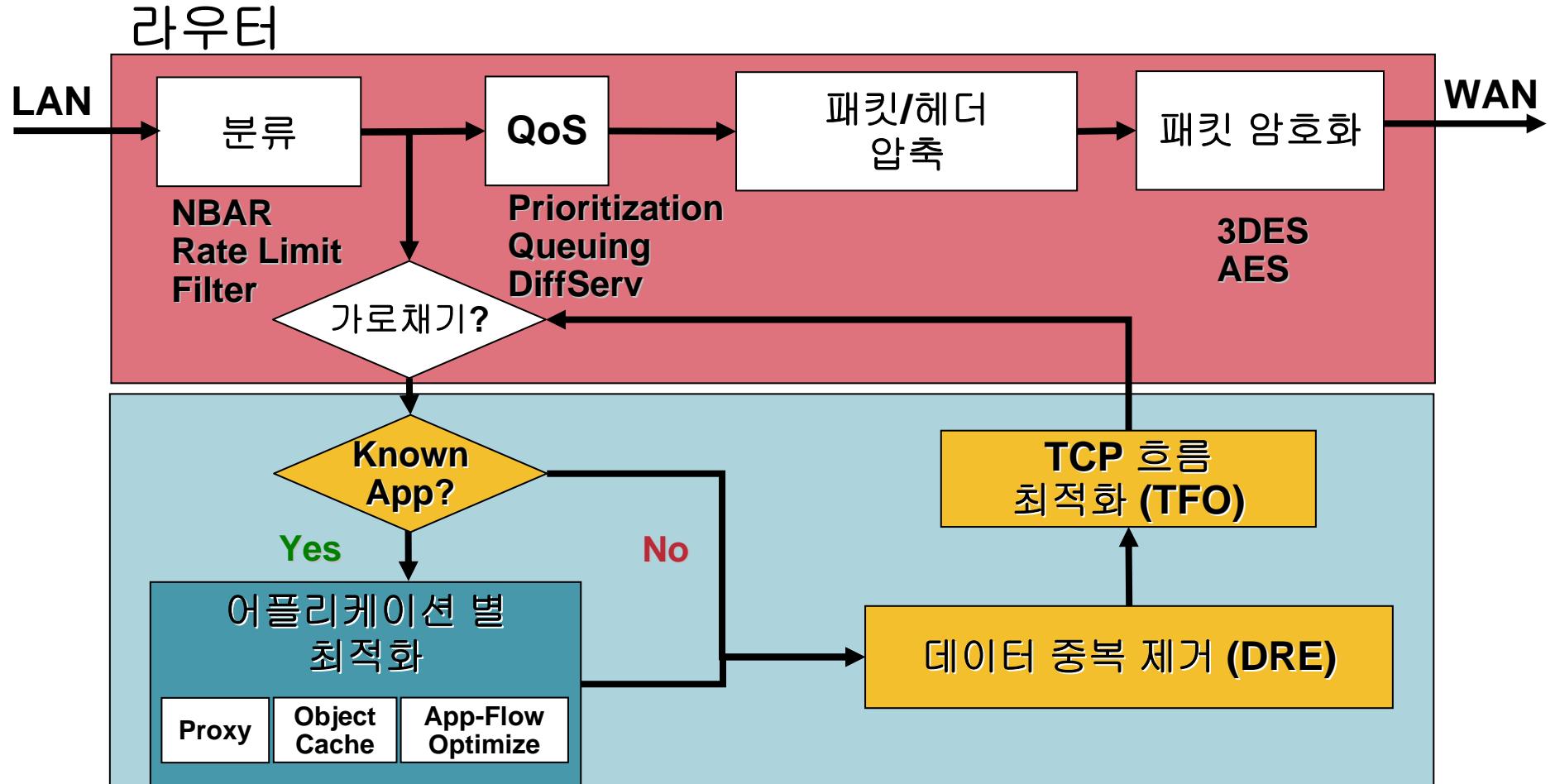
WAAS 기술 사양

- **Expand compression technology and TCP flow optimizations**
 - ✓ Optimize user access to all applications – not just those with specific application adapters
- **Strong Emphasis on Application Adapters**
 - ✓ Combine application adapters from ACNS and WAFS onto common, optimized foundation
 - ✓ Add further application adapters as needed for “problem” applications
- **Network Centric Architecture for Investment Protection**
 - Compliance with all standard network functions (QoS, NBAR, ACLs, IPsec, load-balancing, network management & monitoring)
 - Integrate into existing network hardware platforms

WAAS (Wide Area Application Service) 원격지 파일 서비스 예

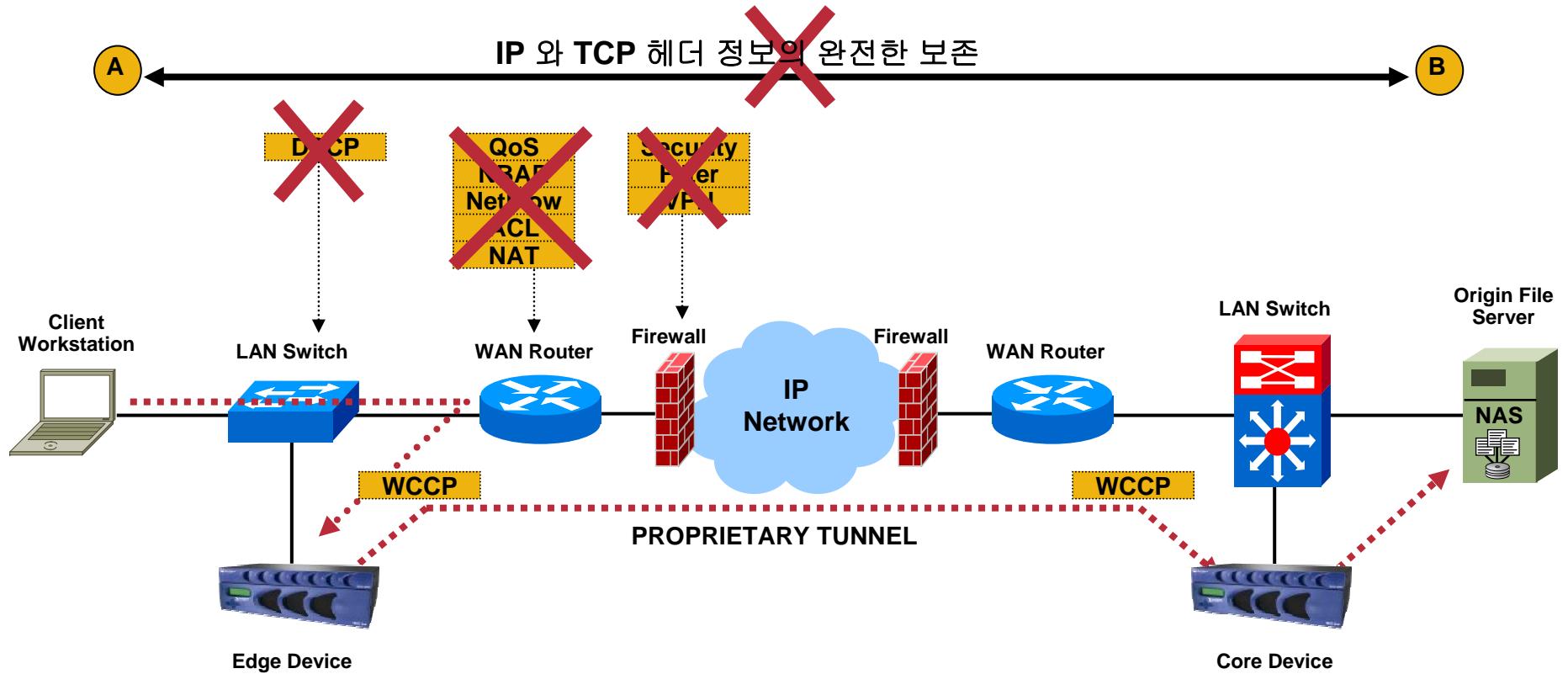


시스코 WAAS (Wide Area Application Service) 의 최적화된, 투명한 패킷 흐름



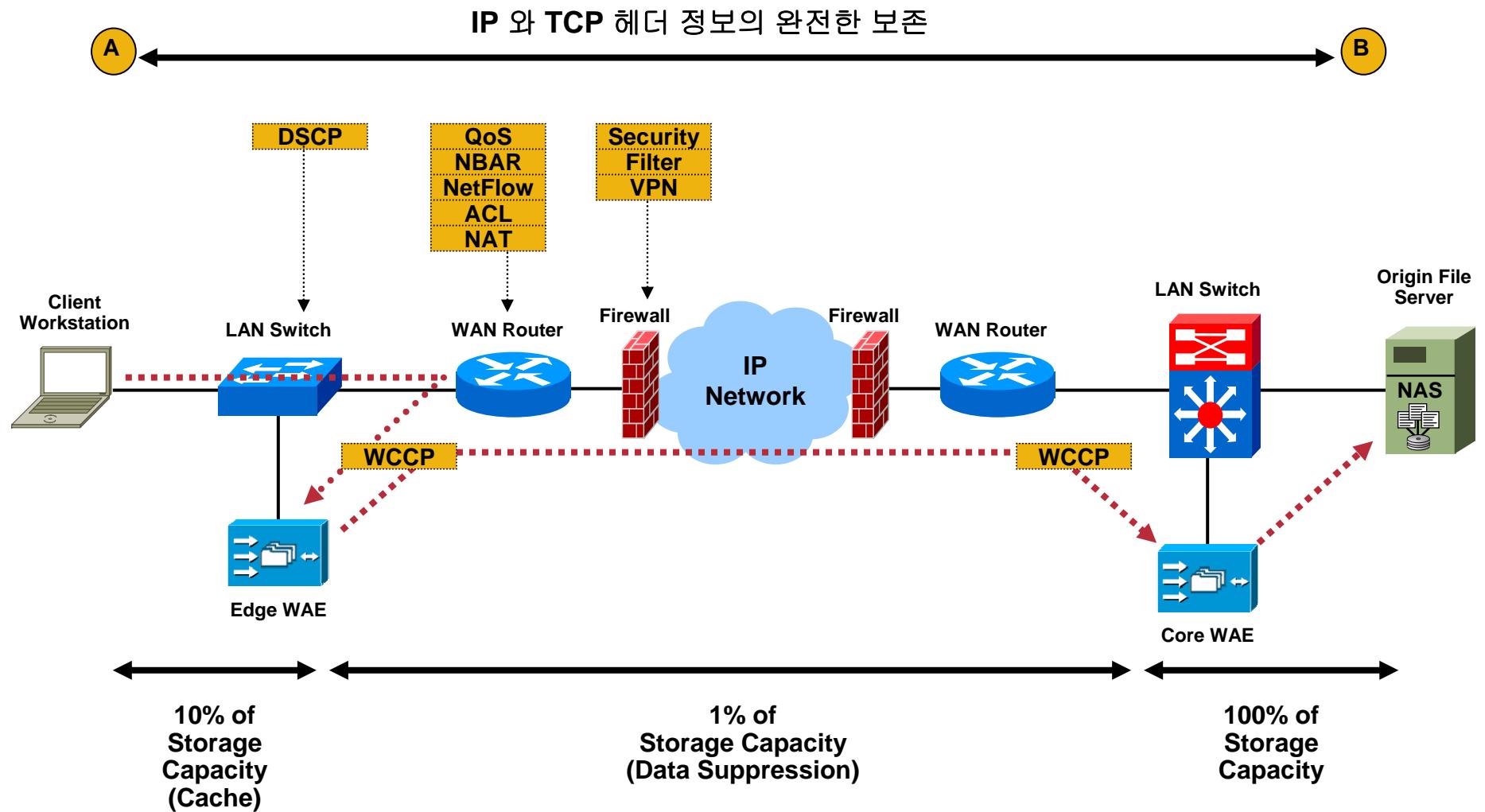
Wide Area Application Engine 또는 Router Module

터널 증후군을 극복하라



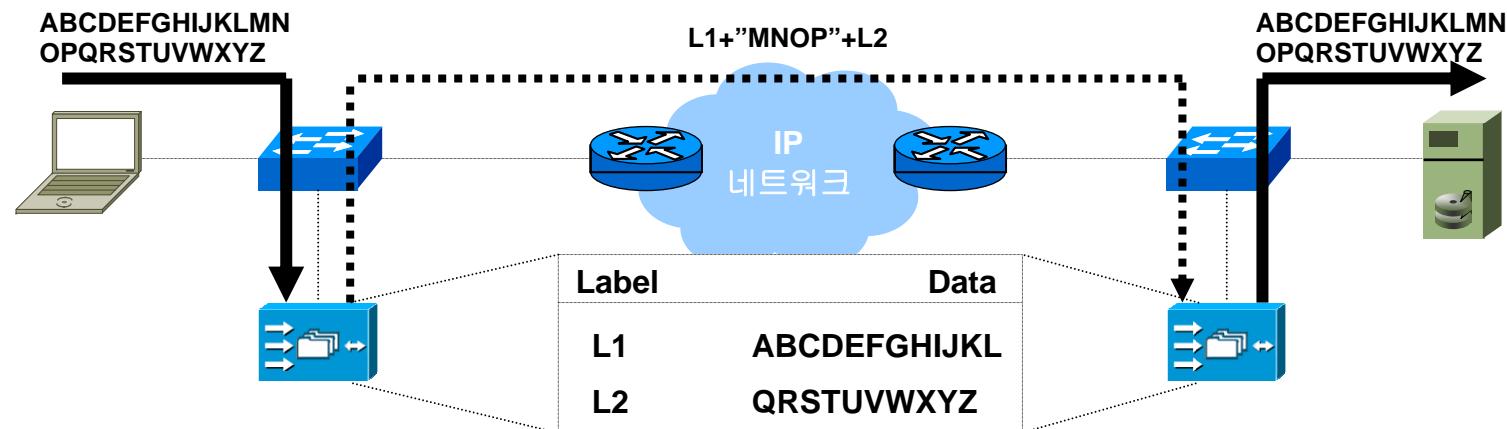
- 라우터와 방화벽은 오직 어플라이언스의 트래픽만을 볼 수 있음
- 네트워크 흐름의 관리와 모니터링이 어렵다
- 어플라이언스 기반 **QoS** 와 보안 모델로 전환할때의 어려운 마이그레이션
- 지원 모델이 불필요하게 복잡해짐

WAAS 의 투명한 네트워크 통합



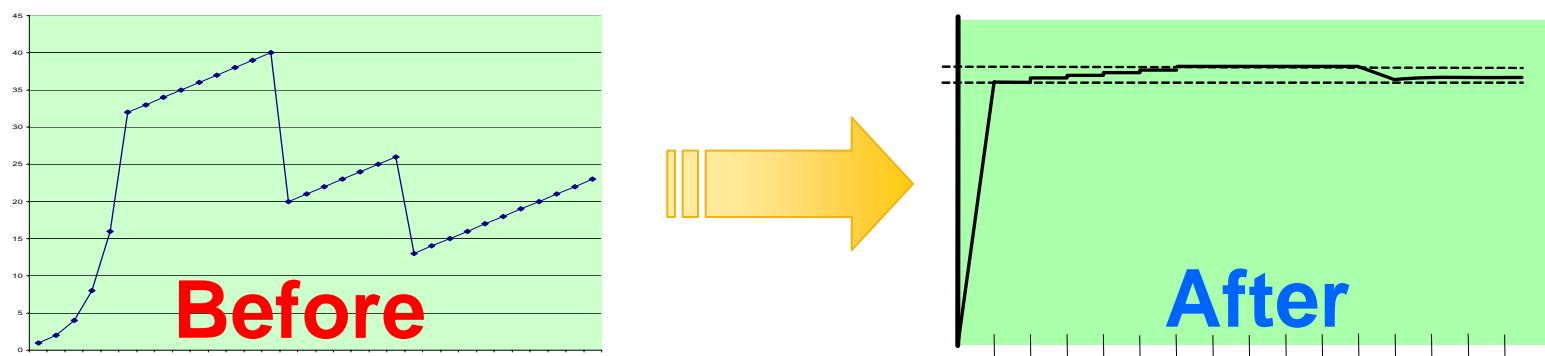
데이터 중복 제거 (DRE)

- 중복 데이터에 의한 전체적인 **WAN** 사용을 축소
 - 이전에 주고 받은 트래픽의 액티브 데이터베이스를 유지
 - 이전에 보내어진 데이터에 대해서는 인덱스만을 전송
 - 5배에서 50배의 압축을 실현. **WAN** 대역 소모 최소화
- LZ** 압축에 의한 모든 아웃바운드 트래픽을 압축
 - 데이터 **Suppression** 이후의 2배의 추가적인 압축
 - 비중첩 데이터에 대한 우수한 압축율 제공

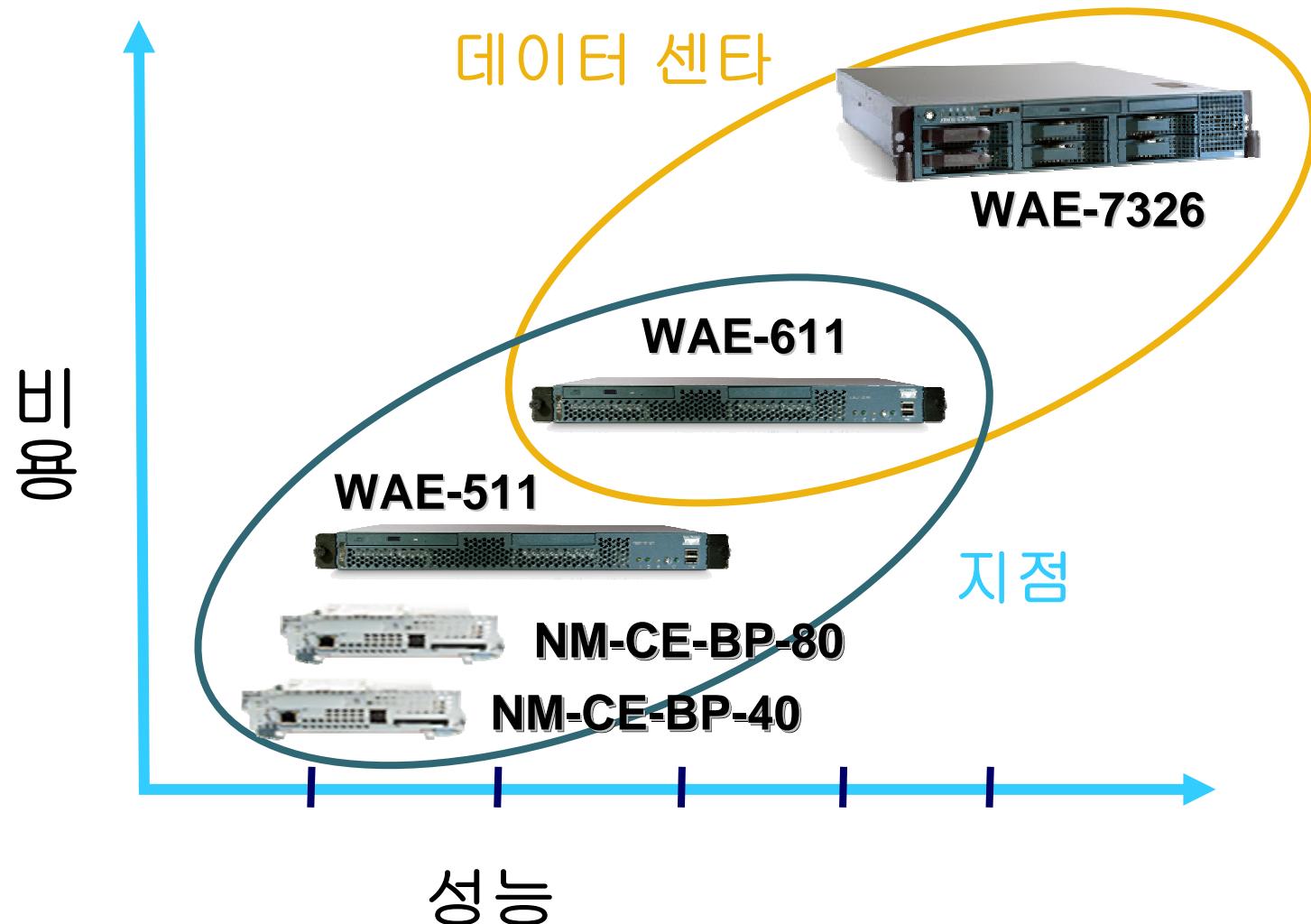


TCP 흐름 최적화 (TFO)

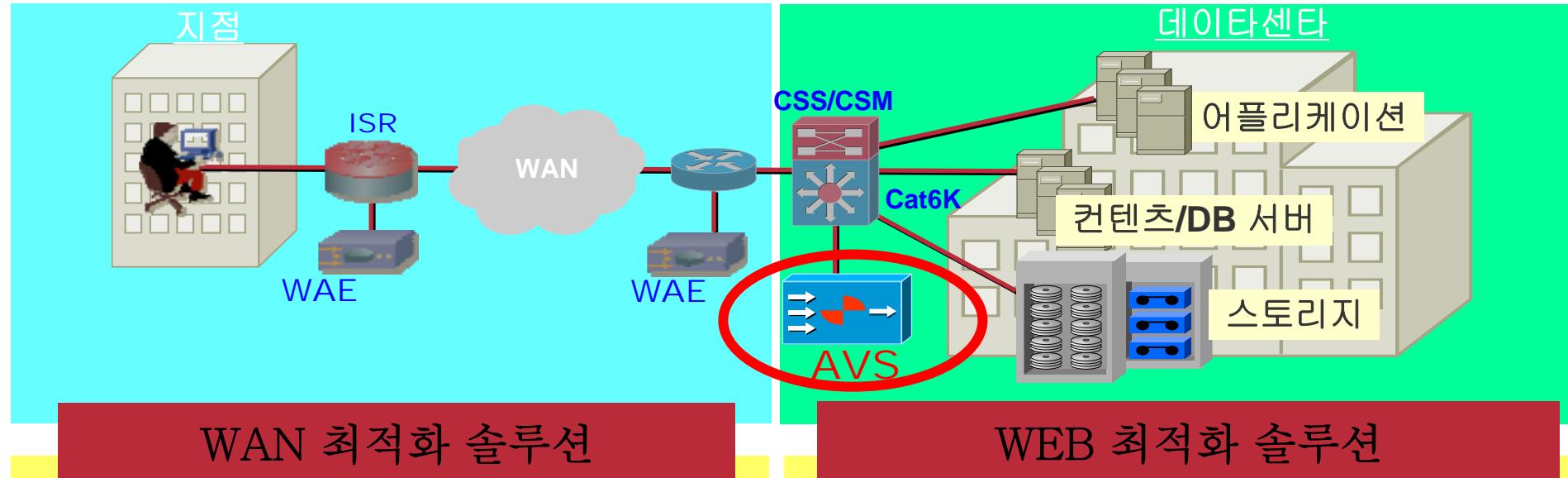
- 개선된 TCP 윈도우 관리 통한 성능 개선
 - ✓ 지능적인 윈도우 튜닝과 윈도우 스케일링
 - ✓ 빠른 윈도우 개방 (ACK splitting)
 - ✓ TCP 터미네이트 및 파이프라이닝을 통한 성능 개선
- 패킷 손실에 의한 성능 영향 최소화
 - ✓ TCP SACK – selective acknowledgement
 - ✓ 개선된 충돌 윈도우 핸들링
 - ✓ 빠른 재전송 및 재시작



시스코 WAAS 하드웨어 플랫폼 제품군



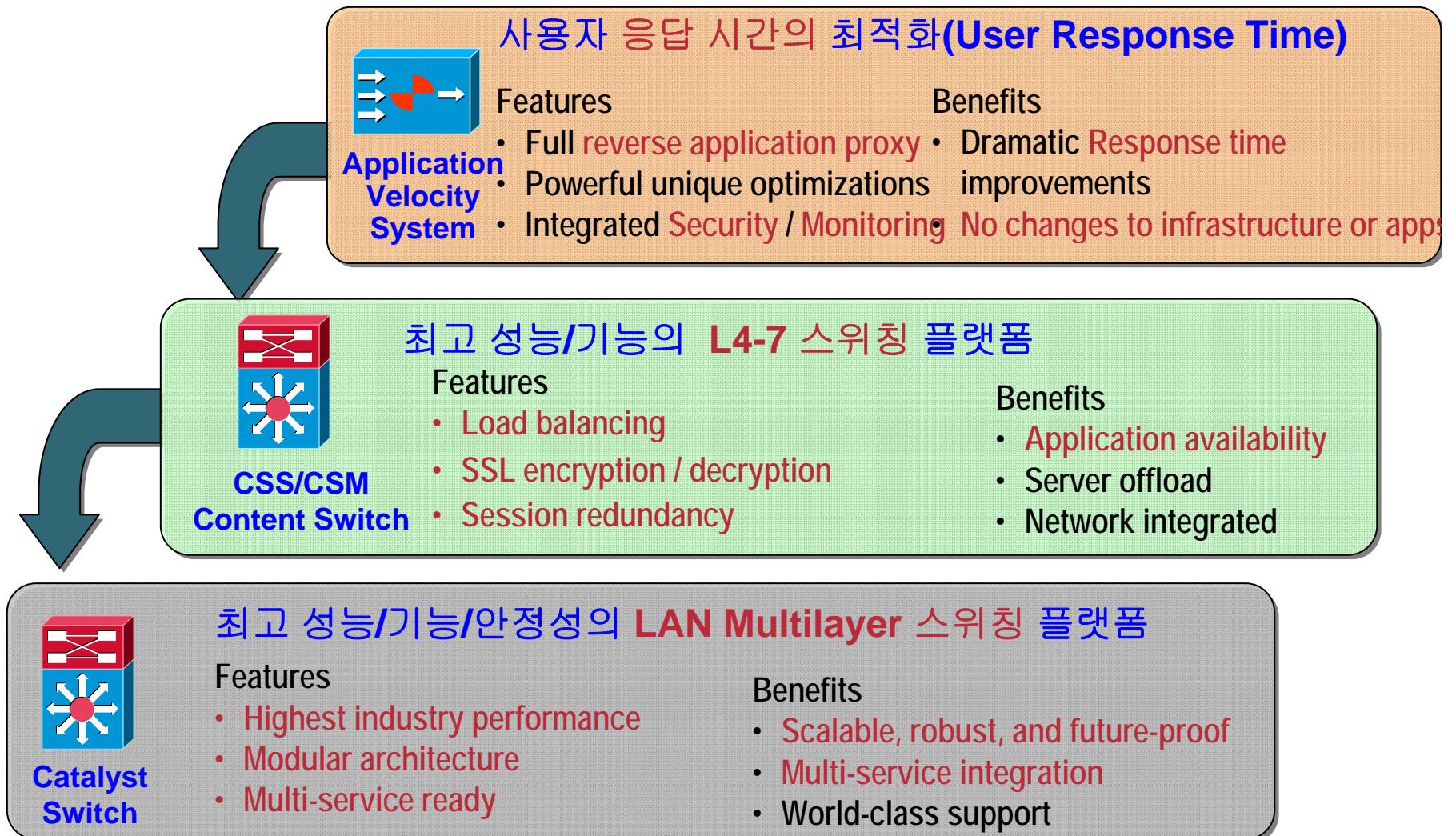
Cisco Application Service (Delivery) 솔루션



- WAAS (Wide Area Application Service)
- 단독 Box형 / ISR 모듈형
- Data Caching / TCP Session Control / 압축등을 통한 응답속도 향상 및 B/W 사용량 절감
- 센터와 지점 양단간 구성

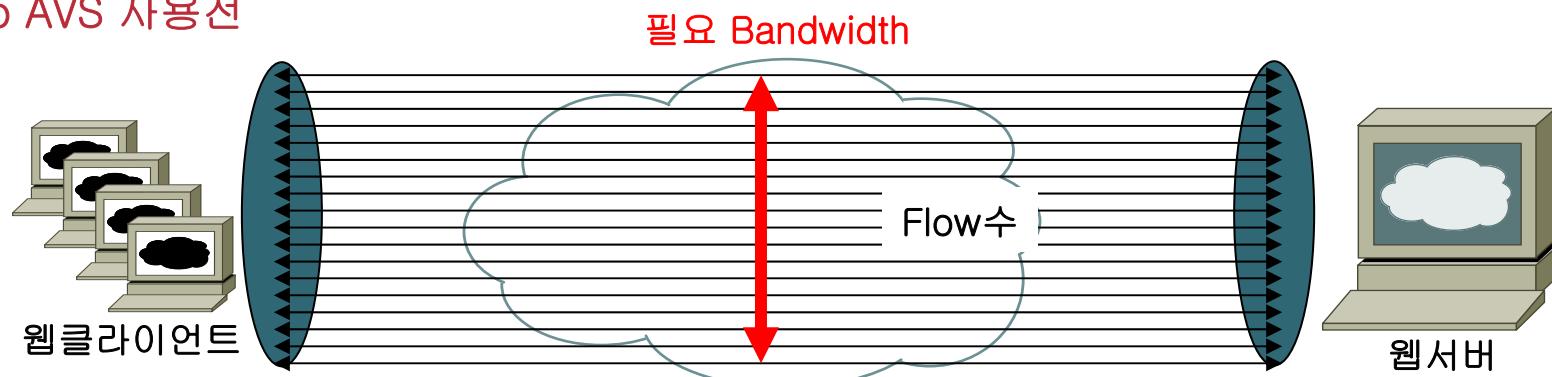
- AVS(Application Velocity System)
- 단독 Box형
- Latency 축소 / 동적캐싱 / TCP Offload / 압축등을 통한 응답속도 향상 및 B/W사용량 절감
- 센터에만 구성(서버 앞단)

Data Center를 위한 Application Delivery 솔루션

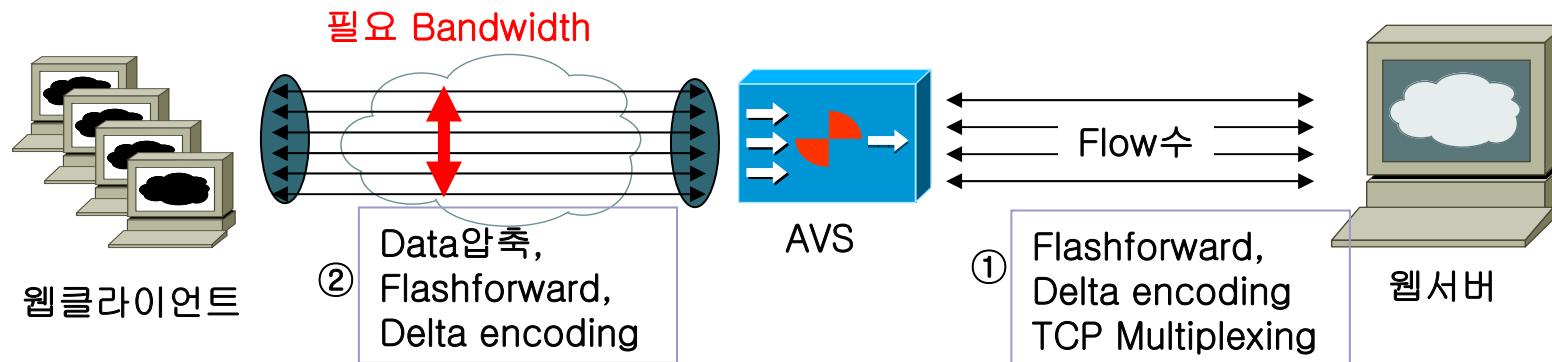


AVS 솔루션 요약

o AVS 사용전



o AVS 사용 후



감사합니다

CISCO SYSTEMS

