Cisco Application Networking Services (ANS)

At-A-Glance

What is Cisco Application Networking Services?

Cisco® Application Networking Services (ANS) is a critical component of the Cisco Service-Oriented Network Architecture (SONA) that facilitates use of customers' most important applications on their network, improving performance, availability, security, and total cost of ownership (TCO).

Cisco Application Networking Services Product Portfolio

Data Center Solutions

Cisco data center ANS products provide secure, reliable, high-performing data center infrastructure for application traffic within or across data centers. (See Figure 1 below.)

Cisco Application Control Engine (ACE)

Cisco ACE is a services module (line card) for the Cisco Catalyst® 6500 that provides organizations with new levels of control over the way they deploy, operate, deliver, secure, and manage their applications across the extended enterprise. It is unique because it provides a new level of flexibility and scalability through virtualization technology—with the ability to be upgraded simply through purchasing a software license for new services—hardware upgrades are unnecessary.

Cisco AVS 3100 Series Application Velocity System

The AVS appliance improves Web-based (HTML and Extensible Markup Language [XML]) application performance, measuring end-user response time end to end, and managing application layer security.

Cisco CSS 11500 Series Content Services Switch

The Cisco CSS is a modular Layer 4–7 load-balancing appliance that offers flexible configuration, onboard Secure Sockets Layer (SSL) encryption/decryption, and compression.

Cisco Content Switching Module (CSM)

The Cisco CSM is a Cisco Catalyst 6500 Line Card that balances client applications and traffic to farms of servers, firewalls, SSL devices, or VPN termination devices.

Cisco GSS 4400 Series Global Site Selector Appliances

The Cisco GSS 4400 appliances constitute a critical component for business resilience—the ability to optimize multi-site deployments that involve globally distributed data centers; as a result forming the cornerstone of multi-site disaster recovery infrastructure.

Branch/WAN Solutions

Cisco branch ANS products provide LAN-like performance for applications delivered over the WAN, and thus enable IT to consolidate servers/storage within the branch office. Cisco branch solutions for application delivery are deployed symmetrically in both the data center and branch offices.

Cisco Wide Area Application Services (WAAS) Software

Cisco WAAS is a comprehensive application acceleration and WAN optimization solution for branch offices that optimizes performance of any TCP-based application across a WAN. This allows customers to confidently deploy centralized applications, and consolidate costly branch servers and storage into data centers, while offering LAN-like performance for remote users. WAAS integrates transparently with the network, preserving TCP information to maintain functions such as security, QoS, visibility and monitoring end-to-end.

Cisco Application and Content Networking System (ACNS) Software

Cisco ACNS Software enables customers to establish a content delivery network (CDN) within their organization. It enables effective large-scale content distribution and video streaming to remote sites over the WAN.

Cisco Wide Area Application Engine (WAE) Appliances

The Cisco WAE product family offers a single, consolidated platform—either appliances or a router module—that allows customers to run either Cisco WAAS or ACNS Software.

Figure 1. ANS Reference Model
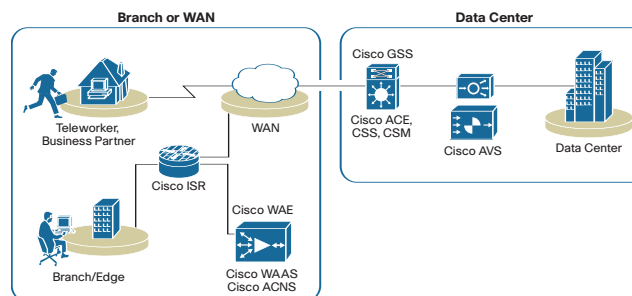
Typical Cisco ANS Customer

The Cisco ANS customer would have the following needs or requirements.

Enterprise customers with:

- An existing Cisco Catalyst 6500 infrastructure in the data center
- Existing deployments of Cisco Application Delivery solutions (for example, Cisco CSS or CSM local directors, competitive load balancers or content switches, or CDN solutions)
- Mission-critical servers requiring high availability, or large traffic to a group of servers that have different performance capabilities and need optimized performance
- An initiative to improve efficiency and usage rates of their asset base (servers, bandwidth), including at branch offices
- Consolidation projects to reduce costs for operational, security or compliance reasons
- Third-party or in-house business applications offered to partners or clients
- Poor performing applications accessed by remote users/offices—especially over long distances
- Large numbers of branch or retail locations

Service provider customers that:

- Support high-traffic Web portals
- Offer managed or hosted services

Business Drivers that Effect Application Delivery in the Data Center and Branch

Enterprise and service provider customers are deploying Cisco ANS solutions for numerous reasons; some of the primary factors that direct these deployments follow:

- **Faster Deployment of Applications**—Enables IT to dynamically respond to changing business demands by rapidly provisioning network infrastructure to help bring applications into production in a more timely and cost-effective manner.
- **Return on assets, efficiency, and better use**—Customers can minimize the costs associated with scaling server farms or centralized applications by optimizing the use of existing server resources and offloading non-essential server functions.
- **Increased application usage, better customer satisfaction, and better end-user response time**—Poor application response times result in lowered client and customer satisfaction, diminished productivity, and reduced competitiveness for an organization.

- **Consolidation of branch office servers**—Large numbers of file servers, print servers and storage in branch offices represent significant OpEx and data protection risks. Branch office server consolidation creates initiatives to consolidate the servers into data centers.

- **Reduction of operating expenses (OpEx), consolidation, reduced complexity, and increased availability and serviceability**—Multiple point products and managements tools are introduced to address application delivery requirements, increasing the cost and complexity of supporting an application delivery infrastructure.

- **Keeping pace with the latest security threats at the application layers, not just the network layer**—Application attacks are causing concern because most traditional firewalls do not address application-based attacks.

Cisco ANS Customer Benefits

For enterprise IT decision makers who are challenged to provide reliable and acceptable applications and service to users while dealing with consolidation, budget constraints, and regulatory compliance, Cisco ANS provides a portfolio of application networking products and technologies that enable organizations to deliver end-to-end business processes across their entire infrastructure and to all users everywhere, while optimizing the resources needed for that to happen.

You're a Customer of Cisco ANS Products

The following describes the roles of individuals and what affects decisions related to ANS solutions:

- **Network operations**—primary concerns: integration, deployment, and manageability

- **Director of IT**—primary concerns: uptime, usage, CapEx, operating expenses (OpEx), and TCO

- **Applications team**—primary concerns: application performance or application security is important, or for a strategic application such as special file access, enterprise resource planning (ERP), human relations, supply chain, e-government, etc.

- **Server operations**—primary concerns: servers and storage

- **Security operations**—primary concerns: perimeter and application security

Customer Challenges and Cisco ANS Solutions

Challenge: New application rollout for Oracle, SAP, BEA, Siebel, and MS Exchange

Solution: Cisco ANS data center and branch-office products

Cisco solutions address the primary challenges of new application rollouts—deployment speed, application performance, security, and scale, including at the remote sites.

Challenge: Slow WEB portal performance

Solution: Cisco ANS data center and branch office products

Cisco AVS improves Web portal performance to the end user two- to seven-fold. Cisco CSS, CSM, and ACE provide server off-load functions to significantly improve server performance and thereby increase capacity without additional CapEx. Cisco WAAS improves response time and bandwidth usage at remote sites.

Challenge: Branch office-related issues—WAN refresh, slow remote application performance, branch office server and infrastructure consolidation

Solution: Cisco ANS branch-office products

Cisco WAAS and ACNS are powerful solutions that enable customers to significantly reduce the TCO of branch office IT infrastructure and the applications branch employees use, while enabling centralized management and increased protection for all branch-utilized file data.

Challenge: Data center consolidation

Solution: Cisco ANS data center products

Complex data center redesigns benefit from partnering with a vendor that can provide a total, end-to-end solution: Cisco Systems®.

Public Information

Cisco ANS
http://www.cisco.com/go/applicationservices

Cisco ACE
http://www.cisco.com/go/ace

Cisco ACNS
http://www.cisco.com/go/acns

Cisco AVS
http://www.cisco.com/go/avs

Cisco CSS
http://www.cisco.com/go/css11500

Cisco GSS
http://www.cisco.com/go/gss

Cisco WAAS
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