

Nortel Networks

Alteon Content Manager

Benefits:

- Provides control over cache content with a centralized management solution that is flexible, secure, and easy to use
- Enables non-intrusive and simple content distribution by acting as an agent (content is distributed from origin servers)
- Minimizes operation, administration, and maintenance costs by optimizing cache management, content management, and accounting data collection
- Enables differentiated services via intelligent content prioritization
- Collects extensive accounting data efficiently, without requiring expensive third-party database solutions

The Nortel Networks Alteon Content Manager (ACM) provides highly scalable and efficient centralized management for content delivery networks (CDNs)—networks designed to optimize the management, distribution, and delivery of content to drive new revenues, improve end-user performance, and reduce costs. Service providers, enterprises, and content providers can all use the ACM to manage networks of Alteon Content Caches (ACCs) and control the distribution and prioritization of static and streaming content. The ACM also provides powerful accounting management capabilities for tracking and billing purposes.



*The Nortel Networks
Alteon Content Manager (ACM)*

In deploying CDNs, many enterprises and service providers focus on the placement and deployment of caches. While caches are a vital component of a CDN, the day-to-day operational details of managing a sizable cache deployment can easily overwhelm the benefits realized. In answer to this concern, Nortel Networks created the Alteon Content Manager. The Nortel Networks ACM is a highly scalable and easy-to-use solution for managing CDNs and networks of caches, providing extensive control over the content and full accounting management. The ACM is comprised of three software elements: System Controller, Content Controller, and Content

Applications:

- Content Delivery Network (CDN) management and accounting
- Alteon Content Cache (ACC) management
- Management of static and streaming (live and on-demand) content for eLearning, corporate communications, and product/service launches

Features:

- Ability to define and create groups of ACCs to simplify cache management
- Access for up to 20 administrators
- Advanced reporting and monitoring including health and performance status, requests served, cache hit ratio, and hit reporting
- Single point of management for up to 2,000 ACCs
- Ability to create content collections for simplified distribution and management
- Intelligent content prioritization via pre-positioning, pinning, and purging of content
- Job-scheduling for maximum network efficiency
- Granular and flexible content and accounting data collection (per object, per URL, per domain or sub-domain etc...)
- Optimized accounting data collection and summarization
- Support for direct integration with popular third-party billing vendors including Apogee, Portal, and WebTrends
- Web-based GUI with secure connection to Alteon CM

Accountant. Each of these elements is designed to handle different tasks while working together to create a CDN management solution that is virtually effortless to deploy, easy to scale, and extremely cost effective.

Carrier-class system management provides flexibility, resiliency, and scalability

The ACM's System Controller allows for the management, monitoring, and configuration of multiple ACCs in a CDN network, laying the foundation for high-value content and accounting management. The ACM provides configuration flexibility by allowing administrators to define and create multiple groups of ACCs and to collect monitoring, configuration, and logging information from the ACCs on a per-unit or group basis. For high resiliency, the ACM saves ACC configuration information to ensure recovery should the management server or ACCs fail. Enterprises or service providers can achieve further resiliency by configuring two ACMs in a redundant fashion for local or global failover.

The ACM can produce overall CDN system reports on all management transactions, hit reports for content providers, and log files for various services. In addition, it can provide health status and performance information as well as ACC statistics such as total requests served, the number of requests in progress, and cache hit ratios.

The ACM can scale from enterprise content networking implementations to large-scale service provider CDNs, managing up to 2,000 ACCs. To ensure operational efficiency, it can be operated by up to 20 network or system administrators.

Advanced content distribution and management tools ensure efficient management and intelligent content prioritization

The ACM's Content Controller gives service providers and enterprises the tools to automate the distribution of static (e.g., graphics files) and streaming content to a dispersed network of ACCs. These tools help network administrators centrally manage a truly scalable network, ensure a high quality of service, and avoid significant costs.

Administrators can use the ACM to pre-position content in edge ACCs instantaneously or according to a schedule. Job scheduling allows administrators to take advantage of off-peak periods for distribution. The ACM can also pin content to ACCs in similar fashion. Pinning content involves storing content "permanently" on the cache (for a configurable period of time), ensuring prioritization of delivery over "temporary" content, which could be flushed as the cache fills. The ACM enables content pinning to the ACC's RAM or disk space, enabling two additional levels of content prioritization. Further, the ACM supports the instantaneous or scheduled purging of content from ACCs to allow for the removal of non-priority content.

For service providers or large enterprises offering CDN services to multiple customers or groups of users, the ACM provides the ability to define distribution groups consisting of caches or groups of caches. In addition, the ACM enables administrators to create content “collections” that allow large blocks of content to be treated as a single object. Thus, service providers and enterprises can distribute collections of content efficiently to groups of caches, significantly easing the content distribution and management process. Unlike other solutions, content is indexed but not staged on the ACM. As a result, the ACM does not require an external database and is able to pull content directly from the origin server to the ACCs.

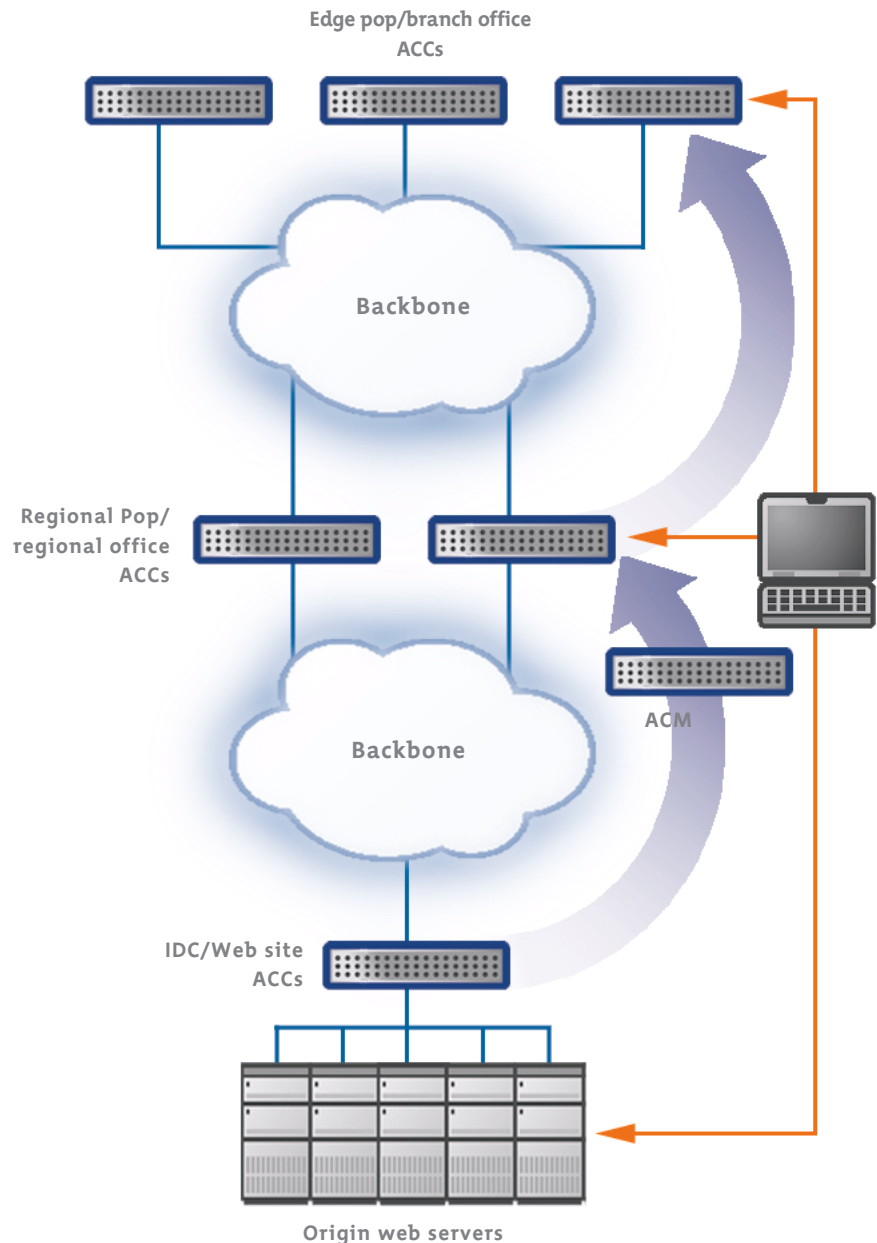
With the ACM’s content management capabilities and ACCs, service providers and enterprises can begin to offer CDN services by distributing content across their networks. The addition of the Alteon Content Director (ACD) for Layer 7 request-to-content routing and Alteon Web Switches ensures high-performance CDN services for new applications, better performance as seen by the end user, and is designed for cost savings.

Comprehensive accounting management allows administrators to efficiently track and bill for services

The ACM’s Content Accountant provides tracking and reporting of content delivery for accounting and billing purposes. It provides a centralized means of collecting data from individual ACCs or from cache groups. Three features of the ACM help optimize accounting data collection. First, accounting data collection can be performed in a selective manner so that only the most relevant data is

collected. Second, administrators can schedule reporting at configurable intervals. Lastly, ACCs can summarize accounting data prior to sending. The net result is a reduction in unnecessary data being collected and transmitted, speeding data reporting and reducing network impact. Once the data is collected, the ACM allows for simple, direct integration with popular billing and reporting systems such as Apogee, Portal, and WebTrends.

For maximum efficiency, the ACM utilizes an integrated database. This database makes integration and configuration seamless, and facilitates the creation of an internal directory that is easily synchronized with all ACCs in a network. This design dramatically reduces startup and operational costs when compared to alternative implementations that require a third-party database.



Alteon Content Manager specifications

Models	<ul style="list-style-type: none"> - iSD-ACM-SP: Manages up to 2000 caches - iSD-ACM-LE: Manages up to 500 caches - iSD-ACM-SM: Manages up to 100 caches
Hardware	<ul style="list-style-type: none"> - Disk Drives: 2 x 18GB - RAM: 1 GB - Fast Ethernet NICs: 2 - Gigabit Ethernet NICs: 1 (optional)
Scalability and Resiliency	<ul style="list-style-type: none"> - 2000+ ACCs - 20+ administrators - Local, global and active-active redundancy - File directory recovery
System Management	<ul style="list-style-type: none"> - Per-ACC or per-group of ACCs basis (scheduled or triggered) - Log management for ACC system and content monitoring
Content Management	<ul style="list-style-type: none"> - Per-ACC or per-group of ACCs basis (scheduled or triggered) - Content distribution via FTP or HTTPS (protocol must be consistent throughout) - Content purging and pinning - Hit reporting on a per-object/stream basis - Bandwidth management
Accounting Management	<ul style="list-style-type: none"> - Per-ACC or per-group of ACCs basis (Scheduled or triggered) - Accounting data collection or Squid, W3C or WELF (Web Trends) files - Summarization of data (for ease of reporting) - Integration with third-party billing software (Apogee, Portal, Web Trends)
Chassis	<ul style="list-style-type: none"> - 19" rack-mountable - 1.7" (h) x 17.61" (w) x 24"(d) - Rack Unit(s): 1RUs - Weight: 26 lbs
Power	<ul style="list-style-type: none"> - 240 Watts; 110/220 V

Environmental specifications

Operating temperature:

10° C to 35° C (50° F to 95° F)

Storage Temperature:

-40° C to 65° C (-40° F to 149° F)

Operating Relative Humidity:

8% to 80% (non-condensing)

Storage Relative Humidity:

5% to 95% (non-condensing)

Operating Vibration:

0.25G at 3Hz to 200Hz for 15 minutes

Storage Vibration:

0.5G at 3Hz to 200Hz for 15 minutes

Operation Shock:

6 shock pulses of 41G for up to 2ms

Storage Shock:

6 shock pulses of 71G for up to 2ms

Operating Altitude:

-16m to 3,048M (-50 ft to 10,000 ft)

Storage Altitude:

-16m to 10,600m (-50 ft to 35,000 ft)

Regulatory specifications

DOC (Canada) Class B; CE EN 55022, IEC 801-2, EN50082-1, ICE 801-3, ICE801-4;VCCI Class II; UL 1950; CSA 950; EN 60950; IEC 60950; CE



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