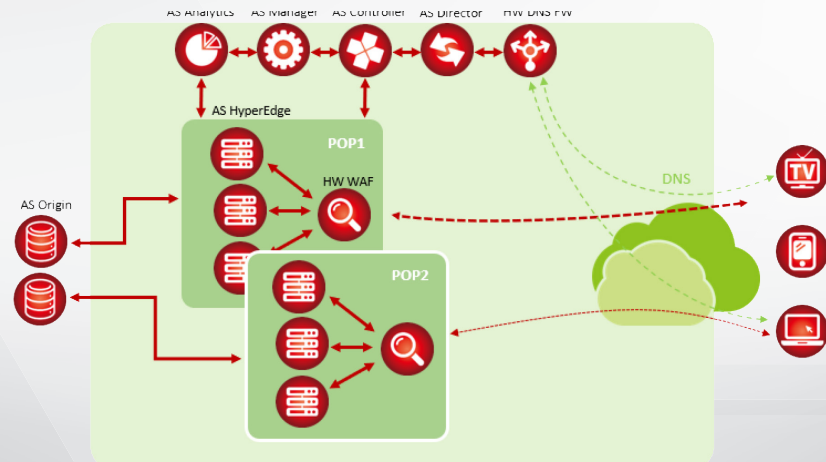




Content Delivery Network

Ascentac CDN

Features of Ascentac CDN

AscentacCDN is a fully featured CDN solution that supports all of the latest delivery formats, as well as providing security, management and reporting tools.

Overview

AscentacCDN is a Content Delivery Solution built from the ground up for the Telco and Carrier market. It enables operators to build their own private Content Delivery Network (CDN). This allows them to develop their own content services or to resell this CDN service to their enterprise customers. Against a backdrop of declining ARPU and massive CAPEX requirements for investment in next generation network infrastructure, many operators are increasingly focused on building new revenue streams. CDN is a natural path for an operator to extend their network capabilities and to allow them to monetize content.

AscentacCDN is the enabling service that allows operators to build out their own premium content services such as Internet TV. Where the operator already has an IPTV solution, it provides the ideal solution to enable the operator to reach a wider audience across any device.

| Hybrid Architecture

A unique feature of AscentacCDN is the combination of Public and Private infrastructure to provide an operator with the optimal solution. Operators can take full control of their CDN by deploying and managing their own AscentacCDN infrastructure.

However AscentacCDN also supports full integration with the public AscentacCDN service. This enables operators to take advantage of the global capacity and reach of AscentacCDN to deliver their content outside of their network. Alternatively if the operator is facing unexpected demand that exceeds the deployed AscentacCDN capacity they may take advantage of the AscentacCDN delivery capacity to cope with peak traffic (served from off-net).

| AscentacCDN Component



AS Manager

The Core of AS-CDN to provide management and multi-tenants.



AS Director

Map user requests to the best ableCDN node.



AS Analytics

Suite of analysis tools for traffic monitoring and Visualization.



AS HyperEdge

SW-WAF protection with content smart cache.



AS Controller

Centralized control unit for whole system configuration.



AS Origin

Packager and Stream server for OTT Video Stream services .



HW WAF

Advance WAF protection include SQL injection, XSS, Brute Force Login, etc.



HW DNS FW

DNS DDOS protection with Response Policy Zone (RPZ).

| AS Manager

- Account Setting support such as OpenID with different authority level setting and so on. All access scenario (login, modification, account and IP) will be record to AS Analytics server.
- Web portal support multi language and can be through the browsers on Windows/Linux/MAC OS
- Customer Origin Setting (Domain name, SSL authentication, WAF rule, Cache rule, Source path and so on)
- IP setting support IP • CIDR format
- support content Purge and Pre-load function
- Token Authentication
- Support Restful API for system integration
- Cache Rule Setting (Cache duration)
- Country Filtering
- System alert support integrate to Email, SMS, Line

| AS Origin

- On-The-Fly packaging for HLS, DASH, HDS and Microsoft Smooth Stream
- Support H.264 and H.265(HEVC) format
- Support AAC audio format
- Support N+M architecture include Dynamic block size handling storage
- Support internal and external storage
- Database synchronization
- Support URL query string forwarding
- Support full range bitrate (500k~30Mbps) and resolution (480x270~3840x2160)
- Support up to 1000 TCP Connection
- Support up to 3Gbps throughput
- Support content storage encryption

| AS Director

- Support Http 307 redirect for content awareness services
- Support IPv4 and IPv6 DNS query, with DNSSEC support
- Support IP group redirect for traffic dispersion and geo load balancing, and support ECSO protocol
- Support to monitor each HyperEdge status (CPU, Memory, throughput) to avoid single point failure and overload
- Country Filtering

| AS HyperEdge

- Support HLS, DASH, HDS, MP3, MP4 and Microsoft Smooth Stream
- Support HTTP/HTTPS for Push and Pull mode
- Support RFC7231 HTTP response code
- Support software WAF with OWASP® ModSecurity Core Rule Set CRS) rule set
- Support multi-layer architecture
- Support multi source Origin server
- Support connect with 3rd-party origin
- Support RFC 5246 TLS 1.2 and RFC 8446 TLS 1.3 transmission encryption protocol.
- Support Token Authentication
- Support up to 100,000 TCP Connection
- Support up to 10Gbps throughput
- Support RFC2616 control for different domain
- Provide purge mechanism for difference group and content
- Support user define cross-origin header
- Support cache period control
- Support URL transform
- Support WAF which include SQL Injection, Black/Whitelist, Bad User-Agent, Cross site Scripting, Insecure Direct Object References, Failure to Restrict URL Access, Server Side Request Forgery, Upload Inspection, Referer Control

| AS Analytics

- Provide dashboard or graph/chart for below information display
 1. Total traffic volume, per server
Traffic volume and status
 2. Total throughput and per server
throughput
 3. Top URL by data volume
 4. Top URL by visit count
 5. User Agents statistic
 6. OS Type statistic
 7. Content, IP (IPv4/ | Pv6) statistic and
ranking
 8. WAF analysis information
 9. Error Type Statistic (4xx, 5xx) per
server
 10. Cache hit/miss statistic per server
 11. CPU/Disk/Memory monitoring per
server
- Log receive and analytics:
 1. System access log
 2. Content distribution log
 3. System maintenance log
 4. Backend support(rule setting,
distribution setting and so on)
 5. API access log
- System maintenance log:
 1. System off-line detection record
 2. Safety maintenance record
 3. Average request content number
from CDN to Origin
 4. Connection total number: Active
Session number per 5 to 10 minutes
 5. Access data total statistic

| AS Controller

- Centralized whole CDN POP
configuration
- Parameter setting between
components will through the token
protection

