



CPS1000-CM

Motorola Content Propagation System — Cluster Manager

Optimizes storage, streaming, and bandwidth resources to enable a flexible on demand network

Highlights

- Intelligently manages placement of content and streams across the on demand network
- Optimizes streaming, storage, and network resources through Adaptive Media Management
- Supports multiple storage architectures for maximum flexibility
- Proactively distributes content based on metadata and reactively based on usage patterns
- Uses prevailing industry standards, designed to support third-party servers

Advanced on demand services have become an increasingly important part of a multichannel video offering. Video Service Providers need to optimize their storage, streaming, and network bandwidth costs in the face of realtime ingest of live content, expanding content libraries and flattening concurrency curves, resulting in the much discussed “long tail”.

The CPS-1000 Cluster Manager (CPS1000-CM) is the first component of Motorola’s Content Propagation System (CPS1000). CPS1000-CM acts as a cluster manager between the on demand servers and the operator’s back office system, managing the distribution of content and stream allocation within a cluster of on demand servers. The CPS1000-CM optimizes storage, streaming, and network resources and improves fault resiliency for a cluster of co-located or geographically distributed cluster elements.

The CPS1000-CM utilizes Adaptive Media Management, Motorola’s approach to intelligent distribution of content and streaming resources across the appropriate storage and streaming technologies.

Key Features

Proactive Placement Options

- Reliable, full replication of content across an entire cluster
- Rules-Driven Content Placement optimizes placement of content in cluster based on metadata

Reactive Content Placement Options

- Library Balancer ensures all servers have the entire library in a fully replicated environment
- Demand-Driven Content Placement utilizes usage statistics to best position content across the cluster

Stream Placement Options

- Content Affinity Load Balancing assigns streams to servers currently streaming the content to more efficiently use streaming resources and storage bandwidth
- Automatically redirects streams to more efficient resource in cluster
- Supports Propagate and Stream when local server does not have required content

Fault Resiliency

- Automatically retries failed streams on another server in the cluster
- Distributed deployment model eliminates single point of failure for centralized ingest and stream processing
- Automatically detects and recovers from possible failure scenarios
- Enables the creation of seamless Maintenance Windows for servers in the cluster

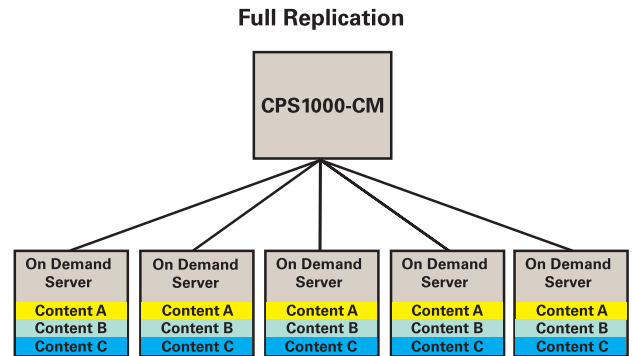
DATA SHEET

Motorola CPS1000 Content Propagation System — Cluster Manager

Supported Storage Architectures

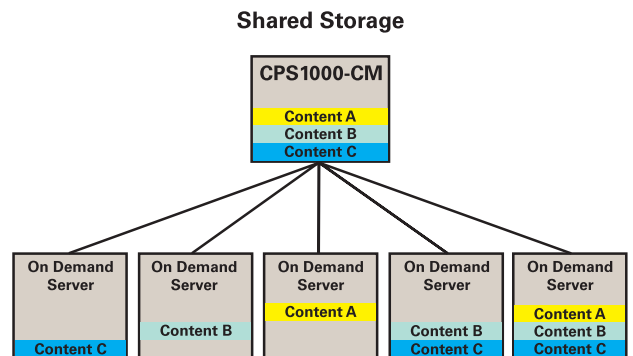
Fully Replicated

- Replicates entire library on each server
- Single point of ingest saves bandwidth
- Library Balancing maintains content synchronization
- Content Affinity Load Balancing selects optimal server to minimize streaming resources, reduce storage bandwidth
- Improved fault tolerance / resiliency



Shared Storage

- Central storage of entire library
- Rules-Driven Content Placement proactively places content on servers in optimized fashion
- Demand-Driven Content Placement reactively optimizes content placement
- Supports Library Server (NAS w/ NFS, CIFS, etc.)
- Directs stream requests to server with content or propagates to “local” server



Specifications

BACK OFFICES SUPPORTED

Version 1 — Integrated Services Architecture (ISA)

Tandberg OpenStream®; Time Warner Mystro Business Management Server (BMS)

Version 2

Comcast Next Generation On Demand (NGOD), including StartOver extensions; eventIS stagIS/prodIS/traxIS; Motorola TSX1000

HARDWARE SPECIFICATIONS

Dell PowerEdge 2950 server, with the following specifications: (2) Dual-core Xeon 2.33 GHz 64-bit processors; 4 GB DRAM; (3) 73 GB 15K RPM hard drives configured as RAID-5



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