Carrier Grade Caching Solution

TRANSPARENT CACHING FOR ISPS

HIGH PERFORMANCE
MULTI GIGABIT
FULLY TRANSPARENT

BANDWIDTH SAVINGS

Highest bandwidth savings (BHR – Byte Hit Ratio) and bandwidth gain on the market. Supporting the most different content classes and including special optimizations for all popular services and sites.

BROWSING ACCELERATION

Small objects cached and served from ultra high performance Solid State Disks (SSDs). Subscriber satisfaction improved because Internet browsing accelerated.

CDN CACHING

Unique caching mechanism, highly accurate for arbitrary caching of videos and large rich media files from Content Delivery Networks (CDNs).

COST EFFECTIVE

Reduce costs, increase number of subscribers and avoid costly bandwidth upgrades at value-added prices.

SINGLE UNIT

- ✔ 24 Gbps Throughput
- ✔ 13.2 Gbps HTTP
- ✔ 12 Gbps from Disks
- ✔ 9.6 Million Connections
- ✔ 2 TB NVMe Storage
- ✔ 48 TB SSD Storage
- ✔ 256 GB ECC Memory

Appliance Features

- HTTP and FTP support, optional HTTPS
- On-device network test tools
- Peer-to-Peer (P2P) / BitTorrent caching
- Encrypted P2P connections
- IPv6 support / IPv6 ready
- High-Availability and redundancy
- Proprietary caching technology
- Video-On-Demand caching (Netflix,...)
- Partial object caching (HTTP range requests,...)
- Content Delivery Networks (Akamai, EdgeSuite,...)
  - ✔ De-duplicates content that comes from different CDN hosts
- Caching Static & Dynamic web content:
  - ✔ Antivirus and software updates
  - ✔ Filehoster/Sharehoster/One-Click-Hoster
  - ✔ Games (EA, Playstation, Steam, Xbox,...)
  - ✔ OS updates (Apple, Linux, Microsoft,...)
  - ✔ Videohoster (Muscdn,...)
- Caching HTTP-based live streaming:
  - ✔ HTTP Live Streaming (HLS)
  - ✔ HTTP Dynamic Streaming (HDS)
  - ✔ HTTP Smooth Streaming (HSS)
- HTTP access control and content filtering (Blacklists, Whitelists, ACLs, Policies, ...)

Operating System & Platform

- Optimized 64 bit Linux Kernel
- Unified cache cluster management
- Dedicated video caching platform
- Multiple terabytes of storage capacity
- Ultra high performance SSDs for low-latency
- Drive monitoring and management
- Automatic Fail-Over function
- Small and large object file caching
- Disk hot-swap support

Flexible Deployment

- Transparent | Non-Transparent
- Reverse proxy
- Detailed logging facilities
- Comprehensive access control rules
- Dynamic ISP content filtering
- Advanced cache hierarchies
- Bridge Mode | Dynamic routing OSPF
- WCCP Layer 2
- Policy Based Routing (PBR)
- L4 / L7 load balancers, including TmcMARA balancer
- Multiple router connectivity
- 1 / 10 / 25 / 40 Gbps interfaces
- Central cluster monitoring and reporting
- Scalable cache cluster with shared storage

Management & Reporting

- Innovative and intuitive Web GUI (Multilingual)
- Command line interface via serial console & ssh
- Appliance status and live monitoring
- Daily, weekly or monthly executive reports (PDF)
- Real-time and historical statistics by day, week, ...:
  - ✔ System resources, network traffic, HTTP caching performance,...
- Comprehensive usage reports:
  - ✔ Top 1000 Sites, Top 1000 Users
- Simple backup and restore capability
- Remote logging servers support (remote syslog)
- Embedded stateful firewall
- SNMP support with configurable alerts

Optional Modules

- TCP Optimizations for HTTP and HTTPS
- HTTPS access control and content filtering
- Category based content filtering for HTTP and HTTPS
- Deep packet inspection
- Traffic Visibility

Network Appliances
Securing Your Freedom

MARA SYSTEMS

Carrier Grade Caching Solution

CARRIER GRADE HARDWARE

MARA Systems only provides latest hardware generation and IT findings to deliver the most secure and robust transparent caching solution on the market.

EASY CLUSTERING

Multiple CacheMARA appliances can easily be clustered to implement larger scenarios even up to multiple 100 Gbps of bandwidth. CacheMARAs in the cluster share available storage so that total caching capacity is increased with every CacheMARA added to the cluster.

RELIABLE PLATFORM

Exceptionally optimized and hardened Linux platform, tailored for high availability, security and performance needs. Systems booting from read-only, compressed image. Purpose-built hardware.

PROVEN SOLUTION

CacheMARA is a safe buy with more than 900 installations worldwide.

SERVICES / SUPPORT

- Dedicated technical support
- Expert consulting
- Installation & configuration
- Ongoing maintenance
- Firmware upgrades
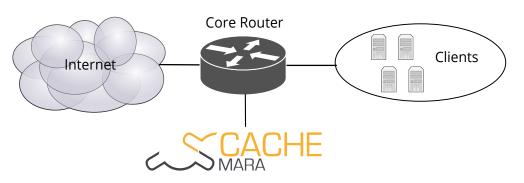- Hardware warranty
- Product manuals & FAQs

Product & Technical Specifications

Q1 2024	FL-1U-02	FL-1U-04	FL-1U-08	FL-2U-16			FL-2U-24		
	Standard	Standard	Standard	Std	Upg 1	Upg 2	Std	Upg 2	Upg 3
Generated from disks all services Mbps	500	1000	2000-4000	4000	6000	8000	8000	10000	12000
Total Mbps HTTP to clients	550	1100	2200-4400	4400	6600	8800	8800	11000	13200
Total Mbps all services	1000	2000	4000-8000	8000	12000	16000	16000	20000	24000
Max concurrent connections	0.4 M	0.8 M	1.6-3.2M	3.2 M	4.8 M	6.4 M	6.4 M	8.0 M	9.6 M
ECC memory	16 GB	32 GB	64 GB	128 GB			256 GB		
SSD cache size	8 TB	12 TB	16 TB	24 TB	28 TB	32 TB	32 TB	40 TB	48 TB
NVME cache size	240 GB	480 GB	960 GB	1920 GB					
PSU redundancy	no			yes					
Hardware Remote	yes								
1 Gbps RJ45	2								
Form Factor	1U			2U					
Typical power	125W	150W	250W	325W-350W			425W-450W		
Weight	15 kg			25 kg			30 kg		
Optional 1 Gbps RJ45 or SFP	yes								
Optional 10/25 Gbps SFP+/SFP28	yes								

Std = Standard   Upg1 = Upgrade package 4 TB   Upg2 = Upgrade package 8 TB   Upg3 = Upgrade package 16 TB
2.000 / 1.100 Mbps   4.000 / 2.200 Mbps   8.000 / 4.400 Mbps

Example Deployment

Internet — Core Router — Clients
CACHE MARA

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