



Media Mining System Sample Configurations

The Sail Labs Media Mining System can be configured in different ways to fit the needs and wishes of different users. We present here some such configuration scenarios and the specific requirements associated with each of them.

Indexer Configuration for Demonstration / Non-Production Purposes

For running a single Indexer for non-production purposes, we recommend a minimum of Intel Pentium 4 3 GHz or faster CPU. The machine needs to have 2GB of memory. This is required due to the footprint of the system. To optimize performance, we suggest fast memory resulting in high memory bandwidth (e.g. DDR2 ECC memory) and a high performance motherboard utilizing a fast chipset supporting multiple memory channels and memory interleaving. Access to a DVD-ROM drive is required for installation (when using SAIL LABS installation images).

Sample Configuration 1 (desktop computer)

- Dell Precision 470
 - Intel(TM) Xeon Processor 3.4 GHz, 2MB cache
 - 2GB ECC DDR400 RAM (2x1GB)
 - 80GB SATA-Hard disk, 7.200 rpm
 - DVD-ROM Drive
 - Mouse, Keyboard, Monitor, Sound Card, Speakers, Network per your requirements
 - Windows XP
- Media Mining Indexer (including one language)
- Media Mining Indexer additional languages as required
- For feeding from TV card: Hauppauge WinTV

We recommend to perform Video and Audio feeding on a separate encoding machine for performance reasons (potential frame loss due to contention of I/O).

Sample Configuration 2 (rack-mountable server)

- Dell PowerEdge 750
 - Intel(TM) pentium(R) 4 processor, 3.4 GHz, 1MB cache, 800MHz FSB
 - 2GB ECC DDR400 RAM (2x1GB)
 - 80GB SATA-Hard disk, 7.200 rpm
 - DVD-ROM Drive
 - Mouse, Keyboard, Monitor, Sound Card, Speakers, Network per your requirements
 - Windows XP or Windows 2003 Web Server
- Media Mining Indexer (including one language)
- Media Mining Indexer additional languages as required
- For feeding from TV card: Hauppauge WinTV

We recommend to perform Video and Audio feeding on a separate encoding machine for performance reasons (potential frame loss due to contention of I/O) and for compatibility of drivers with Windows 2003 Web Server.

Indexer Configuration for Production Purposes

For running a single Indexer for production purposes, in addition to the requirements stated above, protection against physical disk failure is required. One RAID controller capable of RAID 1 or RAID 5, IDE or SCSI. All disks need to be capable of hot swap, configuration of a hot spare disk is not required. In addition, system backup is needed. With respect to the latter, we assume integration into the company's corporate backup solution.

Sample Configuration for RAID 1 (disk mirroring)

- 2 disks of same size, minimum 73GB, minimum 7200 rpm, resulting in one logical 73GB disk drive
(For Microsoft operating systems: Configure as one logical disk drive ("C:" drive) hosting the operating system, swap space, Media Mining Indexer and temporary storage.)

We recommend using hardware RAID controllers like e.g. DELL CERC SATA

RAID Controller capable of hot-swapping failed disks.

Sample Configuration for RAID 5

- Minimum of 3 disks of same size, minimum 73GB each, minimum 7200 rpm resulting in $\text{number_of_disks_minus_1} * \text{capacity_of_disks}$ disk space. For example, 3 disks at 73GB = $2 * 73\text{GB} = 146\text{GB}$ disk storage.

General Configuration hints

Here is a list of hints which should enable you to build your own system to best match the Media Mining Indexer's hardware requirements.

- **CPU:** we use both Intel and AMD CPUs.
- **Cache:** at least 1MB cache, better 2MB cache.
- **Instruction set:** SAIL LABS makes use of the SSE and SSE2 instructions, which are usually supported by all modern CPUs from AMD and Intel (desktop CPUs clocked with 3 GHz or more; Intel Mobile Pentium CPU)
- **Hyper-Threading:** very recommended, speed-up is comparable to 80% of a second CPU.
- **Clock frequency:** for real-time operations a Pentium-4 clocked at 3 GHz+ is sufficient; or similar AMD CPUs.
- **Memory:** dual-channel memory is preferable to single-channel memory.
DDR2 is preferable to DDR.
DDR memory is better than SDR memory.
Minimum memory size: 2GB due to the footprint of the Indexer.
ECC is recommended for failure detection and correction.
- **Hard-drives:** 80GB is a good size to fit the operating system, MMI, and some intermediate data for small applications and demo purposes. RAID1 or RAID5 highly recommended on production systems. Disk I/O is not crucial for the operation of the MMI, because most of the disk activity appears only on start-up of the system.
- **DVD-ROM:** SAIL LABS delivers software only via software download or on DVD, so you need to have a DVD-ROM either in the machine or accessible on the network, or access to the Internet.
- **Graphics card:** make sure you do not have a machine where the Graphics card

shares the main memory (e.g. chipsets with a nnnG in the part number). This causes strong memory contention.

- **Sound Card and Speakers:** recommended for recording and playback of audio.
- **Operating System:** SAIL LABS requires Windows XP SP1 or the equivalent Windows Server 2003. There is nothing known which should prevent MMI from running on 64bit Windows XP, but this is currently not supported.