hyper → ContentManagementServer
CMS

Version 5.6
Installation Guide

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1 Introduction

The hyper Content & Digital Asset Management Server will be installed on a web server. For the installation on the server you well need an FTP-Client or SCP-Client if you don't have direct access to the file system of the server. The FTP-Client is used for the transfer of the hyperCMS files to your destination server.
After the file transfer some directories and files need special file permissions on UNIX systems. So hyperCMS is allowed to write files on your server.
All additional configuration can be done using the graphical user interface of hyperCMS.
To perform a successful installation of hyperCMS you should have basic knowledge about the operating system and web server you use.

Please notice the basic layers of your system and their dependencies in the order the installation and configuration of those software packages have to be done:

1. Operating System (e.g. MS Windows, Linux)
2. Web server (e.g. Apache, MS IIS)
3. mySQL
4. hyper Content Management Server

2 Prerequisites

The following technical prerequisites must be fullfilled before installing hyperCMS:

On server-side (PHP in version 5 must be available):
- Operating System: Linux, UNIX-Derivates, MS Windows NT/2000/XP
- WebServer: Apache, Iplanet or MS IIS with PHP5-Modul

Only for Digital Asset Management (DAM) support:
- FFMPEG (for converting video and audio files)
- YAMDI (for mete data injection into FLV files)
- ImageMagick (for converting images)
- XPDF (for reading in indexing PDF-documents)
- ANTIWORD (for reading and indexing Word-documents)
- GUNZIP (for unpacking files)
- UNZIP (for unpacking files)
- UNOCONV (for converting office files)
- EXIFTOOL (for reading meta data of files)

On client-side:
- As Browser Internet Explorer 7+, Firefox 3+, Chrome 18+, Safari 5+ as well as Opera 9.5+ can be used. hyperCMS is 100% browser based no additional client software is required.

3 hyperCMS architecture

The hyper Content & Digital Asset Management Server is based on the language PHP5 and other software packages. hyperCMS will be delivered in source code. To operate hyperCMS you will need a web server that support PHP5 or a higher version. More details about PHP are available at: *http://www.php.net*.
The source code will be compiled automatically through the PHP hypertext preprocessor on the server-side. A compilation of the source code is therefore not necessary. You will have the possibility to access and adopt the source code without recompiling it. please keep in mind that changes in the source code could have a deep impact on the functionality of the content management system. Please notice the support agreement.

hyperCMS requires a MYSQL or ODBC database. It can be operated without an additional database as well for small sites. Some information will be saved directly in the file system. Where those files will reside can be partly defined by yourself.
The hyper Content & Digital Asset Management Server consists besides program files of an internal repository and an external repository. Where those repositories will be located can be defined by you. What is important to notice is, that a repository must be available on one server only. Where the program files can be deployed on more servers if you use clustered server nodes.
The internal repository will be usually named „data". That you will find in your installation package.
The external repository will be usually named „repository" and is also part of the software package.

📁 data	internal Repository
📁 hypercms	Content & Digital Asset Management Server program files
📁 mypublication	first of n-Publications (needs access to the external Repository)
📁 repository	external Repository
📄 readme.txt	Readme file

The internal repository (data) is the central data storage and has the following structure:

checkout	Data of checked-out objects
config	Configurations
content	Content-Repository
customer	Data of Personalization
eventsystem	Event System
export	Export directory
import	Import directory
ldap_connect	LDAP Connectivity Profile
link	Link Management database
log	Media indizes
media	Session data
session	Task lists
task	Templates
template	Data of Users and Groups
user	Workflows
workflow	Master Workflows
workflow_master	

You won't find more details here. Manual changes in the repository can destroy the data storage!

The external repository (repository) has the following structure:

component	Component Repository
config	Publication Configuration
link	Link Indexing
media_cnt	Content-Media
media_tpl	Template-Media
search	Search engine

This repository consists of files which have relevance for the Publications, such as components, publication configuration settings, link management and media files.

3.1 Instances

hyperCMS can be set up for multiple instances. This is strongly recommend if you have a shared hosting environment with different customers and you want the data to be strictly separated from each other. This gives you more flexibility, since each customer uses it's own database as well as internal and external repository.
Also for security reasons your should separate the data and setup the restrictions in the web servers hosts accordingly.
Automating the creation of instances all necessary steps to setup a secure environment should be done by experts.
The full support for instances by providing a management interface for multiple instances comes with the enterprise edition.

3.2 Operation in a Server Cluster

The hyper Content & Digital Asset Management Server can be operated in a server cluster. This will improve the operational availability and performance because of the distributed system.
Per CPU you can have a work load of approximately 15 concurrent user, that can be handled by one management server.

The management server where hyperCMS is installed will be distributed on several server nodes that will access a central internal and external repository. The architecture could be:

Firewall

```
                    ┌──────────────┐
                    │   Content    │
                    │  Management  │
          ┌─────────│   Server 1   │─────────┐
┌──────────┐        └──────────────┘     ┌──────────────────┐      ╭─────────╮
│ internal │                             │ Publication Server│      │Internet,│
│Repository│                             │  with external    │──────│Intranet,│
│  Server  │                             │   Repository      │      │Extranet │
│ (central)│        ┌──────────────┐     │  and Publications  │      ╰─────────╯
└──────────┘        │   Content    │     └──────────────────┘
          └─────────│  Management  │─────────┘
                    │   Server 2   │
                    └──────────────┘
```

(Load Balancing of Publication Server is possible.)
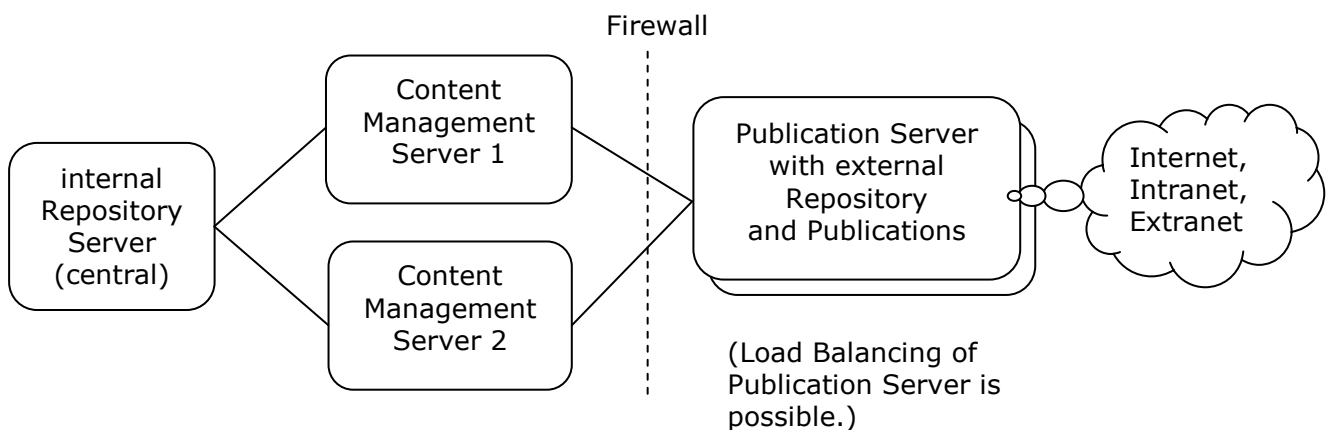
3.3 hyperCMS Modi

The hyper Content & Digital Asset Management Server can be operated in different modes. There is the operating mode of the "virtual server" and of the "server". The difference lies in the number of websites or publications and some functions. hyperCMS in virtual server mode is prepared to handle one website. With the server mode however, the content management server can operate several websites. Thus you can administer several publications with one installation of hyperCMS. With the server mode each individual publication is treated completely detached by others. Which modes you may use depends on the license agreement and the delivered software of the hyper Content Management Servers.

4 Configuration of the webserver

For detailed information about the installation of PHP on different web servers please visit *http://www.php.net*.

Never mind what web server you will use, it must be prepared to handle all files with the extension „.php" and pass them to the PHP hypertext pre-processor for parsing, compiling and execution. This can be set on any web server, for instance in the configuration file of Apache „http.conf" or in MS IIS directly through the properties of a website/host. More details you will find in the description of your web server.

An important security setting is to restrict the access to certain directories for PHP scripts. For this purpose, the setting "php_admin_value open_basedir" need to be set, usually in the virtual host of the web server.
This ensures that PHP scripts can only access files, where access is required.

If you use multiple hyperCMS instances, the internal and external repository of an instance should be placed in a defined location inside a separate virtual host. Access to files should be limited to the files in the virtual host and not outside of the scope of the host.

5 hyperCMS and PHP

hyperCMS runs only on PHP version 5 or higher versions. We recommend to run PHP as a server modul (not as CGI version). The binary distribution of PHP can be downloaded for free on *http://www.php.net*
An installation guide for PHP is included in the distribution, but is also available on the PHP website.
We recommend to use only official PHP distributions to guarantee the full functionality.

5.1 Configurations in php.ini

To operate hyperCMS you will need PHP as a server module on UNIX derivates or MS Windows. You can find more details about „php.ini" on *http://www.php.net*.

The configuration file of PHP „php.ini" holds configuration which are important for the operation of hyperCMS. In order to operate hperCMS as Digital Asset Management system, a few parameters need to be set.

The following parameters of php.ini should be defined:

short_open_tag = Off
output_buffering = Off
safe_mode = Off
disable_functions =
passthru,shell_exec,show_source,phpinfo,system,proc_open,chgrp,chown,chmod,symlink
,show_source,dl,php_uname,posix_kill,posix_mkfifo,posix_mknod,posix_setegid,posix_se
teuid,posix_setgid,posix_setpgid,posix_setsid,posix_setuid,posix_ttyname
expose_php = Off
max_execution_time = 21600
memory_limit = 3072M
error_reporting = E_ALL & ~E_DEPRECATED
display_errors = Off
error_log = /var/log/php5/error.log
register_globals = Off
register_long_arrays = Off
post_max_size = 6000M
upload_max_filesize = 6000M
session.cookie_httponly = 1
session.gc_maxlifetime = 21600

6 What is included in the installation package

The installation package of the hyper Content & Digital Asset Management Server consists of a compressed file that includes the software as well as the manuals. You will need Adobe Acrobat Reader to open the manuals. This software can be downloaded for free, please visit *http://www.adobe.com*.

7 Installation

The hyper Content & Digital Asset Management Server will be delivered as a compressed file (e.g. ZIP format). This file need to be transferred to the web root of the web server and the content of the file need to be extracted there. You can also extract the files content locally and copy all files to the web server.

7.1 Easy installation

The installation of the system is quite simple. After placing all the hyperCMS files directly in the root directory of the web server, please assign write permissions to the following directories:

- hypercms/config
- hypercms/temp
- hypercms/temp/view
- data
- repository
- mypublication

Now call to the following URL: http(s)://www.youromain.com/hypercms/
This starts the installation process and takes you to a form that asks you for all the data necessary for the installation. The installer guides you through the installation process and forwards you to the logon form of the system after the successful installation.

7.2 Installation and configuration for advanced users

The installation and configuration of the system can be done or changed any time manually as well. Open the file "hypercms/config/config.inc.php" in the config directory of hyperCMS in a text editor. This file holds all the main settings. The explanations of the various settings are located in the file itself.

Some settings include specifying absolute paths of the hyperCMS installation as well as the URL's. If you do not know the document root directory of the web server, please ask the server's administrator for the exact path.

After all hyperCMS files are placed on your web server, you must assign write permissions to directories and files on UNIX systems. Even under Windows, this step is necessary so that the files can be written to certain directories.
It is important that all files in the internal and external repositories can also be written by the content management server (web server user). This also applies to the temp folder in the hyperCMS directory.

After hyperCMS is installed on your server, a directory for your publication (website) must be created. In this directory all generated pages will be saved. You can create this directory anywhere within your document root on the web server. It is recommended to create a directory that presents the name of your website. Do you operate hyperCMS in server mode, you must repeat this process for any other publication/website.

Please note: Do not use the same publication directory for multiple websites. If you do so, the user of another publication can access the pages as well.

On the presentation server the files "livelink.inc.php", "livelink.inc.jsp" or "livelink.inc.asp" need to be placed in case of an activated link management. These files contain the function for the active link management of the hyper Content & Digital Asset Management Server under various applications.
The files themselves are located in your installation directory hyperCMS "hypercms/function" . Therefore you need to copy them in the "config" directory of the external repository for PHP.
Are you using JSP, the file "livelink.inc.jsp" must be present in any web application root. With ASP, a virtual directory named "include" in the IIS (Web server) need to be set up , where the file "livelink.inc.asp" is stored centrally for all publications.
Using ASP please take care that the virtual directory "include" is accessible to both the site and the repository.

The specific settings for your website are saved in the files "Publication.conf.php" in the internal repository and also in the file "Publication.ini" of the external repository. In case you use JSP, the settings are saved in the file "Publication.properties" of the external repository. These files can be found in the "config" directory of the internal and external repository.
Set the values of the individual parameters according to established directories or circumstances. Explanations can be found for each parameter in the file itself

7.3 Setting up automated tasks

hyperCMS needs to perform automated tasks. Therefore you need to create scheduled Cron Jobs when using Linux/UNIX or automated tasks if using MS Windows.

The files which need to be executed regularly are located in hypercms/job:
daily.php .... needs to be executed daily (e.g. midnight)
minutely.php ... needs to be executed every minute

Please take care that the Webserver User is executing these tasks.

Example for the Cron Jobs entries to execute the tasks:
```
* * * * * cd /home/hypercms/public_html/hypercms/job; /usr/bin/php -f minutely.php
30 1 * * * cd /home/hypercms/public_html/hypercms/job; /usr/bin/php -f daily.php
```

8 First time Start

Call the address in your browser you defined in the file „hypercms/config/config.inc.php" as the root for the content management system, e.g.:
http(s)://www.yourdomain.com/hypercms/

Now you should see the hyperCMS logon mask in your browser. If hyperCMS can not be started and you receive an error message from the web server, please double check your settings (especially path information).

The further procedure is described in the hyperCMS guides. Here you will find all further information for further setup of your the system.

9 Usage of WebDAV

Web-based Distributed Authoring and Versioning, or WebDAV, is a set of extensions to the Hypertext Transfer Protocol (HTTP) that allows computer-users to edit and manage files collaboratively on remote World Wide Web servers.

The WebDAV protocol allows interactivity, making the Web a readable and writable medium. It allows users to create, change and move documents on a remote server (typically a web server or "web share"). This has obvious uses when authoring the documents that a web server serves, but it can also be used for storing files on the web, so that the files can be accessed from anywhere.

The hyper Content Management Server supports WebDAV native to access all multimedia files via mounted drive.

9.1.1 WebDAV-Probleme unter Windows Vista und Windows 7

Mounting a WebFolders fails:
It may happen that mounting a WebFolders on Vista fails with the error message "The folder name is not valid" or something like that. One reason for this may be that the BasicAuthLevel in the Vista configuration is either not configured or with too low a value. This is an entry in the registry under the following path:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\WebClient\Parameters

Start the Registry Editor with the command "regedit".
In the registry editor go to the above path and set the BasicAuthLevel to the value 2.
If BasicAuthLevel ia not available, right-click the mouse in the right pane, then click on New and DWORD (32-bit). The new entry must be called BasicAuthLevel and should have the value 2. Then restart the PC so that the entry are also active.

The WebDAV connection is very slow:
Instructions for improving the WebDAV Performance:
- In Internet Explorer, open the Tools menu, then click Internet Options.
- Select the Connections tab.
- Click the LAN Settings button.
- Uncheck the "Automatically detect settings" box.
- Click OK.

9.1.2 WebDAV Probleme mit Mac OS Finder

You may encounter a few problems when using the WebDAV feature in Finder.

A WebDAV connected drive may operate extremely slow on some Mac operating systems. Newer Mac operating systems seems to be faster. The reason new Mac operating systems are faster is that they are better at caching small operations. The Mac integrates the WebDAV feature in the file system and many applications such as Finder create an enormous amount of file system operations. If not cached by the WebDAV client in the Mac operating system, these requests will be sent to the server, thus slowing down the WebDAV connection.

- You can speed up the Finder by performing the following operations.
  Open terminal and prevent .DS_Store file creation on network volumes:
  defaults write com.apple.desktopservices DSDontWriteNetworkStores true

- For any network connected drive, in Finder: uncheck "Show icon preview" option for Column view and disable "Show item info" in icon view

Non English characters not working

Finder seems to have a problem with UTF-8 encoded characters mixed with spaces. You should avoid using non English characters in folder names and file names together with space characters. Alternatively, use the free Cyberduck Mac WebDAV client which does not have any problems with UTF-8 encoding. Please note that Cyberduck does not integrate with the file system; thus you will not be able to work with files directly on the server. You must first copy the files to your local file system before you can work on the files.

10 Legal reference / flag

10.1 Questions and suggestions

For advanced questions and suggestions, please contact the support. We are available for every question regarding our reseller- and partner-program. You can apply for an access to our enhanced Online-Demo of the hyper Content Management Servers via our support.

hyperCMS Support:
support@hypercms.com
http://www.hypercms.com

10.2 Imprint

Responsible for the content:

hyperCMS
Content Management Solutions GmbH
Rembrandtstr. 35/6
A-1020 Vienna – Austria

office@hypercms.com
http://www.hypercms.com

10.3 Legal information

The present product information is based on the version of the program, which was available at the time the document was composed.

The maker reserves the rights of modifications and corrections of the program.
Errors and misapprehension accepted.

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