OpenCms Core API (version 7.0) package and class structure

org.opencms.main

Provides the main OpenCms "operating system".

OpenCms

The OpenCms "operating system" that provides public static methods which can be used by other classes to access basic system features of OpenCms like logging etc.

<< uses >>

- CmsEventManager
- CmsContextInfo
- OpenCmsCore
- <<interface>> I_CmsSessionStorageProvider
- CmsSessionManager
- CmsSessionInfo
- OpenCmsListener
- CmsLog
- CmsShell
- CmsEvent
- OpenCmsServlet
- OpenCmsServletErrorHandler
- I_CmsThrowable
- CmsException
- CmsMultiException
- CmsResourceInitException
- CmsRuntimeException
- CmsIllegalStateException
- CmsIllegalArgumentException
- CmsInitException
- Implement I_CmsThrowable
- Extend CmsException
- Extend CmsRuntimeException
- <<interface>> I_CmsResourceInit
- <<interface>> I_CmsRequestHandler
- <<interface>> I_CmsEventListener

org.opencms.file

This important package provides the methods to access the OpenCms VFS repository with the permissions of an authenticated user.

To access the OpenCms VFS repository, obtain a CmsObject which will encapsulate the current users permissions.

- **CmsObject** — This pivotal class provides all authorized access to the OpenCms VFS resources.
- CmsGroup
- CmsProject
- CmsUser
- CmsProperty
- CmsPropertyDefinition
- CmsResourceFilter
- **CmsRequestContext** — Stores the information about the current users OpenCms context, for example the requested URI, the current project, the selected site and more.
- **CmsResource** — Base class for all OpenCms VFS resources like CmsFile or CmsFolder.
- CmsFolder
- CmsFile
- CmsDataAccessException
- CmsDataNotImplementedException
- CmsVfsException
- CmsVfsResourceAlreadyExistsException
- CmsVfsResourceNotFoundException
- Extend CmsDataAccessException
- Extend CmsVfsException

org.opencms.file.collectors

Collectors allow to gather lists of OpenCms resources from the OpenCms VFS using specific rules.

org.opencms.file.wrapper

Contains classes and interfaces used to access OpenCms through a wrapped, so for example that files always have the correct file extension.

org.opencms.file.types

The implementations of the core resource types for the VFS are located here.

- <<interface>> I_CmsResourceType
- <<abstract>> **A_CmsResourceType** — Base implementation for resource type classes.
- <<abstract>> A_CmsResourceTypeFolderBase
- CmsResourceTypeBinary
- CmsResourceTypeFolder
- CmsResourceTypeFolderExtended
- CmsResourceTypeImage
- CmsResourceTypeJsp
- CmsResourceTypePlain
- CmsResourceTypePointer
- CmsResourceTypeUnknown
- CmsResourceTypeXmlContent
- CmsResourceTypeXmlPage

org.opencms.file.history

Contains the classes to deal with the OpenCms VFS history archive

- <<interface>> I_CmsHistoryResource
- **CmsHistoryFolder** — A historical version of a folder in the OpenCms VFS resource history
- **CmsHistoryFile** — A historical version of a file in the OpenCms VFS resource history
- CmsHistoryProject
- CmsHistoryResourceHandler

org.opencms.db

Low-level database connection and access functionality.

The OpenCms scheduler provides a facility to run jobs in a regular schedule, much like the "cron" facility in UNIX systems.

- CmsLoginManager
- **CmsDriverManager** — The OpenCms driver manager.
- CmsUserSettings
- **CmsSqlManager** — Superclass for all SQL manager implementations.
- CmsDbPool
- **CmsSecurityManager** — The OpenCms security manager.
- <<interface>> I_CmsDbContextFactory
- CmsDbContextFactory
- CmsDbContext
- CmsDbException
- CmsDbConsistencyException
- CmsDbEntryAlreadyExistsException
- CmsDbEntryNotFoundException
- CmsDbIoException
- CmsDbKeyException
- CmsDbSqlException
- Extend CmsDbException
- The interfaces are implemented in the org.opencms.db.* packages.
- <<interface>> I_CmsProjectDriver
- <<interface>> I_CmsVfsDriver
- <<interface>> I_CmsUserDriver
- <<interface>> I_CmsHistoryDriver
- <<interface>> I_CmsDriver

org.opencms.db.generic

Generic/standard implementation of the OpenCms database connector. (non-stand-alone, has to be extended)

org.opencms.db.mysql3

MySQL3 implementation of the OpenCms database connector.

org.opencms.db.maxdb

MaxDB/SapDB implementation of the OpenCms database connector. (experimental)

org.opencms.db.oracle

Oracle9+ implementation of the OpenCms database connector.

org.opencms.db.mssql

MS SQL implementation of the OpenCms database connector. (experimental)

org.opencms.db.oracle8

Oracle8 implementation of the OpenCms database connector.

org.opencms.db.mysql

MySQL4+ implementation of the OpenCms database connector.

org.opencms.db.postgresql

PostgreSql implementation of the OpenCms database connector. (contributed)

Database (see OpenCms database diagram)

org.opencms.workplace

The base classes for the OpenCms Workplace (standard dialog, tab dialog, report based dialog) and the Workplace configuration classes are located here.

- **CmsWorkplaceManager** — Manages the global OpenCms workplace settings for all users.
- CmsDialog
- CmsWorkplaceSettings
- CmsWidgetDialog
- CmsMultiDialog
- CmsWorkplaceException
- <<interface>> I_CmsDialogHandler
- CmsWorkplace
- CmsLogin
- CmsFrameset

org.opencms.workplace.comparison

Contains OpenCms Workplace dialogs to compare OpenCms *.html Documents.

org.opencms.workplace.editors

Base classes for the editors (WYSIWYG, plain text, XML content) used in the OpenCms Workplace.

org.opencms.workplace.editors.directedit

Base classes for the editors (WYSIWYG, plain text, XML content) used in the OpenCms Workplace.

org.opencms.workplace.help

Generates online help available in the OpenCms Workplace.

org.opencms.workplace.list

Generates the list views commonly used in the OpenCms Workplace "Administration" tools.

org.opencms.workplace.threads

A collection of thread classes that are used in the OpenCms Workplace, usually in connection with a report.

org.opencms.webdav

Provides a WebDAV access to OpenCMS and handles all issues belonging to the WebDAV protocol.

- **CmsWebdavServlet** — Basic implementation of a Servlet which adds support for WebDAV level 2.

org.opencms.workplace.explorer

Contains the functions that generate the Workplace "Explorer" view, also contains the "New resource" wizard.

org.opencms.workplace.commons

Contains often used OpenCms Workplace dialogs, for example for file operations, user preferences and project based operations like publishing.

org.opencms.workplace.galleries

Contains the various "Galleries" which are available in the editors and widgets of the OpenCms Workplace.

org.opencms.workplace.tools

Contains the base classes for implementing a tool in the OpenCms Workplace "Administration" view.

org.opencms.search

Contains the function of the workplace search tool.

org.opencms.workplace.explorer.menu

Contains the functions that generate the Workplace "Explorer" view, also contains the "New resource" wizard.

org.opencms.publish

Contains the Managment and Configuration for the publish process.

- **CmsPublishManager** — This manager provide access to the publish engine runtime information.
- << uses >>
- CmsPublishEngine
- << uses >>
- CmsPublishHistory
- CmsPublishQueue
- CmsPublishThread
- <<interface>> I_CmsPublishEventListener
- CmsPublishEventAdapter
- CmsPublishJobBase
- CmsPublishJobEnqueued
- CmsPublishJobFinished
- CmsPublishJobRunning
- << uses >>
- CmsPublishReport

org.opencms.repository

Contains all classes and interfaces needed to create or use a repository to access the resources in the VFS.

- <<interface>> I_CmsRepository
- <<interface>> I_CmsRepositorySession
- <<abstract>> A_CmsRepository
- <<abstract>> A_CmsRepositorySession
- **CmsRepository** — Basic implementation to get access to the resources in the VFS of OpenCms.
- CmsRepositorySession
- <<interface>> I_CmsRepositoryItem
- **CmsRepositoryManager** — The RepositoryManager keeps a list with all configured repositories.
- CmsRepositoryItem

org.opencms.cache

Implementations of specialized caches used in OpenCms.

org.opencms.util

Utility functions for String manipulation and other often used tasks.

org.opencms.importexport

Contains functions to import and export resources from the OpenCms VFS.

org.opencms.report

Classes used to generate the OpenCms reports, which are displayed during publish, import, export etc.

org.opencms.monitor

Contains functions to monitor the OpenCms system status.

org.opencms.notification

Contains classes for the automatical notification of outdated, expiring or released content.

org.opencms.newsletter

Contains classes to distribute newsletters.

org.opencms.synchronize

Classes used to synchronize the OpenCms VFS with the real file system.

org.opencms.setup

Used during the initial setup of the database by the OpenCms setup wizard.

org.opencms.setup.comptest

Contains classes to test components when runing the OpenCms setup.

org.opencms.setup.xml

Contains classes to adapt xml configuration files when updating OpenCms.

org.opencms.jsp

The implementation of the OpenCms JSP tag library, with some additional utility classes to help in JSP scriptlet code and navigation building.

Bean to be used in JSP scriptlet code that provides direct access to the functionality offered by the opencms taglib.

Classes/interfaces for the OpenCms tag library

- **CmsJspNavBuilder** — Bean to provide a convenient way to build navigation structures based on the CmsJspNavElement.
- CmsJspNavElement
- CmsJspBean
- **CmsJspActionElement** — Bean to be used in JSP scriptlet code that provides direct access to the functionality offered by the opencms taglib.
- CmsContentInfoBean
- CmsJspLoginBean
- CmsJspXmlContentBean
- I_CmsJspTagContentContainer
- I_CmsXmlContentContainer
- I_CmsJspTagParamParent
- CmsJspTagContentCheck
- CmsJspTagContentLoad
- CmsJspTagContentShow
- CmsJspTagEditable
- CmsJspTagInclude
- CmsJspTagInfo
- CmsJspTagLink
- CmsJspTagParse
- CmsJspTagTemplate
- CmsJspTagContentInfo
- CmsJspTagContentLoop
- CmsJspTagDecorate
- CmsJspTagImage
- CmsJspTagIncludeTEI
- CmsJspTagLabel
- CmsJspTagParam
- CmsJspTagProperty
- CmsJspTagUser

org.opencms.jsp.util

Utility classes to be used for JSP pages.

org.opencms.jsp.decorator

HTML postprocessor, used to tag single words or phrases in the HTML output.

org.opencms.jsp.parse

API classes for the <cms:parse> tag.

org.opencms.mail

- **CmsSimpleMail** — This class is used to send simple text internet email messages without attachments.
- CmsMailSettings
- CmsMailHost
- CmsMailTransport
- CmsHtmlMail
- CmsMultiPartMail
- CmsInputStreamDataSource
- CmsVfsDataSource

writes the log output to the log file(s)

org.opencms.loader

Provides utility classes to generate different kinds of email messages using the OpenCms email configuration.

Low-level functions to manage the loading of resources from the OpenCms VFS.

- **CmsResourceManager** — Collects all available resource loaders, resource types and resource collectors at startup and provides methods to access them during OpenCms runtime.
- CmsDumpLoader
- CmsImageLoader
- CmsImageScaler
- CmsJspLoader
- CmsPointerLoader
- CmsTemplateLoaderFacade
- CmsXmlContentLoader
- CmsXmlPageLoader
- CmsLoaderException
- I_CmsFlexCacheEnabledLoader
- I_CmsLoaderIncludeExtension
- I_CmsResourceLoader
- I_CmsResourceStringDumpLoader

org.opencms.scheduler

Some predefined implementations for often used scheduled job tasks. All jobs are implementing the interface I_CmsScheduledJobs.

- **CmsScheduleManager** — Manages the OpenCms scheduled jobs.
- << uses >>
- CmsScheduledJobInfo
- <<exception>> CmsSchedulerException
- <<interface>> **I_CmsScheduledJob** — Identifies a class that can be scheduled with the OpenCms scheduler.

org.opencms.scheduler.jobs

- CmsCreateImageSizeJob
- CmsImageCacheCleanupJob
- CmsPublishJob
- CmsStaticExportJob

org.opencms.site

Provides access to the multi-site configuration of OpenCms.

- **CmsSiteManager** — Manages all configured sites in OpenCms.
- CmsSite
- CmsSiteMatcher

org.opencms.lock

The lock state of the resources in the VFS is handled with these classes.

org.opencms.xml

Basic XML functionality and utilities used by OpenCms to maintain XML documents and content.

Contains functions for structured content storage using XML, commonly called "XML content" in OpenCms.

- **CmsXmlContentTypeManager** — Manager class for registered OpenCms XML content types and content collectors.
- <<interface>> I_CmsXmlDocument
- <<abstract>> A_CmsXmlDocument
- **CmsXmlContentDefinition** — Describes the structure definition of an XML content object.
- CmsXmlEntityResolver
- CmsXmlErrorHandler
- CmsXmlUtils
- CmsXmlValidationErrorHandler

org.opencms.xml.content

- <<interface>> I_CmsXmlContentHandler
- CmsDefaultXmlContentHandler
- **CmsXmlContentFactory** — Provides factory methods to unmarshal (read) an XML content object.
- << uses >>
- **CmsXmlContent** — Implementation of a XML content object, used to access and manage structured content.

org.opencms.xml.page

Contains functions for unstructured content storage using XML, commonly called "XML pages" in OpenCms.

- **CmsXmlPageFactory** — Provides factory methods to unmarshal (read) an XML page object.
- << uses >>
- **CmsXmlPage** — Implementation of a page object used to access and manage xml data.

org.opencms.xml.types

Contains the basic XML content type definitions, used for XML content and XML pages.

- <<interface>> I_CmsXmlSchemaType
- <<interface>> I_CmsXmlContentValue
- <<abstract>> **A_CmsXmlContentValue** — Base class for XML content value implementations.
- <<abstract>> A_CmsXmlValueTextBase
- <<abstract>> A_CmsXmlValueDataBase
- CmsXmlBooleanValue
- CmsXmlDateTimeValue
- CmsXmlLocaleValue
- CmsXmlVfsFileValue
- CmsXmlColorValue
- CmsXmlHtmlValue
- CmsXmlStringValue
- CmsXmlNestedContentDefinition

org.opencms.widgets

Some predefined implementations for often used scheduled job tasks. All jobs are implementing the interface I_CmsScheduledJobs.

- <<interface>> I_CmsWidget
- <<abstract>> **A_CmsWidget** — Base class for XML editor widgets for use in the OpenCms workplace.
- <<abstract>> A_CmsHtmlWidget
- <<abstract>> A_CmsSelectWidget
- <<abstract>> A_CmsHtmlGalleryWidget
- <<interface>> I_CmsWidgetParameter
- CmsCalenderWidget
- CmsCheckboxWidget
- CmsComboWidget
- CmsDownloadGalleryWidget
- CmsHtmlGalleryWidget
- CmsHttpUploadWidget
- CmsInputWidget
- CmsLocalizationWidget
- CmsOrgUnitWidget
- CmsPrincipalWidget
- CmsTableGalleryWidget
- CmsUserWidget
- CmsColorpickerWidget
- CmsDisplayWidget
- CmsGroupWidget
- CmsHtmlWidget
- CmsImageGalleryWidget
- CmsLinkGalleryWidget
- CmsMultiSelectWidget
- CmsPasswordWidget
- CmsSelectWidget
- CmsTextareaWidget
- CmsVfsFileWidget

org.opencms.security

- **CmsOrgUnitManager** — This manager provide access to the organizational unit related operations.
- << uses >>
- CmsOrganizationalUnit
- <<interface>> I_CmsValidationHandler
- CmsDefaultValidationHandler
- <<interface>> I_CmsPasswordHandler
- CmsDefaultPasswordHandler
- <<interface>> I_CmsPrincipal
- CmsPrincipal
- CmsRole
- << uses >>
- CmsRoleManager
- CmsSecurityException
- CmsAuthentificationException
- CmsPermissionViolationException
- CmsRuleViolationException
- Extend CmsSecurityException

Access control and security classes for the OpenCms ACL permission system.

org.opencms.file.CmsUser
org.opencms.file.CmsGroup

org.opencms.staticexport

Contains the functionality for the static HTML page export.

- **CmsStaticExportManager** — Provides the functionality to export resources from the OpenCms VFS to the file system.
- <<interface>> I_CmsStaticExportHandler
- <<abstract>> A_CmsStaticExportHandler
- <<abstract>> A_CmsOnDemandStaticExportHandler
- CmsAlterPublishStaticExportHandler
- CmsOnDemandHtmlSubTreeHandler
- CmsOnDemandStaticExportHandler

manages the static export

org.opencms.module

OpenCms modules provide a powerful, standardized way to extend the core OpenCms functionality.

- **CmsModuleManager** — Manages the modules of an OpenCms installation.
- <<interface>> I_CmsModuleAction
- CmsModule
- <<abstract>> **A_CmsModuleAction** — Simple base implementation of the I_CmsModuleAction interface, extend this class for more sophisticated module action implementations.

org.opencms.search

Implements the main full text search and indexing functions available in OpenCms using Lucene search engine library.

- **CmsSearchManager** — Implements the general management and configuration of the search and indexing facilities in OpenCms.
- <<interface>> I_CmsIndexer
- CmsVfsIndexer
- CmsSearchIndex
- CmsSearchException
- **CmsSearch** — Helper class to access the search facility within a jsp.

org.opencms.search.fields

These classes controls the mapping of the OpenCms content to the Lucene search fields.

org.opencms.search.extractors

Contains a generic, low-level framework for extraction of plain text content out of various popular file formats (e.g. pdf,html,doc...).

org.opencms.search.documents

Handles indexing different sorts of document and resource type from the OpenCms VFS for the full text search.

org.opencms.flex

Provides low-level JSP integration funtionality for OpenCms, also implements the FlexCache, a declarative parameter-based cache.

org.opencms.i18n

Classes to handle internalization (i18n) and locale selection in OpenCms.

- **CmsLocaleManager** — Manages the locales configured for this OpenCms installation.
- <<interface>> I_CmsLocaleHandler
- CmsDefaultLocaleHandler
- CmsMessages
- CmsMultiMessages
- CmsMessageContainer

org.opencms.configuration

Reads and writes the XML based OpenCms configuration files.

- **CmsConfigurationManager** — Configuration manager for digesting the OpenCms XML configuration.
- CmsDefaultUserSettings
- CmsConfigurationException
- <<interface>> I_CmsConfigurationParameterHandler
- <<interface>> I_CmsXmlConfiguration
- <<abstract>> A_CmsXmlConfiguration
- CmsImportExportConfiguration
- CmsSearchConfiguration
- CmsVfsConfiguration
- CmsModuleConfiguration
- CmsSystemConfiguration
- CmsWorkplaceConfiguration

reads and writes configuration files

Real File System "RFS":

- XML configuration files /WEB-INF/config
- log file /WEB-INF/logs
- static export /export
- image cache /WEB-INF/imagecache
- JSP repository /WEB-INF/jsp
- export points /WEB-INF/classes /WEB-INF/lib
- index /WEB-INF/index

Paths from the folder of your web application: e.g. /tomcat/webapps/opencms

Virtual File System "VFS":

- modules /system/modules
- sites /sites
- login /system/login
- explorer /system /workplace /explorer
- error handler /system/handler
- workplace /system/workplace

Alkacon
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