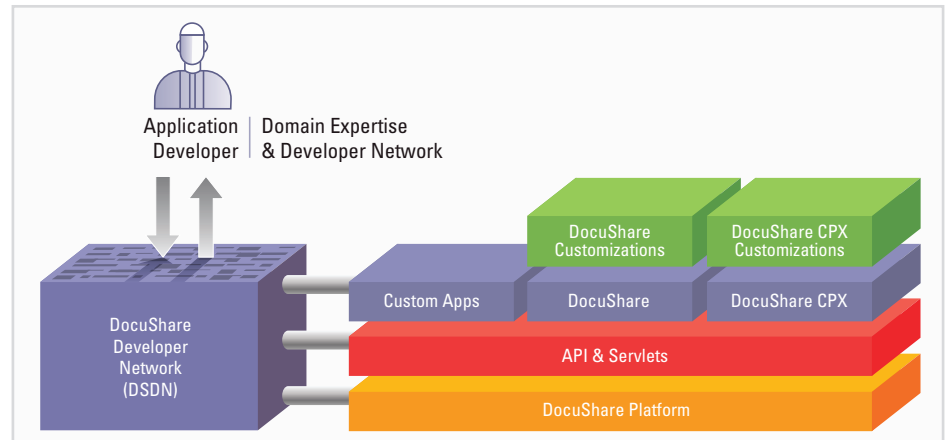


Advanced Development with Xerox DocuShare

Xerox DocuShare was specifically engineered to support the development of customized applications and solutions to meet specific content and process management needs. Built on the highly extensible Java 2EE platform, DocuShare offers open and comprehensive Software Developer Kits (SDKs) that enable developers to extend DocuShare or DocuShare CPX, integrate them with third-party applications, or develop complete systems that leverage DocuShare's document management, Web publishing, collaboration, and workflow capabilities.

Xerox DocuShare Development Server

The Xerox DocuShare Development Server License enables up to three development servers with full CPX capabilities. When combined with the DocuShare Software Development Kit, it delivers a comprehensive environment to extend the DocuShare application, or in which entirely new document-centric business applications may be created.



Applets and applications developed using the DSDN may be deployed with either Xerox DocuShare or Xerox DocuShare CPX.

Xerox DocuShare Software Development Kit (SDK)

The Xerox DocuShare SDK contains numerous APIs, code samples, applications, and the source code for off-the-shelf connectors to third-party applications. All functions of DocuShare are exposed through a full set of APIs.

Documentation on all DocuShare APIs, and customization tools, plus directions on system configuration and optimization are included.

The kit includes:

- DocuShare Java API
- DocuShare Client SDK
- DocuShare HTTP/XML Interface
- DocuShare Enterprise Workflow SDK
- DocuShare Content Intake Manager Toolkit
- DocuShare Connectors
 - Kofax Ascent Capture to DocuShare Release Script
 - Batch Upload Tool
 - Cardiff Liquid Office E-forms Intake Connector
 - FreeFlow VI PDF Connector
- DocuShare Web UI Customization
 - JSP/Servlet Customization
 - Wiki/Weblog Customization
 - VDF Customization
- Other Interfaces/Documentation
 - DocuShare Database Table Schema
 - DocuShare Command Line Interface
 - DocuShare LDAP Interface
 - Content Indexing and XDB Queries

It is expected that developers using the SDK have programming experience with Java, JavaScript, Windows COM, CSS, and database development.

DocuShare CPX: Platform for Document Applications

DocuShare CPX is an ideal platform for the development and deployment of your document-centric business applications. Some of the capabilities of DocuShare include:

- Rich set of APIs
- Proven platform in use at thousands of customer installations
- Flexible user levels provide the exact combination of access your customers need
- Direct integration to multiple scan devices
- Cross platform application available for Windows, Linux, and Solaris
- Flexible database integration to Oracle, Microsoft SQL Server, IBM DB2, PostgreSQL, or MSDE
- Support for a wide range of browsers
- Secure system supporting SSL, LDAP, Netegrity, and other enterprise authentication standards

DocuShare Developer Network

The DocuShare Developer Network (DSDN) provides access to the DocuShare SDK, development resources, and an active online community of DocuShare developers. The Web site, at docushare.xerox.com/dsdn, is the “one-stop-shop” for developers who are engaged in the creation and delivery of solutions based on DocuShare and DocuShare CPX. The DSDN is a comprehensive, interactive Web site where developers access the latest software components, custom code, FAQs, support documents, and links to many other resources. Many developers read and contribute to the DocuShare blog and wiki to share information, post questions, and interact with other like-minded developers. Much of the DSDN (including SDK documentation) can be accessed by users at no charge once they complete a simple online registration form. However, to participate in the discussion groups and to receive developer support from Xerox, a full subscription to the DSDN is required. The required annual maintenance agreement for a DocuShare Development Server License includes a full subscription with a year of unlimited online access to the DSDN.

DocuShare Developer Support: Email Support

DocuShare Developer Support includes personalized email-based support. An initial 20 hours of email support is included in the annual maintenance agreement; additional support packs can be purchased in increments of 20 hours or 100 hours.

DocuShare Developer Training

The optional, five-day, instructor-led DocuShare Developer Training course provides in-depth information and programming-level instruction about DocuShare. Information presented in this course is intended to aid students in customizing DocuShare, developing applications for use with DocuShare, and integrating third-party applications with DocuShare.

A current schedule of training courses can be found at:
docushare.xerox.com/support/training

About the Xerox DocuShare SDK

DocuShare Java API

DocuShare offers a complete Java API, which includes a collection of Java libraries and methods that enable external systems to communicate with DocuShare. This API lets developers integrate DocuShare with third-party applications running on the Java platform, and offers the most direct interface to the DocuShare server.

DocuShare Client SDK

This is a collection of COM objects for programming in the Windows environment. The DocuShare Windows Client, Outlook Client, and PaperPort Link were all developed using the DocuShare Client SDK. Developers can use the SDK to create standalone DocuShare applications and to integrate DocuShare with third-party applications using the following languages: VB, VC++, VBScript, and VBA scripts. DocuShare Client SDK installs with an online help guide and also packages numerous code samples and includes the DSAccess tool (direct scripting access to the DocuShare server within Windows).

DocuShare HTTP/XML Interface

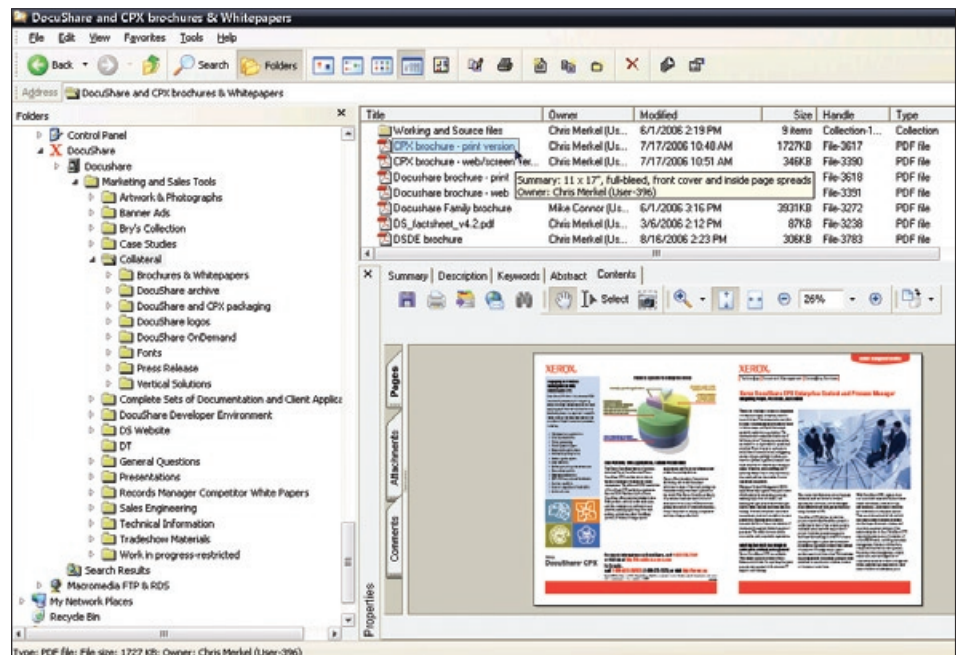
All DocuShare Clients communicate with the mid-tier server via the HTTP/XML Interface. This includes:

- Windows Client
- Outlook Client
- PaperPort Link
- DocuShare Client SDK

The HTTP/XML interface is used for read/write transactions with the DocuShare server using HTTP/1.1 protocol and XML data format. Any language that has HTTP protocol access, such as Perl, Java, VB, or VC++ can use this interface to communicate with DocuShare. Please refer to the HTTP/XML guide for details on this interface.

The HTTP/XML interface also supports the WebDAV protocol, which allows users to collaboratively edit and manage files on remote Web servers. DocuShare follows these standards, enabling both Mac OS X and Windows applications to map a DocuShare server. Any development language that uses HTTP protocols can communicate with DocuShare using this interface.

Please refer to www.webdav.org for general WebDAV standards and documentation.



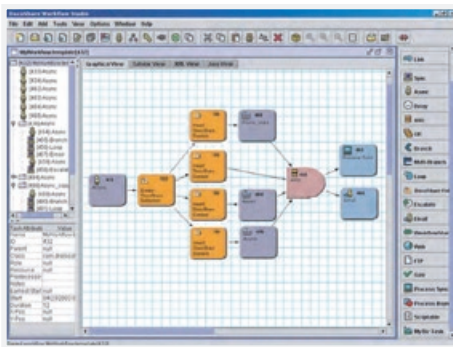
The Xerox DocuShare Windows Client uses the DocuShare SDK to expose significant functionality, including presentation, HTML rendering, search, thumbnailing, metadata management, and ACL management.

DocuShare Enterprise Workflow SDK

DocuShare Enterprise Workflow is a comprehensive, Java-based business process management (BPM) and workflow application, designed to streamline and accelerate document-centric business processes in the enterprise. DocuShare CPX includes the workflow engine as part of the core application, minimizing the amount of system integration and migration work required to create sophisticated workflows for use by content rules and in enterprise solutions.

DocuShare Enterprise Workflow features:

- Conditional loops, time-based events, dynamic workflow instantiation, workflow sub-routines
- Enablement on deployment servers via license key with no additional software installation required
- Complete toolset for VARs/system integrators to design, run, monitor, and report on vertical or line-of-business workflows



The DocuShare Enterprise Workflow SDK includes the Workflow Design Studio (pictured above), Workflow Manager for monitoring, administering, and optimizing workflows, and Workflow Resource Manager for integrating enterprise workflow user, group, and role data with DocuShare Access Control Lists (ACLs).

DocuShare Content Intake Manager Toolkit

The DocuShare Content Intake Manager (CIM) toolkit is a powerful subsystem included with both DocuShare and

DocuShare CPX licenses. Using the CIM, DocuShare is able to add hundreds of documents a minute into the content repository. These documents could come from multiple imaging stations, fax capture stations, or e-forms servers. CIM is designed to upload document files, metadata, and renditions into specified DocuShare collections at a high rate of speed.

Generic connections to imaging servers and e-forms servers are included in the CIM reference library. A full subscription to the DSDN includes documentation and several code examples that enable developers to create new connection pathways (called “sockets”) to specific automated content sources.

DocuShare Connectors

DocuShare Connectors are working examples of applications implemented using the DocuShare SDK.

Kofax Ascent Capture to DocuShare Release Script

This connector uses the DocuShare Client SDK to deliver scanned images directly into DocuShare.

Batch Upload Tool

This tool is designed to facilitate the automated import of large numbers of documents or files, and associated metadata, directly into the DocuShare repository. Batch Upload allows users to set up a watch folder on their network into which documents and comma-separated files (CSV) may be deposited. The tool automatically coordinates the efficient upload of both documents into the DocuShare repository.

Each connector is packaged with installable binaries, source code, sample configurations, and full documentation. Developers can further customize these connectors for specific needs; for example, developers may choose to add their innovations to the DocuShare use case library and expand upon proven techniques and best practices for future solution development.



DocuShare Web UI Customization

JSP/Servlet Customization

DocuShare supports integration with JSP. JSP/Servlet allows customization of the DocuShare Web interface as well as third-party integration. Developers can also deploy the servlet into DocuShare for specific business needs.

Wiki/Weblog Customization

Wikis and Weblogs can be customized easily with Cascading Style Sheets (CSS). Documentation and samples are available on the DSDN Web site to further assist developers with these types of customizations.

View Definition Format Customization

View Definition Format (VDF) is the standard XML-based Web UI templating environment used in DocuShare and provides simple syntax for developers who wish to customize the DocuShare Web Interface. The VDF Reference Guide is included in all copies of DocuShare, as well as in the DSDN. Please refer to this guide for further details and sample code.

Other Interfaces/Documentation

DocuShare Database Table Schema

The DSDN publishes the DocuShare Database Table Schema, enabling DBAs to further optimize DocuShare or to map it to existing database deployments.

DocuShare Command Line Interface

Command Line Interface (CLI) provides a method for performing batch operations

directly against the DocuShare server, such as importing large quantities of data from other applications or running external services such as content OCR. The CLI has been extended from earlier versions and includes extensive documentation.

DocuShare LDAP Interface

DocuShare fully supports the Lightweight Directory Application Protocol (LDAP) standard. The DocuShare LDAP Interface has been extended to fully support Microsoft Active Directory, with full documentation and configuration interfaces directly accessible from the administrative interface of DocuShare servers enabled for LDAP (support included in the DSDN Development Server).

Content Indexing and Extensible Database Queries

The extensible database (XDB) available within DocuShare CPX supports the indexing of XML files into a standard relational database (RDBMS) and converting the semantics expressed in an XML file. An “XDBQuery” is the mechanism for retrieving information from the XDB knowledge network. The XDBQuery returns a single XML file that includes a summary of the query, document information for each query match, and the context/content details for each match.

Extensive examples of practical XDB implementations are included as part of the DSDN. These include an Excel

Submission Template that easily converts any legacy Excel worksheet into a form for the submission of information, and an Excel Summarization Tool that can quickly summarize information submitted through a large number of individual Excel worksheets.

Of course, the XDB indexing and query system is a supplemental addition to the comprehensive text and metadata indexing that is included in DocuShare and DocuShare CPX.

DocuShare Enterprise Content Platform

