

XStream RapidShareTM Learning Management System

Technical Brief

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XStream RapidShare Learning Management System – Overview

XStream RapidShare Learning Management System (LMS) is XStream Software's powerful, wide-ranging and completely web-based LMS module (within the **XStream RapidShare*** technology) that can manage all types of online learning content and offline scheduled events. In addition, the system includes optional capabilities for web-based communication and collaboration.

***NOTE: XStream RapidShare** is XStream's unique web environment and digital workspace that provides access to the following modules:

1. **Learning Management System (LMS) Module** – This module enables management of all types of online learning content and offline scheduled events with optional capabilities for web-based communication and collaboration as part of the LMS.
2. **Communication and Collaboration Module** – This module enables clients to use a project-based methodology to have distributed or global teams of people access, organize and work jointly on projects 24/7. Each project created consists of powerful capabilities that enable users to instantly share files and documents (of all types), exchange e-mail, post notes and messages, participate in real-time discussions and chat sessions, and much more. For more information on the XStream RapidShare technology and the specific communication and collaboration capabilities provided, consult the “**XStream RapidShare v1.0 Technical Brief**” document. This document may be downloaded (in .PDF format) from XStream's web site at <http://www.xstreamsoftware.com/downloads.htm>, or it may be acquired by contacting XStream at 613-731-9443 or by e-mail at info@xstreamsoftware.com.

This technical document focuses on the capabilities provided by the XStream RapidShare LMS Module along with optional capabilities that may be added in for web-based communication and collaboration as part of the LMS.

Learning Management Features

Based on a scalable .NET architecture, XStream RapidShare LMS includes various powerful features that provide a strong foundation for organizations to deploy and manage all types of learning within their organization:

- **Decentralized administration capabilities** provide the flexibility to control the access and user rights of each administrator (i.e., each administrator may have full access to all aspects of the LMS or only partial access to certain elements within the LMS, and each administrator has defined rights that control the type of functions the administrator can perform at each level).
- **Hierarchical administration capabilities** provide full flexibility to customize and organize the use of the LMS by creating organizational units, each containing their own users/groups, designated administrators, assigned content matter/events, user rights, etc.
- **Event capabilities** (to schedule and track offline events of all types).
- **Self-registration capabilities** (for new users to register themselves in the system by creating their own accounts online).
- **Required learning paths/curriculums** (containing a defined set of assigned content matter/events that must be completed by the user).
- **Recommended learning curriculums** (containing supplementary assigned content matter/events not included as part of required learning paths).
- **Learning catalogs** (containing defined groupings of online and offline content matter, which may be directly accessed or only accessed upon request).
- **Archiving capabilities** (for automatically storing all deleted content matter/events and associated data).

XStream RapidShare LMS represents a major technological advancement and upgrade to XStream's widely used **RapidManager/RapidPortal** LMS technology. The XStream RapidShare LMS module incorporates all of the features and capabilities present in RapidManager/RapidPortal along with a large variety of new features and additional capabilities.

Communication and Collaboration Features (LMS)

In addition to the extensive learning management functions and capabilities (as described above), XStream RapidShare LMS also provides optional access to powerful Communication and Collaboration capabilities (as part of the LMS Module). These optional capabilities can be made available to administrators, content developers/authors, and users who are working with the LMS to access their content.

The available communication and collaboration features include **interactive text-based chat sessions** (between multiple internal users and/or external users), **threaded discussion forums**, **file transfer/sharing capabilities**, **"notify me" capabilities** (for automatically notifying users via e-mail when changes are made to specific elements within the LMS), **e-mailing capabilities**, **calendar** (for tracking upcoming events/activities), **notifications**, and **posted notes, comments, and URL links**.

These capabilities allow multiple content developers/authors to effectively collaborate on the development of learning content prior to its release. With the security features provided as part of the LMS, the content that is being developed or the ideas that are being communicated and collaborated upon can be restricted to a specific set of users or groups. Once the content has been finalized, it can very simply be made available (or released) by assigning the content to the users and groups and making it a part of a learning catalog.

In addition to the above, the **file transfer/sharing capabilities** can be used to enable organizations to effectively manage and provide access to any other type of content that may reside within the organization.

These powerful communication and collaboration features enable users within an organization to use the same system to perform administrative tasks in the LMS, access the learning content that has been assigned to them, communicate and collaborate with others as learning content is being developed, and also use the LMS to manage and access any other type of content/files that may be used within an organization.

Hosted or Non-Hosted Solution

XStream RapidShare LMS is available as a cost-effective hosted service solution. This option minimizes total cost of ownership and accelerates deployment time for quick realization of benefits.

XStream RapidShare LMS is also available as a non-hosted license offering.

Administration of XStream RapidShare LMS

XStream RapidShare LMS provides a decentralized, hierarchical management environment in which the various LMS components and features are accessible based on rights assignments.

In XStream RapidShare LMS, administrators can either have full access to all aspects of the LMS or have partial access to specific components and elements within the LMS. When creating an administrator, capabilities are provided to define rights at each level of the LMS to control what the administrator has access to and what functions an administrator can perform at each level.

The Organizational Hierarchy of XStream RapidShare LMS means that the system is capable of hosting multiple Organizational Units with complete security for the LMS data/content within each Organizational Unit. An Organizational Unit, which contains its own users and groups, can represent any sub-division (physical or logical) within the organization. Examples of physical sub-divisions may include departments or functions within the organization. Examples of logical sub-divisions may include different roles and

responsibilities within the organization. Full flexibility is provided to organize the use of the LMS within the organization.

Administrators can perform the following functions:

- a. Assign separate administrator(s) within each organizational unit that is created. Administrators could be given access to perform functions within a specific organizational unit, multiple organizational units or specific elements within the organizational unit(s).
- b. Assign user(s)/group(s) to selected content matter and event(s). Full flexibility is provided to control what each user or groups of users can access within the LMS.
- c. Assign user rights at the Organization, Organizational Unit, LMS, folder and individual node or resource levels.
- d. Use content matter filtering tools and user/group filtering tools (when assigning content, generating reports, etc.). Content matter filtering tools are used to search on content type (e.g., courses, exams, etc.), keywords, start date, etc., and user/group filtering tools are used to search on character index, user name, ID, title, and department.

SSL Security

XStream RapidShare LMS can be made accessible using either the HTTP or HTTPS protocol. The HTTPS protocol provides SSL security using 128-bit encryption, providing a completely secure environment for all transactions, including file uploads/downloads.

Users and Groups in XStream RapidShare LMS

Access to the various components and elements of XStream RapidShare LMS is based on user and group rights.

Users

To provide maximum flexibility and security, each user in XStream RapidShare LMS is designated with a particular user account type with a defined level of access:

- **Administrator** – Any number of administrators may be assigned to the organization and each individual organizational unit. Administrators can add/remove/edit organizational units under the organization, add/remove/edit users within an assigned organizational unit, manage LMS nodes, assign rights to users and guests, and access assigned learning content and scheduled events.
- **LMS Manager** – A single LMS manager is assigned to each LMS module created* within the organization or individual organizational units. The LMS manager completely manages the assigned LMS, including assigning rights to users and guests accessing various components within the LMS. The LMS manager can also access assigned learning content and scheduled events within the LMS.

***NOTE:** The number of LMS modules that can be created and the elements contained therein are dependent upon the module instances and components/features allocated when the top-level organization node was created.

- **User** – Any number of users may be created. A user may access certain components or features of the LMS (based on assigned rights) as well as access assigned learning content and scheduled events within the LMS.
- **Guest** – Any number of guests may be created. For security purposes, a guest does not have any default access rights to LMS components. A guest must be explicitly assigned to components to gain access.

Groups

XStream RapidShare LMS includes the capability of organizing users into groups, which is extremely useful for managing large numbers of users within the LMS. Administrators and LMS managers may create groups and assign existing users as members of those groups. There is no practical limit to the number of groups that can be created within the organization. Groups can be assigned to any component within the system. Members assigned to a group will automatically inherit all assignments given to that group.

In XStream RapidShare LMS, there is a single default Everyone group. Each user created is automatically assigned as a member of this group. Although the purpose of the Everyone group is to provide a convenient grouping of all existing users, this is not a mandatory group. It is possible to remove users from the Everyone group.

Learning Content in XStream RapidShare LMS

XStream RapidShare LMS enables administrators to register various types of learning content in the system and assign the content to users and groups. When users subsequently access their assigned learning content, their progress and scoring data is completely tracked and recorded by the system. Administrators may generate a variety of reports based on the recorded data.

In addition to Title, ID, and Description, there are various other information types/settings that may be configured for each learning content matter. These include Learning Objective (information about the objective of the content matter), Duration (estimated length of time required to complete the content matter), Enable Credits (option to enable or disable the use of credits for the content matter), Enable Fees (option to enable or disable the use of fees for the content matter), Allow Guest Access (option to make the content matter available to new self-registered users), and Keywords (option to specify additional descriptive keywords for search purposes).

Capabilities are also provided to optionally define the Start Date and Expiry Date for each learning content matter. The Start Date represents the date before which the content is not available. The Expiry Date represents the date after which the content is not available.

The following types of learning content may be registered in XStream RapidShare LMS:

RapidBuilder Projects

A RapidBuilder project is created using XStream's **RapidBuilder v3.1** or **RapidBuilder v3.1 Deluxe** simulation-authoring technology. It is essentially a course comprising a main project (.RPR) file with links to a series of lesson (.RBX) files. The main .RPR project file typically contains a Login page for the users to log in to the project and a Menu page that links to the different .RBX lesson files. Each .RBX lesson file contains topics and subtopics.

NOTE: In RapidBuilder, both .RPR and .RBX files may be saved in Flash (SWF) format. Any Flash (SWF) file that has been generated from an .RPR file may be managed and tracked by XStream RapidShare LMS in the same way as a regular .RPR file.

It is important to note that a developer working in RapidBuilder may create .RPR and .SWF files that are not linked to XStream RapidShare LMS at all. However, if an .RPR or .SWF project file is linked to XStream RapidShare LMS, each user of the file will be required to log in so that his/her progress data can be tracked. When tracking users' progress data, the system is keeping track of which lessons, topics, and subtopics each user has completed. The administrator can generate a variety of different progress tracking reports from XStream RapidShare LMS. In addition to this, the developers of RapidBuilder projects can provide the users with the capability to generate and view a progress report at runtime and, also, bookmark specific lessons, topics or subtopics before exiting playback in order to easily return to them in the future.

SCORM v1.2 Courses

A SCORM v1.2 course is an online course that complies with the **Sharable Content Object Reference Model (SCORM) v1.2** specifications. The SCORM v1.2 is an XML-based framework (developed by various international standards organizations) used to develop, package, and deploy online courses in a universally accessible format. A course that complies with the SCORM v1.2 specifications can be easily shared with any Learning Management System (LMS) that supports SCORM v1.2.

A SCORM v1.2 course consists of a main course manifest file (imsmanifest.xml) containing descriptive details about the course package. This manifest file is necessary for sharing and reusing the contents of the course within any LMS that supports SCORM v1.2. The course also consists of an .XML metadata file (containing relevant course data) and any number of Sharable Content Objects (SCOs), which are reusable objects incorporating the actual learning contents for the course.

Any existing SCORM v1.2 course (created with XStream's **RapidBuilder v3.1 Deluxe**, **RapidExam v2.5 Deluxe**, **Performance Analyzer v1.0**, and **RapidSVG v1.0 Deluxe** authoring technologies as well as any other third-party SCORM v1.2 course-building tool) may be registered in XStream RapidShare LMS in order to be managed and tracked.

RapidExam Exams

A RapidExam exam (.EXM or .XML) file is created using XStream's **RapidExam v2.5 Deluxe** exam-authoring technology. It is an online multimedia assessment containing different types of questions.

Once the end user logs into an exam, XStream RapidShare LMS tracks information about the exam (such as the number of attempts, score during each attempt, etc). The administrator can generate a variety of different reports related to exams from XStream RapidShare LMS.

It is important to note that a developer working in RapidExam may create .EXM and .XML files that are not linked to XStream RapidShare LMS at all. However, if an .EXM or .XML exam file is linked to XStream RapidShare LMS, each user of the file will be required to log in so that his/her progress and scoring data can be tracked.

Performance Exams

A performance exam (.RPE, .SWF, or .XML) file is created using XStream's **Performance Analyzer v1.0** performance evaluation-authoring technology. It is a performance-based evaluation that tracks, tests, and scores a user's performance through a task-based software simulation created for one or more application(s) in the Windows environment.

Once the end user logs into a performance exam, XStream RapidShare LMS tracks and scores the user's progress through the sequential steps that make up each task within the performance exam. Performance data collected by XStream RapidShare LMS includes such information as the score value achieved for each task and step, the number of attempts made on each step, the amount of time taken on each task and step, etc. The administrator can generate a variety of different reports related to performance exams from XStream RapidShare LMS.

It is important to note that a developer working in Performance Analyzer may create .RPE, .SWF and .XML files that are not linked to XStream RapidShare LMS at all. However, if an .RPE, .SWF or .XML exam file is linked to XStream RapidShare LMS, each user of the file will be required to log in so that his/her progress and scoring data can be tracked.

RapidGuide Categories

A RapidGuide category (.NWZ) file is created using XStream's **RapidGuide v1.0** performance support and guidance technology. It delivers relevant in-application performance support in the form of RapidGuide sessions, which are step-by-step instructional guidance sessions displayed on the user's live desktop. Each RapidGuide session functions like an online teacher or coach who guides the user with step-by-step text/audio instructions (and supporting screen snapshots) as the user performs a real-time

task within a live application. In addition to the live RapidGuide sessions, the user has access to “Show Me” simulations (which are interactive or non-interactive “movies” of desktop activity demonstrating how to perform tasks) and Associated Knowledge Documents (which are supporting documents/files used to provide additional information or related knowledge).

Note that a developer working in RapidGuide may publish an .NWZ file to the XStream RapidShare LMS server (where it will be linked to XStream RapidShare LMS) or deploy it as a standalone file not linked to XStream RapidShare LMS at all. However, if an .NWZ file is linked to XStream RapidShare LMS, each user of the file will be required to log in so that his/her progress data can be tracked.

Scheduled Events in XStream RapidShare LMS

In addition to the capabilities for registering, tracking, and reporting on learning content (courses, assessments, in-application performance support, etc.), XStream RapidShare LMS provides capabilities for registering, tracking, and reporting on **Scheduled Events**. A scheduled event can represent any type of offline event (including instructor-led training sessions, meetings, workshops, seminars, conferences, trade shows, etc.).

When scheduling an event, an administrator is able to perform the following functions:

- a. Schedule one or more instances of the same event (e.g., same sales/training meeting held in three different locations at the same time).
- b. Track the number of seats available for the scheduled event and enable registration and cancellation of registrations.
- c. Option to send an event registration URL (via email or using some other method) to enable users to self-register for the event using the URL. This capability is useful for implementing e-mail campaigns to maximize the number of users registered for a scheduled event.

NOTE: If a user who receives an event registration URL is not already registered in the system, the user has the capability to self-register in the system (by creating his/her own account online). Once the user has created an account, the user may proceed to register for the scheduled event.

- d. Alternate event session offerings if the selected event for which the user wishes to register is full.
- e. Generate a roster for users to sign in and later track attendance of each user.
- f. Option to assign credits to each attendee.
- g. Capabilities for reopening a completed event in order to assign additional users (e.g., unexpected or last-minute attendees) to the scheduled session.

Prerequisites

Administrators may establish Prerequisites for each content matter (including conditions such as progress, time taken, score, and attendance at the content matter level) before a user may launch/register for the content matter. This controls the conditions that must be met by the user before being able to launch/register for a content matter.

Learning Paths

XStream RapidShare LMS enables administrators to build and customize Learning Paths for users. A Learning Path represents required learning content that users must complete.

Each Learning Path defined by an administrator can be composed of courses (RapidBuilder courses or SCORM courses), exams (RapidExam exam files or SCORM-based exam files), performance-based assessments (created using Performance Analyzer), in-application guidance files (created using RapidGuide) and any offline events that have been scheduled.

Once Learning Paths are defined, administrators may assign one or more Learning Paths to each user or group and define the order in which each content matter is listed.

Using the “My Learning” view, users are able to access their Required Learning content (under the “Required Learning” node). For each content matter, users are able to view various pieces of information, such as progress/score, content status (e.g., Not Started, Completed, Passed, Attended, etc.), the start date (if one has been set), etc.

Recommended Learning

In addition to defining Learning Paths (which represent required learning), administrators may define Recommended Learning for users. Recommended Learning represents any type of content matter (online or offline content matter) that has been assigned to a user but has not been included as part of any Learning Paths assigned to the user.

Using the “My Learning” view, users are able to access their Recommended Learning content (under the “Recommended Learning” node). For each content matter, users are able to view various pieces of information, such as progress/score, content status (e.g., Not Started, Completed, Passed, Attended, etc.), the start date (if one has been set), etc.

Learning Catalogs

In XStream RapidShare LMS, administrators may create Learning Catalogs, which are customized learning packages containing online and offline content matter. Administrators can control and define which users have access to each Learning Catalog that has been created.

For each Learning Catalog that has been assigned to the users, administrators can also define if the users can directly access the online content or if they need to request access to it. Access requests are made via means of notifications that are fulfilled by administrators assigning the user to the requested content matter. The user then receives a confirmation message stating that the content matter has been assigned to the user and is available under the “Recommended Learning” node.

In each Learning Catalog, users can see which online content matter is assigned to them and which offline events they have registered for. Users also have the capability to view information next to each content matter, including progress/score, content status (e.g., Not Started, Completed, Passed, Attended, etc.), the start date (if one has been set), etc.

Self-Registration Capabilities

XStream RapidShare LMS includes self-registration capabilities. A user without an account is able to self-register in the system by creating his/her own account online. An account creation confirmation e-mail (containing login credentials) is automatically sent to the user after he/she registers.

NOTE: If a user receives an event registration URL (in order to register for a scheduled event), but the user is not registered in the system, the user can create an account and then proceed to register for the event.

A self-registered user will be able to log in and access content that has been made available to self-registered users. Note that administrators can define which content matter is automatically assigned to self-registered users. In addition, administrators can determine whether self-registered users are automatically assigned as members of one or more existing groups.

Customize User Interface Elements

Customized welcome pages and banner images may be specified for each organization unit within the LMS. A welcome page can be used for a variety of purposes, such as welcoming members to the organization, providing an overview and description of the organization, specifying milestones and deadlines, and more. A banner image may be used to show the organization's logo, a website advertisement, a headline, a combination of a logo and other text (e.g., guidelines), etc.

Other interface elements (such as fonts, colors, etc.) may also be customized via Cascading Style Sheets (CSS).

Search Capabilities

Users may use the built-in search engines to search for and locate specific objects/items within the LMS, including files, folders, and other objects.

Section 508 Compliance

XStream RapidShare LMS includes full support for the accessibility requirements specified in Section 508 of the U.S Rehabilitation Act. XStream RapidShare LMS is a 508-compliant technology that may be fully accessed by users with physical disabilities or limited mobility.

Unicode Support

XStream RapidShare LMS includes support for the Unicode character set (for encoding multiple written languages).

Multi-Language Support

XStream RapidShare LMS supports English, French, Danish, and Norwegian (with upcoming support for additional languages).

XStream RapidShare LMS Reports

XStream RapidShare LMS enables administrators to generate a wide variety of reports on users, groups, and content matter:

- Over 150+ predefined reports are available.
- Generate user-level reports from the user, group, or department-level points of view (e.g., select a report, a user and other options to generate the report).
- Generate transcript reports at the user, group and learning path levels.
- Generate content matter reports at the content matter/event, learning path, or learning catalog points of view (e.g., select a report, a course, exam, etc., and other options to generate the report).
- Reports may be viewed online, printed, exported to other formats (including Microsoft Excel, Adobe PDF, and Rich Text Format), and e-mailed.

Other Learning Management Features in XStream RapidShare LMS

XStream RapidShare LMS includes support for the following learning management features:

Bookmarking

While logged in to a registered RapidBuilder file, RapidExam file, or SCORM v1.2 course, an authenticated user may stop at and mark a specific screen/frame before exiting in order to return to that location upon the next login.

Progress Tracking

An authenticated user's progress through a registered RapidBuilder file (i.e., completion of lessons/topics/subtopics), SCORM v1.2 course (i.e., completion of SCOs within the course), registered RapidExam or Performance Analyzer file (i.e., exam scoring and progress), or registered RapidGuide file (i.e., completion of topics/subtopics) is tracked and maintained as progress data in the user's account.

Archiving

XStream RapidShare LMS includes archiving capabilities. Deleted content, such as courses, exams, performance assessments, in-application guidance, scheduled events, and SCORM courses, will be automatically placed in an archived location.

Archived content matter and event(s) will retain all tracking information (including score, progress, and attendance for each user/group) for use as data for generating future reports.

E-mail Reminders/Notifications

E-mail reminders (i.e., reminder messages automatically sent to participants before the content matter is taken) and e-mail notifications (i.e., results automatically sent to participants after the content matter has been taken) can be configured for learning paths and each type of content matter within XStream RapidShare LMS.

Administrators can configure the e-mail messages for each type of content matter separately and define who has access to the different e-mail reminders/notifications that have been configured.

Multiple e-mail reminders/notifications (assigned to different users and groups) can be created for the same content matter (e.g., for an exam, two e-mail reminders/notifications may be defined: one for one group and the second for a different group).

Other features available for e-mail reminders/notifications include the following:

- a. Selecting one or more manager users for each e-mail reminder and defining the "To", "CC", and "BCC" for each selected manager.
- b. Defining the start and stop dates for each e-mail reminder.
- c. Sending out results reports containing exam scores, course progress (for learning paths and content matter), and event attendance to respective participants and assigned managers.

Offline Exams

Administrators may generate any selected RapidExam exam (.EXM file)* or performance exam (.RPE file)* as an **Offline Exam**, which may be taken by an assigned user at any time without being connected to XStream RapidShare LMS. Only users that have been assigned to the RapidExam exam or performance exam by an administrator may attempt the offline exam (thus preventing unauthorized users from taking the offline exam).

When the user takes the exam, a .DAT file containing exam scoring results and progress information will be generated. Results collected during the offline exam are identical to that collected from an online exam.

The .DAT file is then manually transferred to the administrator (via floppy disk, e-mail, or another method), and the administrator may then upload the data from the .DAT file to the XStream RapidShare LMS database.

***NOTE:** Offline exams can only be generated for RapidExam exams linked to .EXM files and performance exams linked to .RPE files. They cannot be generated for RapidExam exams linked to .XML files or performance exams linked to .SWF or .XML files.

Concurrent Logins

Administrators may designate any user account as having the capability to log in multiple times (i.e., log in concurrently from different machines). By default, a user can only log in once with a user ID or password. However, with this "Concurrent Login" option selected, a user's login ID and password can be used to log in multiple times. This enables a user account to be used for logging in to the system anonymously (i.e., users do not have to disclose their personal login ID and password). This capability is useful for creating public courses and training materials, anonymous surveys/polls, etc.

Editing Associated Knowledge for RapidGuide Categories

Administrators may add, remove, and edit the **Associated Knowledge Documents (AKDs)** linked to the topics and subtopics within any published RapidGuide category.

An AKD may be any type of supplementary document or file hosted on the local network or an HTTP/FTP server, including MS Word (.DOC) or WordPerfect (.WPD) documents, Real Text Format (.RTF) documents, HTML (.HTML or .HTM) pages, text (.TXT, .LOG, or .BAK) files, executable (.EXE) files, graphic files, audio files, video files, and virtually any other type of file, as well as internal Question and Answer (Q&A) documents and posted notes.

Login Status

Administrators may view information related to the login status of all users currently logged in to projects, SCORM courses, exams, RapidGuide categories, and XStream RapidShare LMS itself.

For each user currently logged on, the administrator may view the user's name, login ID, the type of login (project, SCORM course, exam, RapidGuide category, or XStream RapidShare LMS), and the initial date/time of login.

Import Utility

The **Import Utility** is a database-support utility used to populate the XStream RapidShare LMS database with data from a predefined ASCII delimited text file. Each successfully imported record becomes an individual User object for which projects, SCORM courses, exams, RapidGuide categories, events, and other attributes may be assigned.

Communication & Collaboration Features in XStream RapidShare LMS

In addition to its learning management elements, XStream RapidShare LMS provides **optional** access to powerful communication and collaboration capabilities (as part of the LMS module). Note that XStream RapidShare LMS is available and may be used **with** or **without** the communication and collaboration capabilities.

These features enable users to communicate and collaborate with each other, which facilitates content development, discussion, and sharing of ideas. Users may also share files and collaborate on the development of learning content prior to its release. In addition, users may be provided access to other types of files that represent supplementary or reference material to the learning content provided to the users.

The XStream RapidShare LMS communication and collaboration capabilities include threaded discussion forums, interactive chat sessions, file transfer/sharing capabilities, “notify me” capabilities, e-mailing capabilities, calendar, notifications, and posted notes, comments, and URL links. These features are described in the next few sections of this document.

Threaded Discussion Forums

Threaded discussion forums enable users to initiate one-on-one discussions with other users. A new topic is created for each discussion with the capability of adding threaded replies under each message.

Administrators may create threaded discussion forums anywhere at the root level or sub-folder level of the LMS, and they may define the rights that individual users have to discussion forums and discussion topics.

Interactive Chat Sessions

Users can initiate synchronous text-based chat sessions with other users on demand. Chat sessions are an excellent electronic medium for enabling users to share information and ideas.

Administrators or users (with appropriate rights) have the capability to create chat rooms where one or more invited internal users or external users may join the chat. Internal LMS users invited for a chat may be notified via animated marquee to join a chat in progress. External users may participate in chatting by receiving a URL that they can use.

Each chat session can be saved and made available to other users.

File Transfer/Sharing Capabilities

XStream RapidShare LMS includes file transfer/sharing capabilities that facilitate collaboration on the development of content matter files, images, media files, etc. Files and documents (created using any application) can be easily uploaded to the system and then shared with other users. Files/documents may be organized in folders and subfolders created under the LMS root.

Administrators, LMS managers, and power users may restrict file/folder access to selected users/groups for security.

Files/documents may be uploaded using either of the following methods:

- **Normal Method** – The file is uploaded from a local or LAN/WAN drive using a standard “Choose File” dialog box.
- **ActiveX Method** – The file or folder is uploaded over the web using the ActiveX component. Using this method, the user may upload a single file or a folder containing multiple files and subfolders.

The files/documents that are uploaded to the LMS have built-in capabilities for File Locking and Version Tracking. This makes it easier for participants to work on and access the latest versions of files or documents that are part of the LMS.

There are a number of unique features and capabilities provided for File objects:

1. Ownership

The file is by default owned by the person who initially created it. This means that only the owner can edit this file by default. However, the owner can assign rights (read and/or modify) to other users as required.

2. Version Tracking

Users can keep track of the different versions of the files that are created.

3. File Read Access

When a user views a file (i.e. reads a file), other users can still access it. Reading a file does not prevent the file from being accessed by others for reading or editing purposes.

4. File Edit Access

When a user edits a file, they reserve the file, which prevents other users from editing the same file. However, it does not prevent users from accessing the file for reading/viewing purposes. The "automatic" reservation placed on the file (when a user opens the file for editing) is released when the file is replaced or the changes are abandoned. Once the file has been updated, an unread mark is placed on the file as a visual indicator letting others know that the file has been modified.

NOTE: If necessary, the administrator can release a reservation on any file in the LMS so that others can edit it.

5. Manual Reservation

If a user wishes to hold a file for future editing, a manual reservation can be placed on the file. This prevents other users from editing the file until the user has finished editing the file and released the reservation.

"Notify Me" Capabilities

The "**Notify Me**" feature in XStream RapidShare LMS enables users to track changes occurring within the LMS.

Each user is given the capability and the rights to enable "**Notify Me**" at any node level. A user may choose to be automatically notified (by e-mail) as soon as a change occurs in a selected LMS component, or he/she may choose to receive a daily summary of all changes made to a selected LMS component or all changes made to the complete LMS.

Electronic Mail Facility

Users may compose, send, receive, and store e-mail messages. Since anyone can send e-mail to the mailbox, it is particularly useful for receiving e-mail from people outside of the LMS.

Calendar

The Calendar component provides a mechanism for users to keep track of upcoming events or activities. Events can be organized and viewed by day, week, month, or year.

Notifications

Users may create, post, and view notification messages within the LMS.

Notification messages are useful for informing users about LMS changes and enhancements, upcoming meetings and chat sessions, and other types of information.

Notes

Users can post general notes pertaining to the LMS.

Web Links

Users can create shared links or shortcuts to Web URLs.

A link is a shortcut to a web site. It allows you to specify whether a web page referred to by the link should be opened in a new window or not.

Comments

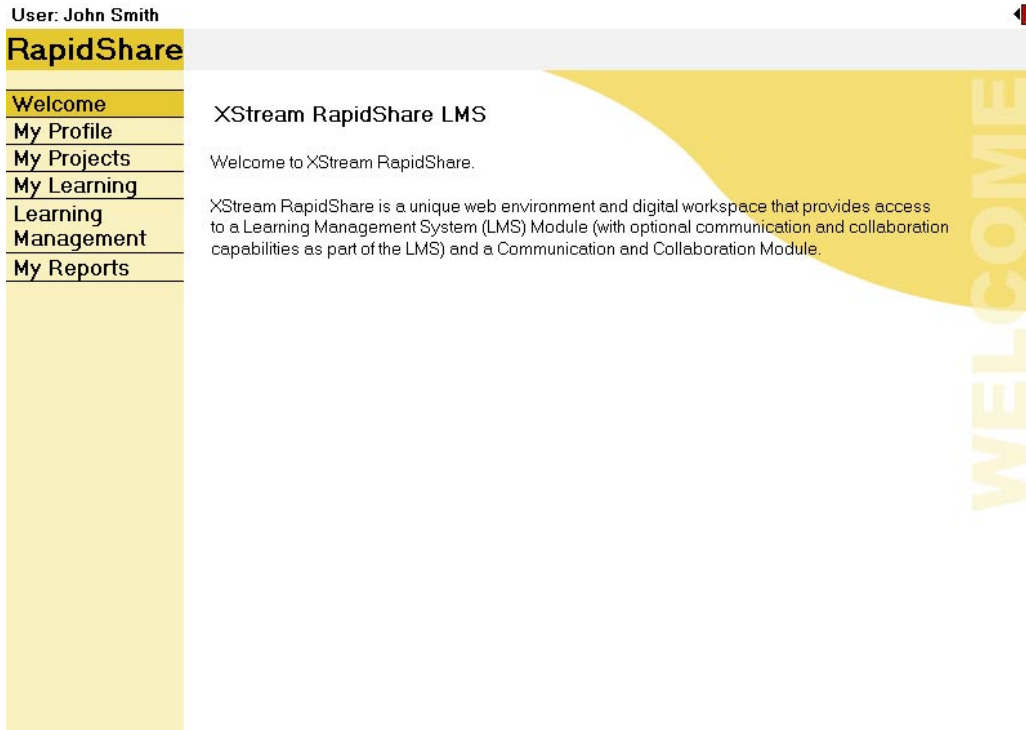
Users may add comments to various objects within the LMS.

Comments are user-defined annotations or notes that provide extra details, recommendations, hints, tips, or other general information to any user accessing the LMS object.

Screen Snapshots of XStream RapidShare LMS

Below are some sample GUI snapshots of XStream RapidShare LMS.

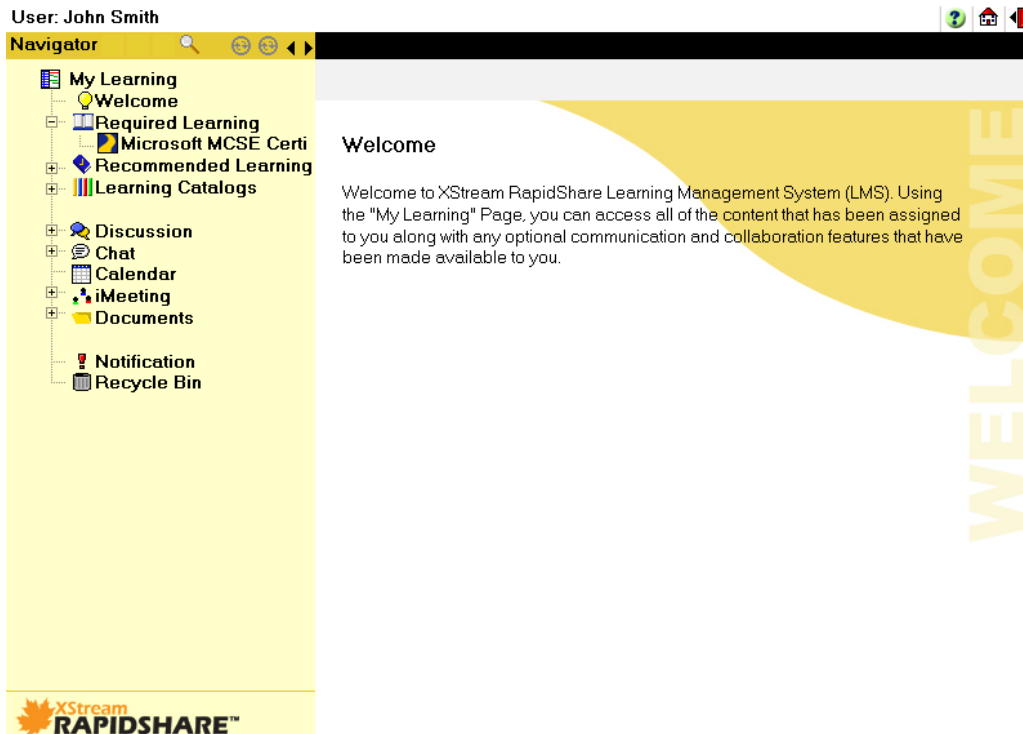
1. Initial Welcome Screen



Once a user successfully logs in to XStream RapidShare, an introductory Welcome screen is presented. The links on the left side of the screen enable the user to access those elements that have been made available to the user. These links include:

- **My Profile** – This link provides access to the user's personal details/information. The user can view this information and also change their personal login password.
- **My Projects** – This link is only available if access has been provided to the Communication and Collaboration Module within the XStream RapidShare technology. This link enables users to access the Projects that have been assigned to them.
- **My Learning** – This link provides access to the user's assigned content matter (including online content matter and offline scheduled events), learning paths, recommended learning, learning catalogs, communication and collaboration features, etc.
- **Learning Management** – This link is only provided to those users who have administrative capabilities within the LMS. Such users can use this link to perform administrative tasks to which they have access, including uploading content matter, scheduling events, configuring e-mail notifications, etc.
- **My Reports** – This link provides access to general reports that are available.

2. “My Learning” View



The user's "My Learning" page provides central access to all of the user's assigned learning content. Upon clicking the "My Learning" link, the user is presented an introductory Welcome screen for the LMS Module. This can include important information about the LMS Module that the user is accessing. In addition, this page provides access to a hierarchical node tree containing all of the required learning content, recommended learning content, and learning catalogs that have been assigned to the user (each containing assigned projects, SCORM courses, exams, performance assessments, in-application performance support, and scheduled events).

Based on assigned rights, the user may also have access to communication and collaboration features, including discussions, chat, file uploading/viewing, etc.

3. "Learning Management" View

User: John Smith

Navigator

- Learning Management
 - Welcome
 - Learning Content
 - Notifications
 - Courses
 - Windows 2000
 - Networking Ess
 - Exams
 - Performance Assess
 - In-application Guidan
 - Events
 - SCORM Courses
 - Learning Paths
 - Learning Catalogs
 - Tools
 - System Settings
 - Change Event Status
 - Generate Offline Exa
 - Upload Marks
- Discussion
- Chat
- Calendar
- iMeeting
- Documents
- Notification
- Recycle Bin

WELCOME

Welcome

Welcome to XStream RapidShare Learning Management System (LMS). This page enables you to perform a large variety of management activities based on the rights that have been assigned to you.

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The "Learning Management" page is accessible to administrators and users with certain administrative rights. It enables the user to perform a variety of management activities (based on the user's assigned rights), including uploading learning content, creating learning paths and learning catalogs, creating scheduled events, changing the status of a scheduled event, assigning users to learning content, learning paths, and learning catalogs, registering users for scheduled events, creating notifications, generating offline exams, and more.

4. Assigned Learning Content

User: John Smith

Navigator

- My Learning
 - Welcome
 - Required Learning
 - Microsoft MCSE Certi**
 - Recommended Learning
 - Learning Catalogs
 - Discussion
 - Chat
 - Calendar
 - iMeeting
 - Documents
 - Notification
 - Recycle Bin

Microsoft MCSE Certification

Object Name: Microsoft MCSE Certification

View 20 per page

Use Filter Submit

	Title	Start Date	Progress/Score	Status
▶	Windows 2000 Network Administration	08/01/2004 9:00AM	20%	In Progress
▶	Windows 2000 Directory Services Adm.	08/01/2004 9:00AM	50%	Not Started
▶	Live - Windows 2000 Product Tour	08/15/2004 10:00AM	0%	Not Started
▶	Hands-on Review	08/15/2004 10:00AM	0%	Not Started
⚙	Troubleshooting Training Session	08/17/2004 9:30AM	N/A	Registered
⚙	Pre-Exam Q&A	08/18/2004 3:00PM	N/A	Registered
▶	Certification Exam 1 (70 Questions)	08/22/2004 10:30AM	0%	Not Started
⚙	Certification Exam 2 (Hands-On)	08/23/2004 10:30AM	0%	Not Started
▶	Post Exam Review Luncheon	08/25/2004 11:30AM	N/A	Registered

Previous Next

Legend: ▶ = Play ⚙ = Register ⚙ = Event info ◆ = Course 📄 = Exam
 📄 = Performance Assessment 🍎 = In-Application Guidance

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Under the “Required Learning” node (on the user’s “My Learning” page), the user may access one or more Learning Paths that have been created/defined and assigned to the user by an administrator. Each Learning Path (which may be composed of online courses, exams, performance assessments, in-application performance support, and offline scheduled events) represents required learning content that the user must complete.

Upon accessing an assigned Learning Path, the user is able to view a list of all the content matter contained in the Learning Path. For each content matter listed, the user is able to view various pieces of information, such as progress/score, content status (e.g., Not Started, In Progress, Completed, Passed, Attended, etc.), the start date (if one has been set), etc. In addition, for each content matter listed, buttons are provided to play/launch the online content or register for the offline event.

Under the “Recommended Learning” node, the user is able to access Recommended Learning (any online or offline content matter that has been assigned to the user but has not been included as part of any Learning Paths assigned to the user)

Under the “Learning Catalogs” node, the user is able to access any Learning Catalogs (customized learning packages containing online and offline content matter) that have been assigned to the user. For each assigned Learning Catalog, administrators can define if the user may directly access the content matter or if the user needs to request access to the content matter (via means of notifications).

The listed content matter for Recommended Learning and Learning Catalogs is accessed and viewed in the same way as it is for Learning Paths.

5. Content Matter Filtering

User: John Smith

Navigator

- My Learning
 - Welcome
 - Required Learning
 - Microsoft MCSE Certi**
 - Recommended Learning
 - Learning Catalogs
- Discussion
- Chat
- Calendar
- iMeeting
- Documents
- Notification
- Recycle Bin

Microsoft MCSE Certification

View 20 per page

No Filter Submit

Assigned Status All Filter by Content Type All

Keywords

Start Date Range From 01/01/2004 To 07/23/2004

	Title	Start Date	Progress/Score	Status
▶	Windows 2000 Network Administration	08/01/2004 9:00AM	20%	In Progress
▶	Windows 2000 Directory Services Adm.	08/01/2004 9:00AM	50%	Not Started
▶	Live - Windows 2000 Product Tour	08/15/2004 10:00AM	0%	Not Started
▶	Hands-on Review	08/15/2004 10:00AM	0%	Not Started
⚙	Troubleshooting Training Session	08/17/2004 9:30AM	N/A	Registered
⚙	Pre-Exam Q&A	08/18/2004 3:00PM	N/A	Registered
▶	Certification Exam 1 (70 Questions)	08/22/2004 10:30AM	0%	Not Started
▶	Certification Exam 2 (Hands-On)	08/23/2004 10:30AM	0%	Not Started
▶	Post Exam Review Luncheon	08/25/2004 11:30AM	N/A	Registered

Previous Next

Legend: ▶ = Play Ⓜ = Register ⚙ = Event info ◆ = Course 📄 = Exam
 📊 = Performance Assessment 🍎 = In-Application Guidance

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When accessing assigned Learning Paths, Recommended Learning, or Learning Catalogs, the user may customize the list view (i.e., control which specific items are displayed in the list of content matter) by using the following filter options:

- **Assigned Status** – The user can choose to display only content matter that is already assigned to the user, content matter that is not assigned to the user, or all content matter (both assigned and not assigned).
- **Filter by Content Type** – The user can choose to display only certain types of content matter (i.e., All, Courses, Exams, Performance Assessment, In-Application Performance Support, SCORM Courses, Events, Learning Catalogs, or Learning Paths).
- **Keywords** –The user can choose to display content matter corresponding with specified keywords.
- **Start Date Range** – The user can choose to display content matter with a start date that falls within a specified date range.

The user may also specify the number of list items (20 by default) that are displayed per page.

6. User/Group Assignments

User: John Smith

Navigator

- Learning Management
 - Welcome
 - Learning Content
 - Notifications
 - Courses
 - Windows 2000
 - Networking Ess
 - Exams
 - Performance Assess
 - In-application Guidan
 - Events
 - SCORM Courses
 - Learning Paths
 - Learning Catalogs
 - Tools
 - System Settings
 - Change Event Status
 - Generate Offline Exa
 - Upload Marks
- Discussion
- Chat
- Calendar
- iMeeting
- Documents

- Notification
- Recycle Bin

Object Name: Windows 2000

View 20 per page

No Filter Submit

User or Groups	Both	Character Index	Name	ID
Department	--Select--		Title	

Users/Groups	
<input type="checkbox"/>	Everyone
<input type="checkbox"/>	Managers
<input type="checkbox"/>	New Hires from June 2004
<input type="checkbox"/>	Aaron Sobey
<input type="checkbox"/>	Burt Billings
<input type="checkbox"/>	James Banting
<input type="checkbox"/>	Jeff Clawson
<input type="checkbox"/>	Larry Tingle

Select All Clear All Previous Next Explore Group

Legend: = Group = User

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An administrator or user with appropriate administrative rights may assign users and groups to any online content matter or offline scheduled event. Full flexibility is provided to control what each user or group of users can access within the LMS. Assignments may be made at the user, group, or content matter level.

The above snapshot image shows user/group assignments at the content matter level. To assign content matter to a user or group, the administrator right-clicks the appropriate content matter name under Courses, Exams, Performance Assessments, In-application Guidance, Events, or SCORM Courses and then selects "Assign to User/Group" from the shortcut menu. This displays the User/Group Assignments page listing the available users and groups. For any selected group in the list, the administrator may click the "Explore Group" link to view a list of all users who are members of the group.

To make assignments, the administrator simply selects the check boxes beside the users and/or groups that the administrator wishes to assign to the content matter, and then clicks the Submit button. The assigned content matter will now appear under the "Recommended Learning" node on the "My Learning" page of each selected user (and each member of each selected group).

The administrator may also filter the user/group list according to Type (Users, Groups, or Both), Name, ID, Department, Title, or Character Index (i.e., letter or number that corresponds to the first letter of the user/group name).

Contact Information

For more information on **XStream RapidShare LMS**, please contact our sales team either by phone at (613) 731-9443 or by e-mail at salesupport@xstreamsoftware.com.

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