

Performance AnalyzerTM v3.0

**SCORM 2004, v1.2, and v1.1
Compliance**

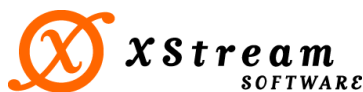


Table of Contents

Introduction 3

Components of a SCORM Course 3

 SCORM 2004 or v1.2 Course Structure..... 3

 SCORM v1.1 Course Structure 4

Saving an Assessment as a SCORM Course or SCO 5

Managing/Deploying SCORM Courses..... 5

Contact Information 6

Introduction

Performance Analyzer v3.0 is a SCORM-compliant technology that enables developers to save performance evaluations as SCORM-compliant content packages.

The **Sharable Content Object Reference Model (SCORM)**, published by the Advanced Distributed Learning (ADL) project, is a collection of standards and specifications (adapted from multiple sources) that are used to enable interoperability, accessibility and reusability of web-based learning content.

As a continually evolving standard, there have been several versions of SCORM. Performance Analyzer supports **SCORM 2004** (the most current version of SCORM) as well as **SCORM v1.2** and **SCORM v1.1** (previous versions of SCORM that are still widely used). A learning content file that complies with the SCORM specifications can be easily deployed and managed using any LMS that supports SCORM (including XStream's own web-based XStream RapidShare LMS). For the purposes of SCORM, an LMS is any system for managing and deploying e-learning content.

In Performance Analyzer, a saved SCORM course consists of an .XML manifest file, an .XML metadata file, various XML control files, and a **Sharable Content Object (SCO)**. The **SCO**, which is a standardized, reusable learner object, consists of an .XML metadata file, an HTML file, and an embedded Performance Analyzer (.RPE) file (along with its associated .RPX task files).

Components of a SCORM Course

In Performance Analyzer, the developer may save a simulation-based assessment as a SCORM 2004, SCORM v1.2, or SCORM v1.1 content package.

SCORM 2004 or v1.2 Course Structure

In Performance Analyzer, a saved SCORM 2004 or v1.2 course consists of the following elements:

- **Course Manifest File (imsmanifest.xml)** – Contains all the information necessary for registering and deploying the course. The **imsmanifest.xml** file, which includes data describing the overall course package (i.e., content structure, metadata, resources, sequencing information, and other details about the aggregation or grouping of the different course elements), is necessary for sharing and reusing the contents of the course within any Learning Management System (LMS) that supports SCORM. In order to register the SCORM course in a SCORM-compliant LMS, the system administrator provides a link to the course's **imsmanifest.xml** file.
- **Course Metadata (.XML) File** – Contains the course's metadata (meaning data about data). While the manifest file includes information required by the LMS so that the course may be registered and tracked, the metadata file includes information that is only provided for developers' reference. The main functionality of metadata is to provide a common way of describing the learning resources so that they can be searched for, located, retrieved and reused in other places. Metadata, as such, provides third-party users with information about the learning resource and how it can be used so that they can reuse it as part of the SCORM courses they are creating.
- **Various XSD Files** – The various required IMS and ADL XSD control documents (such as **adlcp_rootv1p2.xsd**, **imscp_rootv1p1p2.xsd**, etc.), which are used by the manifest file during the import process into the LMS.
- **XMLSchema.dtd** and **datatypes.dtd** (SCORM 2004 only) – The **Document Type Definition (DTD)** files used to validate the XSD files. The DTD files essentially define the rules of the XSD files, such

as which elements are present and the structural relationship between the elements. Specifically, the DTD files define such things as valid tag names and attribute names, which fields are optional, which are required, and which may occur multiple times in the document. The DTD files help to validate the data when the receiving application does not have a built-in description of the incoming data.

- **SCORMCONTAINER.JS File** – The Javascript file for implementing **SCO** functionalities. Because the **SCORMCONTAINER.JS** file is a common file used to access the **SCO** functionalities for each lesson in the course, it is stored in a separate “**XRMScripts**” subfolder.
- **Sharable Content Object (SCO)** – The **SCO** is a standardized, reusable learner object containing the actual performance evaluation content. It comprises three files:
 - **HTML file** (e.g., **SCO1.HTM**) – The actual **SCO** file used to access **SCO** functionalities. The .HTM file contains code for launching the .RPE or .SWF content file from the LMS (e.g., **XStream RapidShare LMS**).
 - NOTE:** In the case of an .SWF-based **SCO**, an HTML file is created for each .SWF task file in addition to the .SWF evaluation file.
 - **RPE/SWF content file** (e.g., **SCO1.RPE** or **SCO1.SWF**) – The Performance Analyzer evaluation (.RPE/.SWF) file containing the contents of the performance evaluation. The .RPE/.SWF file is embedded within the HTML file.
 - NOTE:** All of the task files (in .RPX or .SWF format) linked to the Performance Analyzer evaluation (.RPE/.SWF) file are also included as part of the **SCO**.
 - **XML metadata file** (e.g., **SCO1.XML**) – The metadata file containing the metadata details (tags) for the **SCO**. Metadata essentially provides descriptive information about the content represented in the **SCO**. It is used to facilitate the reuse and discoverability of content within a content repository.
- **ZIP File** – A zip package file containing all of the course-related files described above.

SCORM v1.1 Course Structure

In Performance Analyzer, a saved SCORM v1.1 course consists of the following elements:

- **Content Structure Format File (<file name>.xml)** – Contains all the information necessary for registering and deploying the course. This is the SCORM v1.1 equivalent of the imsmanifest.xml file provided in a SCORM 2004 or v1.2 course.
- **Document Type Definition File (scormcsf(1.1).dtd)** – Used to validate the CSF manifest file. The DTD file essentially defines the rules of the CSF file, such as which elements are present and the structural relationship between the elements. Specifically, the DTD file defines such things as valid tag names and attribute names, which fields are optional, which are required, and which may occur multiple times in the document. The DTD file helps to validate the data when the receiving application does not have a built-in description of the incoming data.
- **Course Metadata File (<file name>_metadata.xml)** – Contains the course’s metadata.
- **SCORMCONTAINER.JS** (stored in the “**XRMScripts**” subfolder)
- **SCO** (stored in the “**Lessons**” subfolder)
- **ZIP File** – A zip package file containing all of the course-related files described above.

Saving an Assessment as a SCORM Course or SCO

Performance Analyzer enables the developer to save a simulation-based assessment as a structured SCORM 2004, v1.2, or v1.1 course or as a standalone **SCO**:

- **Save as RPE-based or SWF-based SCORM Course** – When a simulation-based assessment is saved as a SCORM course, Performance Analyzer generates all the necessary files (i.e., manifest file for registering the course, .XML metadata file, SCORMCONTAINER.JS file, the SCO, and other required files) required for the SCORM course package. The course may then be registered, deployed, and scored/tracked through any LMS that supports SCORM.
- **Save as RPE-based or SWF-based SCO** – When a simulation-based assessment is saved as a standalone **SCO**, Performance Analyzer generates all the necessary files (i.e., .HTM file, .RPE/.SWF content file, and .XML metadata file) required for the **SCO**. The **SCO** may be subsequently incorporated into a third-party SCORM course in order to be scored/tracked as part of the course.

NOTE: When creating a SCORM course or SCO in Performance Analyzer, the developer may customize the course manifest, SCO metadata, and sequencing details by entering information in the fields of the forms provided. However, because the process of creating a SCORM course or SCO is almost completely automated and requires minimal user input, the course manifest, SCO metadata, and sequencing forms do not have to be filled out. Even if the forms are not filled out, all the necessary information will be automatically provided within the course manifest file (which also contains a link to the course's .XML metadata file containing metadata details) and/or SCO metadata file. The developer needs to fill out the manifest and metadata forms only if he/she wants to customize manifest and metadata information for the course and/or SCO.

Managing/Deploying SCORM Courses

A SCORM 2004, v1.2, or v1.1 course may be registered and deployed through any Learning Management System (LMS) that supports the equivalent SCORM standard.

A **SCO** within a SCORM-compliant content package (saved from an .RPE file in Performance Analyzer) is a self contained, browser-launchable file. Performance Analyzer **SCOs** are always launched using a web browser (e.g., Internet Explorer or Netscape). In addition, in order to enable proper tracking by the LMS, the self-contained **SCO** within the content package is played individually (i.e., a **SCO** cannot be launched from another **SCO**). Note that the precise method used to access the **SCO** within the SCORM content package is dependent on the individual LMS.

XStream RapidShare LMS, XStream's web-based Learning Management System, may be used to register, launch, and track any SCORM v1.2 course created with Performance Analyzer, RapidBuilder, RapidExam, RapidSVG, or another third-party SCORM course-building tool.

NOTE: XStream RapidShare LMS only supports SCORM v1.2 courses. It does not support SCORM 2004 or v1.1 courses. The SCORM 2004 and v1.1 courses created with Performance Analyzer must be managed and deployed using a third-party LMS that supports SCORM 2004 or v1.1.

Contact Information

For more information on the SCORM-compliant technology of **Performance Analyzer v3.0**, please contact our sales team either by phone at (613) 731-9443 or by e-mail at salesupport@xstreamsoftware.com.

XStream Software Inc.

2280 St. Laurent Blvd., Suite 200

Ottawa, Ontario, CANADA

K1G 4K1

www.xstreamsoftware.com

info@xstreamsoftware.com (Information)

salesupport@xstreamsoftware.com (Sales)

techsupport@xstreamsoftware.com (Support)

Telephone: (613) 731-9443

Fax: (613) 731-9615