



Elluminate *Live!* SDK (Software Development Kit)

In an effort to foster integration between Elluminate *Live!* and the various Learning Management Systems used by our customers, Elluminate has created a SDK.

Available to both Server and Hosted customers, the Elluminate *Live!* SDK is Elluminate's open architecture initiative. We have provided a comprehensive set of Application Programming Interfaces (API) and specifications that provide the ability to develop an adapter (with a collection of classes derived from the Elluminate *Live!* Manager) that can be used to connect Elluminate *Live!* and an LMS.

For our clients, Elluminate *Live!* SDK provides:

- A flexible environment that can be tailored to your particular needs and Learning Management System
- A seamless method for your users to create and access Elluminate *Live!* sessions and recordings
- The ability to pass user information (login names) directly into the Elluminate *Live!* session and authenticate users from your LMS
- The ability to leverage investments in existing products through integration
- An opportunity to innovate
- An opportunity to build upon or integrate with a market-leading technology
- The ability to open new markets or deepen relationships with existing clients in the education market

Terminology

- Adapter – Integration software produced as a result of the development to allow users to create/edit/enter Elluminate *Live!* sessions and recordings from the LMS
- API – Application Programming Interface
- SDK – Software Development Kit
- Elluminate *Live!* – real-time collaboration environment designed for online learning, collaboration, meetings, training in academic institutions and corporations
- Elluminate *Live!* Manager – a robust web based application that provides Elluminate customers with the ability to easily configure, administer, and use their Elluminate *Live!* Server. Furthermore, it provides all users with an easy to use interface to schedule and access live and recorded meetings
- LMS – Learning Management System which manages meeting lists, meeting registrations, meeting schedules, and user information
- EPS – Elluminate Professional Services

Development Requirements

The Elluminate *Live!* SDK is a description of the API classes that you will have access to for writing your adapter. A default adapter, including the source code, is provided and can be used with minimal configuration. You can create a custom adapter for Elluminate *Live!* by using your own custom classes (which may be more flexible) or customizing/extending the default adapter by modifying the 'Elluminate *Live!* Manager SDK' template default classes.

The following are a list of requirements indexed by need:

1. Elluminate *Live!* Server Version 6.0 or higher (either Academic or Enterprise edition)
2. Elluminate *Live!* Manager Version 1.5 or higher
3. A development environment
 - a. The ability to compile and unit test the adapter
 - b. Running and testing the adapter. The Elluminate *Live!* Manager must be installed and running before you can conduct a live test with your adapter. Note: JDK 1.4.x compatible or higher compiler is required
4. The default adapter is Java code; hence, a basic familiarity with Java development is assumed

Available Resources

A comprehensive set of resources for your system administrators and developers is provided and includes:

- Elluminate *Live!* Installation and Configuration Guide
- Elluminate *Live!* SDK Developer's Guide
- A developer's forum through the Elluminate Community, which allows you to collaborate and learn from other developers using the SDK and Elluminate's developers

Typical Steps in the Adapter Development Process

The following reviews a typical development process.

1. Become familiar with Elluminate *Live!* Manager by creating testing data using the Elluminate *Live!* Manager interface. Create a number of meetings, users, and recordings. Refer to the default adapter for examples of how this can be accomplished programmatically.
2. After developing a good understanding of how the Elluminate *Live!* Manager service works, create your own LMS adapter using the default adapter example as your starting point (or you may write a custom adapter).
3. The LMS sends a request to the 'LMS Customer Adapter' to communicate with 'Elluminate *Live!*'.
4. The Elluminate *Live!* Manager web service responds to the 'LMS Customer Adapter' and invokes commands with parameters passed in a URL. The LMS will tell the service which adapter it wants to use by configuring the Elluminate *Live!* Manager adapters.xml file, which then forwards the request to the appropriate adapter. Afterwards, the URL will format to HTTP (i.e. 'http://localhost/service.html').
5. The web service will accept parameters passed and convert them into a ServiceCall object, which is used by Elluminate *Live!* Manager and its adapters as a standard representation of a command and its related arguments. This ServiceCall is then passed to the adapter where the adapter decides what to do with the information given to it.

6. Once the LMS adapter is written it can be tested using the test data from step one.
7. When the developer is satisfied with their development effort for the LMS adapter it can be deployed following the instructions provided in the Elluminate *Live!* SDK Developer's Guide.

For More Information

For more information on the SDK and the next steps, please contact your account manager or Elluminate's Professional Services Team at epsteam@illuminate.com. Elluminate Professional Services (EPS) has worked with many customers to enable such customized integration specific to their unique environment. This includes working with your development team on the integration or completing the integration for you.