
Liferay Developer Training

Day 1

Introduction

- Introduction to Liferay's Plugins SDK
- Installing Liferay Developer Studio
- Setting Up the Space Program
- Reviewing Liferay Concepts

Developing Portlet Plugins

- Introduction to Java Standard Portlets
- How Portlets Differ From Servlets
- The Java Portlet Specification
- The Portlet Lifecycle
- Phases of the Portlet Lifecycle
- Portlet Characteristics
- Java Standard Portlet Exercise
- Portlet Preferences
- Inter-Portlet Communication
- Methods of Inter-Portlet Communication
- Public Render Parameters
- Events
- Portlets and Web Application Frameworks

Day 2

Parts Inventory Portlet Application

- Design Approach
- Setting up the Data Model for Service Builder
- Generating the Service and Persistence Layer
- Leveraging the Liferay MVC Portlet Framework
- Displaying Data using Liferay's Search Container
- Localization, Feedback and Input Validation
- Integrating Liferay Permissions
- Adding Custom Portlets to the Control Panel

Day 3

Theme and Layout Template Plugins

- Liferay Theme Overview and Exercise
- Liferay Layout Template Overview and Exercise
- Advanced Theme, Layout Topics, and Best Practices

Hook Plugins

- Adding a Post Login Action
- Adding a Startup Action
- Customizing Language Keys
- Customizing Core Liferay JSPs
- Adding Post-Processing to Liferay's Indexer
- Extending Liferay's Services using Service Wrappers

Adding custom Servlet Filters
Overriding Core Struts Actions

Ext Plugins

Ext Plugin Overview
Customizing Portal Properties
Customizing Portlet Defaults
Best Practices

Advanced Topics

Using Liferay's Web Services
Spring in Liferay
Development Strategy

Detailed Account

Day 1

Prior to the start of the course, you will be asked to take part in a brief online course called Introduction to Liferay. The Introduction to Liferay course consists of three videos. The first video begins with an Introduction to Liferay, explaining what Liferay Portal is, what it does, and what makes Liferay Portal an ideal choice for running your web site. In the second video, you will be introduced to the concepts of Users, User Groups, Organizations, Sites, and Teams. You will see how all of these work together to enable you to design your web site in the most efficient way. In the last video, you will be introduced to Liferay's user interface. These three videos are the foundation for the Portal Developer training.

The Liferay Developer course begins with an introduction to the Liferay Plugins Software Development Kit (SDK). The Plugins SDK is at the heart of the development process and it is important for developers to be familiar with how the build and deploy processes work. You will learn the differences between the different types of Liferay Plugins and when to use each one. This will better equip you to come up with a development strategy that gives you the most flexibility.

Next, you will begin getting your hands dirty by setting up your Liferay development environment. All students that attend Liferay Developer training will receive a copy of the Liferay Developer Studio which provides an all-in-one, integrated development environment for Liferay Portal Enterprise Edition platform. The installation of Liferay Developer Studio includes the Liferay-Tomcat bundle and the Liferay Plugins SDK.

With the setup of our development environment complete, we jump in with both feet with an introduction to the features of the Java Portlet API, JSR-286. The first portlet you create will illustrate the lifecycle of a portlet and help you understand how to use Portlet Preferences to store portlet configuration data.

After this, you will explore some advanced features of the JSR-286 API by creating a project which implements communication between two portlets, using a space transportation metaphor: one portlet sends a signal saying "Beam Me" along with a random destination, and the other receives the signal and displays the destination. You will see how you could use inter-portlet communication to implement applications composed of multiple portlets.

Day One is rounded out with a short introduction to using standard web application frameworks to write portlets in Liferay, and you will create a simple portlet using Liferay's own MVCPortlet framework. As you will see, you have as much freedom to use a specific framework in a portal environment, such as Liferay, as you would implementing a web application—while all the benefits of operating in a portal environment come for free.

Day 2

Day Two will have you create a complex, data-driven portlet application. During the course of writing this portlet, you will learn how to use Liferay's Service Builder tool—a code generator which automatically generates Hibernate configuration files, SQL for creating tables, and code for querying your tables, all from a single XML file which you will create.

You will be introduced to tag libraries provided by the Portlet API and by Liferay, and you will use them to create portlet URLs, Action buttons, and a data-driven, paginating table using Liferay's Search Container. This will enable you to make your portlets indistinguishable from portlets provided by Liferay Portal, so that you can provide a unified interface to your users.

You will also learn how to implement user feedback and localization, to further polish your application and ensure that it's accessible by audiences who may speak different languages. After this, you will learn how to integrate Liferay's permissions system into the portlet so that the data in your portlet can be secured using Roles in exactly the same way as Liferay's portlets. Finally, you will learn how you can integrate your portlets with Liferay's Control Panel, so that your users can have a centralized interface for administering almost anything you want them to administer.

Day 3

From portlets, we then move on to themes and layout templates plugins. You will be introduced to Liferay's themes, which enable you to completely customize the way Liferay Portal looks so that your site looks the way you want it to look. You will learn how Liferay's theming system works, and you will customize a theme. After this, you will learn how to create layout templates so that you can customize the containers into which you and your users can drop portlets. When the section on themes is finished, you will be able to not only create dynamic themes, but also provide advanced features in your themes, such as color schemes, handle differences between browsers, use Velocity variables and macros, embed portlets in a theme, and style layouts and portlets from a theme.

Moving on from themes and layouts, you will then learn how to use the Liferay Hook Plugin to customize specific features of Liferay Portal. You will customize portal properties, override internal Liferay JSPs, create an event which fires when a user logs in, and more.

The last plugin type covered will be the Ext Plugin. The Ext Plugin is the newest of the Liferay Plugins and is the most powerful method of extending Liferay. The Ext Plugin replaces the Ext Environment and allows you to override any portal behavior that is not covered by the other plugin types. In this section, you will use the Ext Plugins to modify an out-of-the-box portlet configuration and to extend user management in the Control Panel.

At the end of the course, we will take some time to review all of the different approaches to modifying Liferay that we've discussed. We will also review when each of these approaches is appropriate and ways that you can minimize the impact on future upgrades.

You will find when you have completed the course that you are well equipped to efficiently develop on the Liferay platform.

Training Notes:

A Hands-On Approach

Liferay training is guided by the expertise of experienced Liferay trainers. You will benefit from their hands-on approach to enabling you to learn the material effectively and quickly. Through the many exercises interspersed throughout the course, you will learn to perform all of the functions yourself, which maximizes your ability to learn everything. Your trainer will be there to guide you all the way to success.

Prerequisites

Development experience with Java and Servlets.