Liferay Portal 6.2
Enterprise Intranets

Liferay Portal is an enterprise web platform for building business solutions that deliver immediate results and long-term value. It runs on your existing application servers, databases, and operating systems to eliminate new spending on infrastructure. Liferay Portal adheres to open standards for content, portlets, web services, and front-end technologies to reduce development costs.

With Liferay Portal 6.2 Enterprise Intranets, you will understand why you should use Liferay to build your intranet. You will start by installing and setting up the portal, and building a homepage. Then, you will move on to publish blogs and understand how to convert documents in OpenOffice. Finally, the book explains the integration of Liferay with Alfresco 4.0, SSO CAS, and LDAP.

Who this book is written for
This book is for beginners, intermediate, and advanced portal developers who need to create enterprise intranet portals for the business. It will be handy for IT professionals, who know the concepts and the flow about how the portal technology works and need to integrate different open source technologies. It is also useful for the experienced Liferay Portal developers and Liferay architects as it explains the latest and different technologies used in the Liferay Portal.

What you will learn from this book
- Explore the features of Liferay 6.1 and 6.2
- Manage Users, Site, Organization, User Groups, and Roles
- Set up advanced Web Content Management with implementation of workflow
- Explore Liferay Marketplace, Liferay Social Office, Liferay Sync, and Audience Targeting
- Know the working of Liferay server and portal administration, performance tuning, Liferay Connected Services, and Liferay clustering
- Understand the different controls/actions to make the portal work for an enterprise
In this package, you will find:

- The author biography
- A preview chapter from the book, Chapter 1 'Introducing Liferay for Your Intranet'
- A synopsis of the book’s content
- More information on Liferay Portal 6.2 Enterprise Intranets
Navin Agarwal has been working extensively with Liferay for more than 5 years. This includes work on Java and J2EE technologies. He has executed projects using Liferay in various domains (including retail, insurance, networking, and medical), providing solutions for collaboration, document management, and web content management systems. He also has extensive experience in integrating Liferay with Alfresco and various third-party tools.

He started his career as an intern in portal technology with Sun Microsystems, India. Currently, he is working for IEEE as a senior programmer analyst. He is also an expert in Liferay integration with Ad Server OpenX, different search engines, enterprise content (including video, audio, images, documents, and web content), and other technologies such as Activiti, BPM Intalio, business intelligence, LDAP, and SSO.

Besides development and consulting, he has also delivered training programs on Liferay and Alfresco. He has experience in various software development life cycle (SDLC) models and different technologies, including MongoDB and Pentaho BI, and has worked with numerous frameworks, including Spring, Struts, Hibernate, Apache PDFBox, and ICEfaces.

In his free time, he enjoys writing blogs and reading technical articles. You can send your queries, if any, directly to his e-mail ID at navin.agarwalll1@gmail.com. You can even go through his blog at https://navinagarwalmca.wordpress.com/ to learn more about Liferay Portal.
Liferay is one of the leading enterprise open source portals and has been named the leader in Gartner's Magic Quadrant for Horizontal Portals too. Liferay Portal is so flexible that it is in high demand when it comes to enterprise portal solutions.

To develop an intranet portal for an enterprise, Liferay is one of the best open source portal development platforms that has a large-scale graph for the developer to extend any component. Liferay also provides best-in-class support for integration with other applications.

In this book, we have explained easy steps to develop intranet and extranet portals for an organization. You may be a new, experienced, or advanced user of Liferay: this book is organized in such a way that you’ll find useful information to take away and apply it in your day-to-day work to develop portals. If you are a Liferay Portal administrator, you will find this book useful to maintain the portal server and keep it running smoothly.

This book covers Liferay features in detail, including new features of Liferay, such as Liferay Sync, Liferay Marketplace, Recycle Bin, Liferay Connected Services, Audience Targeting, and so on. This will help you to integrate Liferay with other key applications, such as LDAP, SSO, and Alfresco 4.x and above. This book has numerous practical examples that will help you to develop an intranet portal on the fly. Most importantly, after going through each chapter, you will be able to understand and develop an intranet portal on your own.

Integration between different applications, such as LDAP, SSO, and Liferay Social Office, with numerous illustrations, diagrams, clear step-by-step instructions, and practical examples with screenshots are provided.

By reading this book, you will understand Liferay and its advance features. There are numerous Tips and Notes to help you understand the discussed ideas better.
What this book covers

Chapter 1, Introducing Liferay for Your Intranet, provides an introduction to the Liferay Portal 6.2 architecture and framework and also briefly explains Liferay’s out-of-the-box portlets and features.

Chapter 2, Setting Up a Home Page and Navigation Structure for the Intranet, provides the reader with detailed, step-by-step instructions for the installation of the Liferay Portal server. It also explains the navigation structure for the portal page and helps to understand the different controls/actions for making the portal work for an enterprise.

Chapter 3, Bringing in Users, teaches you the creation of users and managing the users in the portal. It explains different terms, such as Organization, Site, User Groups, and Roles, in brief. It also provides the steps to configure portal settings.

Chapter 4, Forums, Categorization, and Asset Publishing, provides a detailed explanation of forums (Message Boards), Categorization, Tags, and Asset Publisher. It takes you through the steps to create and manage forums. It also covers categorization and tagging to help you manage the content in your portal. Finally, it provides step-by-step instructions to configure Asset Publisher.

Chapter 5, Understanding Wikis, Dynamic Data Lists, and Polls, teaches you about the Wiki, Dynamic Data List, and Polls portlets. It helps you with the creation of a wiki page and also allows you to manage the wiki for the portal. It even teaches you how to create a dynamic data list for your departments. Finally, it briefs you how the Polls portlet works and how you can implement it in your intranet portal.

Chapter 6, Blogs, WYSIWYG Editors, and Social Networking, explains how to create and manage blogs in the intranet portal. It also explains the WYSIWYG editor features and helps you to configure a different look and feel for your intranet portal. This chapter also explains the social networking portlets available within Liferay and how you can make use of all the portlets in creating social networking integrations into your intranet portal.

Chapter 7, Understanding Sites, provides the detailed discussion on Site. It helps you understand the site and how you can manage the site with different settings and controls provided for the site administrator. This chapter describes the advanced settings for the site, such as Application Display Templates, Social Activity, Workflow configurations, and Mobile Device families.
Chapter 8, *Document and Media Management*, teaches you about documents and media in detail. Here, you will learn about all the features of documents and media and how you can implement it in your enterprise intranet portal. It briefs you on Liferay Sync, which allows you to sync the Liferay document and media files in your local filesystem and access them through mobile devices too.

Chapter 9, *Web Content Management*, briefs you about the web content management system. This chapter guides you in creating and managing the web content for your intranet portal. Its also covers advanced topics, such as the staging page and publication, which allows you to publish the ready page to live production after you have formatted it in the staging environment.

Chapter 10, *Marketplace, Social Office, and Audience Targeting*, provides a detailed discussion on Liferay Marketplace, Liferay Social Office, and Audience Targeting, which are new features provided by Liferay.

Chapter 11, *Server Administration*, teaches you about server and portal administration, performance tuning, Liferay Connected Services, and Liferay Clustering. This chapter will teach you how to manage the Liferay Portal server and manage multiple instances. You will learn about the custom fields and their creation. It will also take you through Liferay Connected Services, which helps you to monitor the server and keep an eye on any fix update from Liferay through https://lcs.liferay.com. You will also learn how to create clustering for your Liferay server instance. Finally, it will update you on the new features in Liferay 7.
Introducing Liferay for Your Intranet

Liferay is an enterprise application solution. It provides a lot of functionalities, which helps an organization to grow and is a one-solution package as a portal and content management solution. This book will help you to create an organization intranet portal solution with Liferay. In this chapter, we will look at the following topics:

- The complete features you want your organization's intranet solution to have by the time you reach the end of this book
- Reasons why Liferay is an excellent choice to build your intranet
- Where and how Liferay is used besides intranet portals
- Easy integration with other open source tools and applications
- Getting into more technical information about what Liferay is and how it works

So, let's start looking at exactly what kind of site we're going to build in this book.

Liferay Portal makes life easy

Over the course of this book, we're going to build a complete corporate intranet solution using Liferay. Let's discuss some of the features your intranet portal will have.

Hosted discussions

Are you still using e-mail for group discussions? Then, it's time you found a better way! Running group discussions over e-mail clogs up the team's inbox—this means you have to choose your distribution list in advance, and that makes it hard for team members to opt in and out of the discussion.
Using Liferay, we will build a range of discussion boards for discussion within and between teams. The discussions are archived in one place, which means that it's always possible to go back and refer to them later.

On one level, it's just more convenient to move e-mail discussions to a discussion forum designed for the purpose. But once the forum is in place, you will find that a more productive group discussion takes place here than it ever did over e-mail.

**Collaborative documents using wikis**

Your company probably has guideline documents that should be updated regularly but swiftly lose their relevance as practices and procedures change. Even worse, each of your staff will know useful, productive tricks and techniques—but there's probably no easy way to record that knowledge in a way that is easy for others to find and use.

We will see how to host *wikis* within Liferay. A wiki enables anybody to create and edit web pages and link all of those web pages together without requiring any HTML or programming skills. You can put your *guideline* documents into a wiki, and as practices change, your frontline staff can quickly and effortlessly update the guideline documentation.

Wikis can also act as a shared notebook, enabling team members to collaborate and share ideas and findings and work together on documents.

**Team and individual blogs**

Your company probably needs frequent, chronological publications of personal thoughts and web links in the intranet. Your company probably has teams and individuals working on specific projects in order to share files and blogs about a project process and more. By using the Liferay Blog features, you can use HTML text editors to create or update files and blogs and to provide RSS feeds.

Liferay provides an easy way for teams and individuals to share files with the help of blogs. Blogs provide a straightforward blogging solution with features such as RSS, user and guest comments, browsable categories, tags and labels, and a rating system. Liferay's RSS with the subscription feature provides the ability to frequently read RSS feeds from within the portal framework. We will see the detailed features of Liferay Blog in Chapter 6, *Blogs, WYSIWYG Editors, and Social Networking*.

At the same time, *What You See Is What You Get* (WYSIWYG) editors provide the ability to edit web content, including the blogs' content. Less technical people can use the WYSIWYG editor instead of sifting through complex code.
Shared calendars
Many companies require calendar information and share the calendar among users from different departments.

We will see how to share a calendar within Liferay. The shared calendar can satisfy the basic business requirements incorporated into a featured business intranet, such as scheduling meetings, sending meeting invitations, checking for attendees' availability, and so on. Therefore, you can provide an environment for users to manage events and share calendars. We will see the details of calendar features in future chapters.

Document management – CMS
When there is a need for document sharing and document management, Liferay’s Documents and Media library helps you with lots of features.

The Documents and Media portlet allows you to add folders and subfolders for documents and media files, and also allows users to publish documents. It serves as a repository for all types of files and makes Content management systems (CMSes) available for intranets. The Documents and Media library portlet is equipped with customizable folders and acts as a web-based solution to share documents and media files among all your team members—just as a shared drive would. All the intranet users will be able to access the files from anywhere, and the content is accessible only by those authorized by administrators. All the files are secured by the permission layer by the administrator.

Web content management – WCM
Your company may have a lot of images and documents, and you may need to manage all these images and documents as well. Therefore, you require the ability to manage a lot of web content and then publish web content in intranets.

We will see how to manage web content and how to publish web content within Liferay. Liferay Journal (Web Content) not only provides high availability to publish, manage, and maintain web content and documents, but it also separates content from the layout. Liferay WCM allows us to create, edit, and publish web content (articles). It also allows quick changes in the preview of the web content by changing the layout. It has built-in functionality, such as workflow, search, article versioning, scheduling, and metadata.
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Personalization and internalization
All users can get a personal space that can be either made public (published as a website with a unique, friendly URL) or kept private. You can also customize how the space looks, what tools and applications are included, what goes into Documents and Media, and who can view and access all of this content.

In addition, Liferay supports multiple languages, where you can select your own language. Multilingual organizations get out-of-the-box support for up to 45 languages. Users can toggle among different language settings with just one click and produce/publish multilingual documents and web content. Users can make use of the internalization feature to define the specific site in a localized language.

Workflow, staging, scheduling, and publishing
You can use a workflow to manage definitions, instances, and predetermined sequences of connected steps. Workflow can be used for web content management, assets, and so on. Liferay's built-in workflow engine is called Kaleo. It allows users to set up the review and publishing process on the web content article of any document that needs to end up on the live site. Liferay 6.2 integrates with the powerful features of the workflow and data capabilities of dynamic data lists in Kaleo Forms; it's only available in Liferay Enterprise Edition.

Staging environments are integrated with Liferay's workflow engine. To have a review process for staged pages, you need to make sure you have a workflow engine configured and you have a staging setup in the workflow. We will see how we can achieve the staging environment in Chapter 9, Web Content Management.

As a content creator, you can update what you've created and publish it in a staging workflow. Other users can then review and modify it. Moreover, content editors can make a decision on whether to publish web content from staging to live, that is, you can easily create and manage everything from a simple article of text and images to fully functional websites in staging and then publish them live.

Before going live, you can schedule web content as well. For instance, you can publish web content immediately or schedule it for publishing on a specific date.
Social networks and Social Office

Liferay Portal supports social networks—you can easily manage your Google Plus, Facebook, MySpace, Twitter, and other social network accounts in Liferay. In addition, you can manage your instant messenger accounts, such as AIM, ICQ, Jabber, MSN, Skype, YM, and so on smoothly from inside Liferay.

Liferay Social Office gives us a social collaboration on top of the portal—a fully virtual workspace that streamlines communication and builds up group cohesion. It provides holistic enhancement to the way you and your colleagues work together. All components in Social Office are tied together seamlessly, getting everyone on the same page by sharing the same look and feel. More importantly, the dynamic activity tracking gives us a bird’s-eye view of who has been doing what and when within each individual site. Using Liferay Social Office, you can enhance your existing personal workflow with social tools, keep your team up to date, and turn collective knowledge into collective action. Note that Liferay 6.2 supports the Liferay Social Office 3.0 current version.

Liferay Sync and Marketplace

Liferay Sync is Liferay’s newest product, designed to make file sharing as easy as a simple drag and drop! Liferay Sync is an add-on product for Liferay 6.1 CE, EE, and later versions, which makes it a more raw boost product and enables the end user to publish and access documents and files from multiple environments and devices, including Windows and MacOS systems, and iOS-based mobile platforms. Liferay Sync is one of the best features, and it is fully integrated into the Liferay platform. We will be go more in-depth in later chapters.

Liferay 6.1 introduced the new concept of the marketplace, which leverages the developers to develop any components or functionality and release and share it with other users. It’s a user-friendly and one-stop place to share apps. Liferay Marketplace provides the portal product with add-on features with a new hub to share, browse, and download Liferay-compatible applications.

In Liferay 6.2, Marketplace comes under App Manager, where all the app-related controls can be possible. You will see this in more detail in the upcoming chapters.
More features

The intranet also arranges staff members into teams and sites, provides a way of real-time IM and chatting, and gives each user an appropriate level of access. This means that they can get all the information they need and edit and add content as necessary but won't be able to mess with sensitive information that they have no reason to see.

In particular, the portal provides an integrating framework so that you can integrate external applications easily. For example, you can integrate external applications with the portal, such as Alfresco, OpenX, LDAP, SSO CAS, Orbeon Forms, Konakart, PayPal, Solr, and so on.

In a word, the portal offers compelling benefits to today's enterprises—reduced operational costs, improved customer satisfaction, and streamlined business processes.

Everything in one place

All of these features are useful on their own. However, it gets better when you consider that all of these features will be combined into one easy-to-use searchable portal.

A user of the intranet, for example, can search for a topic—let's say financial report—and find the following in one go:

- Any group discussions about financial reports
- Blog entries within the intranet concerning financial reports
- Documents and files—perhaps the financial reports themselves
- Wiki entries with guidelines on preparing financial reports
- Calendar entries for meetings to discuss the financial report

Of course, users can also restrict their search to just one area if they already know exactly what they are looking for.

Liferay provides other features, such as tagging, in order to make it even easier to organize information across the whole intranet. We will do all of this and more over the course of the book.
Chapter 1

Introducing Palm Tree Publications

In this book, we are going to build an intranet for a fictional company as an example, focusing on how to install, configure, and integrate it with other applications and also implement portals and plugins (portlet, themes, layout templates, hooks, and webs) within Liferay. By applying the instructions to your own business, you will be able to build an intranet to meet your own company’s needs.

"Palm Tree Publications" needs an intranet of its own, which we will call bookpub.com. The enterprise’s global headquarters are in the United States. It has several departments—editorial, website, engineering, marketing, executive, and human resources.

Each department has staff in the U.S., Germany, and India or in all three places.

The intranet site provides a site called "Book Street and Book Workshop" consisting of users who have an interest in reading books. The enterprise needs to integrate collaboration tools, such as wikis, discussion forums, blogs, instant messaging, mail, RSS, shared calendars, tagging, and so on.

Palm Tree Publications has more advanced needs too: a workflow to edit, approve, and publish books. Furthermore, the enterprise has a lot of content, such as books stored and managed alfresco currently.

In order to build the intranet site, the following functionality should be considered:

- Installing the portal, experiencing the portal and portlets, and customizing the portal and personal web pages
- Bringing the features of enabling document sharing, calendar sharing, and other collaboration within a business to the users of the portal
- Discussion forums—employees should be able to discuss book ideas and proposals
- Wikis—keeping track of information about editorial guidance and other resources that require frequent editing
- Dissemination of information via blogs—small teams working on specific projects share files and blogs about a project process
- Sharing a calendar among employees
- Web content management creation by the content author and getting approved by the publisher
- Document repository—using effective content management systems (CMSes), a natural fit for a portal for secure access, permissions, and distinct roles (such as writers, editors, designers, administrators, and so on)
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- Collaborative chat and instant messaging, social network, Social Office, and knowledge management tools
- Managing a site named Book Street and Book Workshop that consists of users who have the same interest in reading books as staging, scheduling, and publishing web content related to books
- Federated search for discussion forum entries, blog posts, wiki articles, users in the directory, and content in both the Document and Media libraries; search by tags
- Integrating back-of-the-house software applications, such as Alfresco, Orbeon Forms, the Drools rule server, Jasper Server, and BI/Reporting Pentaho; strong authentication and authorization with LDAP; and single authentication to access various company sites besides the intranet site

The enterprise can have the following groups of people:

- **Admin**: This group installs systems, manages membership, users, user groups, organizations, roles and permissions, security on resources, workflow, servers and instances, and integrates with third-party systems
- **Executives**: Executive management handles approvals
- **Marketing**: This group handles websites, company brochures, marketing campaigns, projects, and digital assets
- **Sales**: This group makes presentations, contracts, documents, and reports
- **Website editors**: This group manages pages of the intranet—writes articles, reviews articles, designs the layout of articles, and publishes articles
- **Book editors**: This group writes, reviews, and publishes books and approves and rejects the publishing of books
- **Human resources**: This group manages corporate policy documents
- **Finance**: This group manages accounts documents, scanned invoices and checks accounts
- **Corporate communications**: This group manages external public relations, internal news releases, and syndication
- **Engineering**: This group sets up the development environment and collaborates on engineering projects and presentation templates
Introducing Liferay Portal's architecture and framework

Liferay Portal's architecture supports high availability for mission-critical applications using clustering and the fully distributed cache and replication support across multiple servers. The following diagram has been taken from the Liferay forum written by Jorge Ferrer. This diagram depicts the various architectural layers and functionalities of portlets:

![Diagram of Liferay architecture](https://www.liferay.com/web/jorge.ferrer/blog/-/blogs/liferay-s-architecture-the-beginning-of-a-blog-series site blog)

Figure 1.1: The Liferay architecture

The preceding image was taken from [https://www.liferay.com/web/jorge.ferrer/blog/-/blogs/liferay-s-architecture-the-beginning-of-a-blog-series site blog].
The Liferay Portal architecture is designed in such a way that it provides tons of features at one place:

- **Frontend layer**: This layer is the end user’s interface
- **Service layer**: This contains the great majority of the business logic for the portal platform and all of the portlets included out of the box
- **Persistence layer**: Liferay relies on Hibernate to do most of its database access
- **Web services API layer**: This handles web services, such as JSON and SOAP

In Liferay, the service layer, persistence layer, and web services API layer are built automatically by that wonderful tool called **Service Builder**.

Service Builder is the tool that glues together all of Liferay's layers and that hides the complexities of using Spring or Hibernate under the hood.

**Service-oriented architecture**

Liferay Portal uses **service-oriented architecture (SOA)** design principles throughout and provides the tools and framework to extend SOA to other enterprise applications. Under the Liferay enterprise architecture, not only can the users access the portal from traditional and wireless devices, but developers can also access it from the exposed APIs via REST, SOAP, RMI, XML-RPC, XML, JSON, Hessian, and Burlap.

Liferay Portal is designed to deploy portlets that adhere to the portlet API compliant with both JSR-168 and JSR-286. A set of useful portlets are bundled with the portal, including Documents and Media, Calendar, Message Boards, Blogs, Wikis, and so on. They can be used as examples to add custom portlets. In a word, the key features of Liferay include using SOA design principles throughout, such as reliable security, integrating the portal with SSO and LDAP, multitier and limitless clustering, high availability, caching pages, dynamic virtual hosting, and so on.

**Understanding Enterprise Service Bus**

**Enterprise Service Bus (ESB)** is a central connection manager that allows applications and services to be added quickly to an enterprise infrastructure. When an application needs to be replaced, it can easily be disconnected from the bus at a single point. Liferay Portal uses Mule or ServiceMix as ESB.
Through ESB, the portal can integrate with SharePoint, BPM (such as the jBPM workflow engine and Intalio | BPMS engine), BI Xforms reporting, JCR repository, and so on. It supports JSR 170 for content management systems with the integration of JCR repositories, such as Jackrabbit. It also uses Hibernate and JDBC to connect to any database. Furthermore, it supports an event system with synchronous and asynchronous messaging and a lightweight message bus.

Liferay Portal uses the Spring framework for its business and data services layers. It also uses the Spring framework for its transaction management. Based on service interfaces, portal-impl is implemented and exposed only for internal usage—for example, they are used for the extension environment. portal-kernel and portal-service are provided for external usage (or for internal usage)—for example, they are used for the Plugins SDK environment. Custom portlets, both JSR-168 and JSR-286, and web services can be built based on portal-kernel and portal-service.

In addition, the Web 2.0 Mail portlet and the Web 2.0 Chat portlet are supported as well. More interestingly, scheduled staging and remote staging and publishing serve as a foundation through the tunnel web for web content management and publishing.

Liferay Portal supports web services to make it easy for different applications in an enterprise to communicate with each other. Java, .NET, and proprietary applications can work together easily because web services use XML standards. It also supports REST-style JSON web services for lightweight, maintainable code and supports AJAX-based user interfaces.

Liferay Portal uses industry-standard, government-grade encryption technologies, including advanced algorithms, such as DES, MD5, and RSA. Liferay was benchmarked as one of the most secure portal platforms using LogicLibrary’s Logiscan suite. Liferay offers customizable single sign-on (SSO) that integrates into Yale CAS, JAAS, LDAP, NTLM, CA Siteminder, Novell Identity Manager, OpenSSO, and more. Open ID, OpenAuth, Yale CAS, Siteminder, and OpenAM integration are offered by it out of the box.

In short, Liferay Portal uses ESB in general with an abstraction layer on top of an enterprise messaging system. It allows integration architects to exploit the value of messaging systems, such as reporting, e-commerce, and advertisements.
Understanding the advantages of using Liferay to build an intranet

Of course, there are lots of ways to build a company intranet. What makes Liferay such a good choice to create an intranet portal?

It has got the features we need

All of the features we outlined for our intranet come built into Liferay: discussions, wikis, calendars, blogs, and so on are part of what Liferay is designed to do.

It is also designed to tie all of these features together into one searchable portal, so we won't be dealing with lots of separate components when we build and use our intranet. Every part will work together with others.

Easy to set up and use

Liferay has an intuitive interface that uses icons, clear labels, and drag and drop to make it easy to configure and use the intranet.

Setting up the intranet will require a bit more work than using it, of course. However, you will be pleasantly surprised by how simple it is—no programming is required to get your intranet up and running.

Free and open source

How much does Liferay cost? Nothing! It's a free, open source tool.

Here, being free means that you can go to Liferay's website and download it without paying anything. You can then go ahead and install it and use it. Liferay comes with an enterprise edition too, for which users need to pay. In addition, Liferay provides full support and access to additional enterprise edition plugins/applications.

Liferay makes its money by providing additional services, including training. However, the standard use of Liferay is completely free. Now you probably won't have to pay another penny to get your intranet working. Being open source means that the program code that makes Liferay work is available to anybody to look at and change. Even if you're not a programmer, this is still good for you:

- If you need Liferay to do something new, then you can hire a programmer to modify Liferay to do it.
- There are lots of developers studying the source code, looking for ways to make it better. Lots of improvements get incorporated into Liferay's main code.
- Developers are always working to create plugins—programs that work together with Liferay to add new features.
Probably, for now, the big deal here is that it doesn't cost any money. However, as you use Liferay more, you will come to understand the other benefits of open source software for you.

**Grows with you**

Liferay is designed in a way that means it can work with thousands and thousands of users at once. No matter how big your business is or how much it grows, Liferay will still work and handle all of the information you throw at it.

It also has features especially suited to large, international businesses. Are you opening offices in non-English speaking countries? No problem! Liferay has internationalization features tailored to many of the world's popular languages.

**Works with other tools**

Liferay is designed to work with other software tools—the ones that you're already using and the ones that you might use in the future—for instance:

- You can hook up Liferay to your LDAP directory server and SSO so that user details and login credentials are added to Liferay automatically
- Liferay can work with Alfresco—a popular and powerful Enterprise CMS (used to provide extremely advanced document management capabilities, which are far beyond what Liferay does on its own)

**Based on "standards"**

This is a more technical benefit; however, it is a very useful one if you ever want to use Liferay in a more specialized way.

Liferay is based on standard technologies that are popular with developers and other IT experts and that confer the following benefits on users:

- **Built using Java**: Java is a popular programming language that can run on just about any computer. There are millions of Java programmers in the world, so it won't be too hard to find developers who can customize Liferay.
- **Based on tried and tested components**: With any tool, there's a danger of bugs. Liferay uses lots of well-known, widely tested components to minimize the likelihood of bugs creeping in. If you are interested, here are some of the well-known components and technologies Liferay uses—Apache ServiceMix, Mule, ehcache, Hibernate, ICEfaces, Java J2EE/JEE, jBPM, Activiti, JGroups, Alloy UI, Lucene, PHP, Ruby, Seam, Spring and AOP, Struts and Tiles, Tapestry, Velocity, and FreeMarker.
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• **Uses standard ways to communicate with other software:** There are various standards established to share data between pieces of software. Liferay uses these so that you can easily get information from Liferay into other systems. The standards implemented by Liferay include AJAX, iCalendar and Microformat, JSR-168, JSR-127, JSR-170, JSR-286 (Portlet 2.0), JSR-314 (JSF 2.0), OpenSearch, the Open platform with support for web services, including JSON, Hessian, Burlap, REST, RMI, and WSRP, WebDAV, and CalDAV.

• **Makes publication and collaboration tools Web Content Accessibility Guidelines 2.0 (WCAG 2.0) compliant:** The new W3C recommendation is to make web content accessible to a wide range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity, and combinations of these. For example, the portal integrates CKEditor-standards support, such as W3C (WAI-AA and WCAG), 508 (Section 508).

• **Alloy UI:** The Liferay UI supports HTML 5, CSS 3, and Yahoo! User Interface Library 3 (YUI 3).

• **Supports Apache Ant 1.8 and Maven 2:** Liferay Portal can be built through Apache Ant by default, where you can build services; clean, compile, and build JavaScript CMD; build language native to ASCII, deploy, fast deploy; and so on. Moreover, Liferay supports Maven 2 SDK, providing Community Edition (CE) releases through public maven repositories as well as Enterprise Edition (EE) customers to install maven artifacts in their local maven repository.

• **Bootstrap:** Liferay 6.2 provides support for Twitter Bootstrap out of the box. With its fully responsive UI, the benefit of bootstrap is that it will support any device to render the content. Even content authors can use bootstrap markup and styles to make the content nicer.

Many of these standards are things that you will never need to know much about, so don't worry if you've never heard of them. Liferay is better for using them, but mostly, you won't even know they are there.

**Other advantages of Liferay**

Liferay isn't just for intranets! Users and developers are building all kinds of different websites and systems based on Liferay.
Corporate extranets
An intranet is great for collaboration and information sharing within a company. An extranet extends this facility to suppliers and customers, who usually log in over the Internet.

In many ways, this is similar to an intranet—however, there are a few technical differences. The main difference is that you create user accounts for people who are not part of your company.

Collaborative websites
Collaborative websites not only provide a secure and administrated framework, but they also empower users with collaborative tools, such as blogs, instant e-mail, message boards, instant messaging, shared calendars, and so on. Moreover, they encourage users to use other tools, such as tag administration, fine-grained permissions, delegable administrator privileges, enterprise taxonomy, and ad hoc user groups. By means of these tools, as an administrator, you can ultimately control what people can and cannot do in Liferay.

In many ways, this is similar to an intranet too; however, there are a few technical differences. The main difference is that you use collaborative tools simply, such as blogs, instant e-mail, message boards, instant messaging, shared calendars, and so on.

Content management and web publishing
You can also use Liferay to run your public company website with content management and web publishing.

Content management and web publishing are useful features in websites. It is a fact that the volume of digital content for any organization is increasing on a daily basis. Therefore, an effective CMS is a vital part of any organization. Meanwhile, document management is also useful and more effective when repositories have to be assigned to different departments and groups within the organization. Content management and document management are effective in Liferay. Moreover, when managing and publishing content, we may have to answer many questions, such as "who should be able to update and delete a document from the system?"

Fortunately, Liferay's security and permissions model can satisfy the need for secure access and permissions and distinct roles (for example, writer, editor, designer, and administrator). Furthermore, Liferay integrates with the workflow engine. Thus, users can follow a flow to edit, approve, and publish content in the website.

Content management and web publishing are similar to an intranet; however, there are a few technical differences. The main difference is that you can manage content and publish web content smoothly.
Infrastructure portals
Infrastructure portals integrate all possible functions, as we stated previously. This covers collaboration and information sharing within a company in the form of collaborative tools, content management, and web publishing. In infrastructure portals, users can create a unified interface to work with content, regardless of source via content interaction APIs. Furthermore, using the same API and the same interface as that of the built-in CMS, users can also manage content and publish web content from third-party systems, such as Alfresco, Vignette, Magnolia, FatWire, Microsoft SharePoint, and so on.

Infrastructure portals are similar to an intranet; there are a few technical differences though. The main difference is that you can use collaborative tools, manage content, publish web content, and integrate other systems in one place.

Why do you need a portal? The main reason is that a portal can serve as a framework to aggregate content and applications. A portal normally provides a secure and manageable framework where users can easily make new and existing enterprise applications available. In order to build an infrastructure portal smoothly, Liferay Portal provides an SOA-based framework to integrate third-party systems.

Out-of-the-box portlets and features
Liferay provides out-of-the-box (OOTB) portlets that have key features and can be used in the enterprise intranet very efficiently. These portlets are very scalable and powerful and provide the developer with the tools to customize it very easily.

Let's see some of the most frequently used portlets in Liferay Portal.

Content management
Content management is a common feature in any web-based portal or website:

- The Web Content portlet has the features of full web publishing, office integration, and the asset library, which contains documents, images, and videos. This portlet also has the structure and templates that help with the designing of the web content's look and feel. Structure can be designed with the help of a visual editor with drag and drop. It has the integrated help feature with tooltips to name the attributes of the fields. You will see more details in Chapter 9, Web Content Management.
• The **Asset Publisher** portlet provides you with the feature to select any type of content/asset, such as wiki pages, web content, calendar events, message board messages, documents, media documents, and many more. It also allows us to use filter on them by types, categories, tags, and sources. The display settings provide configurable settings, which helps the content to be displayed to the end users perfectly. In *Chapter 4, Forums, Categorization, and Asset Publishing*, you will see this in more detail.

• The **Document and Media** portlet is one of the most usable portlets to store any type of document. It allows you to store and manage your documents. It allows you to manage Liferay documents from your own machine's filesystem with the help of WebDAV integration. It has lots of new, built-in features, such as the inline document preview, image preview, and video player. Document metadata is displayed in document details, which makes it easier for you to review the metadata of the document. Also, Document and Media has features named **checkin** and **checkout** that helps editing the document in a group very easily. The Document and Media portlet has the multi-repository integration feature, which allows you to configure or mount any other repository very easily, such as SharePoint, Documentum, and Alfresco, utilizing the CMIS standard. In *Chapter 8, Document and Media Management*, you will come to know how to achieve such features in your corporate intranet.

**Collaboration**

Collaboration features are generally ways in which users communicate with each other, such as the ones shown in the following list:

• The **Dynamic data list** portlet provides you with the facility of not writing a single line of code to create the form or data list. Say, for example, your corporate intranet needs the job posting done on a daily basis by the HR administrator. The administrator needs to develop the custom portlet to fulfill that requirement. Now, the dynamic data list portlet will allow the administrator to create a form for job posting. It's very easy to create and display new data types. You will see more on this in *Chapter 5, Understanding Wikis, Dynamic Data Lists, and Polls*.

• The **Blog** portlet is one of the best features of Liferay. Blog portlets have two other related portlets, namely Recent Bloggers and Blogs Aggregator. The blog portlet provides the best possible ways for chronological publications of personal thoughts and web links in the intranet. Blog portlets can be placed for users of different sites/departments under the respective site//department page.
• The **Calendar** portlet provides the feature to create the event and schedule the event. It has many features that help the users in viewing the meeting schedule.

• The **Message Board** portlet is a full-featured forum solution with threaded views, categories, RSS capability, avatars, file attachments, previews, dynamic lists of recent posts, and forum statistics. Message Board portlets work with the fine-grained permissions and role-based access control model to give detailed levels of control to administrators and users. You will find more details about this in *Chapter 4, Forums, Categorization, and Asset Publishing*; you will see how to work on message boards.

• The **Wiki** portlet, like the Message Boards portlet, provides a straightforward wiki solution for both intranet and extranet portals that provides knowledge management among the users. It has all of the features you would expect in a state-of-the-art wiki. Again, it has the features of a file attachment preview, publishing the content, and versioning, and works with a fine-grained permission and role-based access control model. This again takes all the features of the Liferay platform. In *Chapter 5, Understanding Wikis, Dynamic Data Lists, and Polls*, you will find more about the Wiki portlet.

• The **Social Activity** portlet allows you to tweak the measurements used to calculate user involvement within a site. The contribution and participation values determine the reward value of an action. It uses the blog entry, wiki, and message board points to calculate the user involvement in the site.

• The **Marketplace** portlet is placed inside the control panel. It's a hub for the applications provided by Liferay and other partners. You can find that many applications are free, and for certain applications, you need to pay an amount. It's more like an app store. This feature was introduced in Liferay Version 6.1. In *Chapter 10, Marketplace, Social Office, and Audience Targeting*, it has been described in detail.

In the Liferay 6.2 control panel, under the **Apps | Store** link section, you will see apps that are stored in the Marketplace portlet. Liferay 6.2 comes with a new control panel that is very easy to manage for the portal's Admin users. We will discuss this in more detail in *Chapter 10, Marketplace, Social Office, and Audience Targeting*. **Liferay Sync** is not a portlet; it's a new feature of Liferay that allows you to synchronize documents of Liferay Document and Media with your local system. Liferay provide the **Liferay Sync** application, which has to be installed in your local system or mobile device. In *Chapter 8, Document and Media Management*, you can see detailed examples of Liferay Sync.
News

**RSS** portlets provide RSS feeds. RSS portlets are used for the publishers by letting them syndicate content automatically. They benefit readers who want to subscribe to timely updates from their favorite websites or to aggregate feeds from many sites into one place. A Liferay RSS portlet is fully customizable, and it allows you to set the URL from which site you would like to get feeds.

Social

**Activities** portlets display portal-wide user activity, such as posting on message boards, creating wikis, and adding documents to Documents and Media. There are more portlets for social categories, such as **User Statistics** portlets, **Group Statistics** portlets, and **Requests** portlets. All these portlets are used for the social media.

Tools

The **Search** portlet provides faceted search features. When a search is performed, facet information will appear based on the results of the search. The number of each asset type and the most frequently occurring tags and categories as well as their frequency will all appear in the left-hand side column of the portlet. It searches through Bookmarks, Blogs Entries, Web Content Articles, Document Library Files, Users, Message Board, and Wiki.

Finding more information on Liferay

In this chapter, we looked at what Liferay can do for your corporate intranet and briefly saw why it's a good choice.

If you want more background information on Liferay, the best place to start is the Liferay corporate website ([http://www.liferay.com](http://www.liferay.com)) itself. You can find the latest news and events, various training programs offered worldwide, presentations, demonstrations, and hosted trials. More interestingly, Liferay eats its own dog food; corporate websites within forums (called message boards), blogs, and wikis are built by Liferay using its own products. It is a real demo of Liferay Portal's software.

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The Liferay website's wiki (http://www.liferay.com/web/guest/community/wiki) contains documentation, including a tutorial, user guide, developer guide, administrator guide, roadmap, and so on.


If you would like to file a bug or know more about the fixes in a specific release, then you must visit the bug-tracking system at http://issues.liferay.com/.

This book will tell you more about a new trend in the portal world with respect to user needs, functionalities, and what we can achieve with the Liferay Portal 6.2 features.

Summary

In this chapter, we looked at what Liferay can offer your intranet and what we should consider while designing the company's enterprise site. We saw that our final intranet will provide shared documents, discussions, collaborative wikis, and more in a single, searchable portal. Well, Liferay is a great choice for an intranet because it provides so many features and is easy to use, free and open source, extensible, and well-integrated with other tools and standards. We also saw the other kinds of sites Liferay is good for, such as extranets, collaborative websites, content management, web publishing, and infrastructure portals. For the best example of an intranet and extranet, you can visit www.liferay.com. It will provide you with more background information.

In the next chapter, we're going to install Liferay and continue building the intranet.
Where to buy this book

You can buy Liferay Portal 6.2 Enterprise Intranets from the Packt Publishing website. Alternatively, you can buy the book from Amazon, BN.com, Computer Manuals and most internet book retailers.

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