Liferay Portal 6.1
Enterprise Edition
PRODUCT GUIDE

#### **LIFERAY EE PRODUCT GUIDE**

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Liferay Enterprise Edition provides the highest quality and support for Enterprise deployments.

## Liferay Portal Enterprise Edition

Liferay, Inc. is the provider of leading enterprise open source portal and collaboration software products, recognized by Gartner in the Magic Quadrant and used by Fortune 2000 companies worldwide, including Allianz, AutoZone, Cisco Systems, Lufthansa Flight Training, Sesame Street, The French Ministry of Defense, and the United Nations. Liferay, Inc. offers professional services, technical support, custom development and professional training to ensure successful deployment in the most demanding IT environments.

Enterprises are increasingly looking to implement open source solutions for several reasons, such as:

- · to capture significant cost savings,
- to reduce the risk of lock-in to a single proprietary vendor
- to implement lighter weight or defacto-standard features found in open source
- to leverage a larger knowledge base and employee pool found in an open source community
- to support the commoditization of common software solutions (e.g., if word processing has been around for 25 years, shouldn't it be free and open source?)

However, how to fully integrate open source solutions into an IT Software Lifecycle program is often an unknown. How do you know when to plan for patch updates? How do you find out about security errors? How do you patch a system and do you need to hire experts that know how to fix bugs? What do you do if those experts leave your company? While proprietary software usually comes with a specific program providing customers with a well-defined method for IT, many open source projects target developers and IT departments and have difficulty maintaining solutions over an extended time period (e.g., if today's team knows how to patch, fix, manage them, what happens when that team leaves?).

Liferay has developed Liferay Portal Enterprise Edition (EE) to provide the benefits of open source along with a strong program for IT Lifecycle Management. Liferay Portal EE offers customers three key areas of value:



## **Enterprise Edition Portal**

- Web Portal Framework
- Web Content Management
- Social Collaboration



## **Enterprise Capabilities**

- For Power Users
- For Systems Administration
- For Enterprise Architectural Integration



## Enterprise Support and Services

- Web Based and Live Support
- Certified Architectural Guidance
- Integration, Security, Lifecycle Support Services

Liferay CE is built by and for the community.

Liferay Portal is released in an Enterprise Edition and a Community Edition (CE is built by and for the Liferay Community). These additional areas of customer value and testing within Liferay Portal EE were determined after analysis of thousands of Liferay installations as to what is most critical when deploying Liferay into a full production environment. The Enterprise-only aspects are grouped into three classes of features: End User (or productivity), Systems Administration, and Infrastructure (those required to integrate into a heterogeneous environment).

Before release, Liferay Portal EE is run through targeted security, performance, scalability and reliability testing and is extensively reworked to meet the requirements for mission critical needs, (e.g., testing to 1 million blog instances and millions of daily page views). While Liferay Portal CE includes the initial implementation of features, many of these features are recoded when developing Liferay Portal EE to ensure the feature is written most efficiently and provides the most system-wide reliability. Examples include the development of a new feature with an external API interface. While the initial feature is complete and while the API will remain the same between CE and EE releases, the code will be optimized for Liferay Portal EE so that it supports common API formats or accessibility requirements.

The consultative, training and support services provided by Liferay are designed to match or beat the services provided by the leading software vendors. As an example, the Liferay Enterprise Support Application (LESA – described below), is a powerful web-based application that allows customers to open, track, find, and escalate issues with the Liferay support and engineering team. Phone support provides an additional method for direct service to customer questions. Additionally, Liferay Portal Certifies each system integration partner in Liferay's extensive ecosystem. These certifications require partners to meet a specific level of training and quality demanded by today's enterprises.

Liferay Portal Enterprise Edition is available in the service levels shown below:



Liferay EE Gold provides up to Mission Critical support.

Customers choose Liferay Gold for implementations up to and including mission critical applications. The Gold service level allows customers access to the Liferay Portal Enterprise Edition code base (and all EE features described below) as well as a robust support offering from Liferay. This includes access to all service packs, hot fixes, notifications of security alerts, phone and web based support with response times as shown above.

Customers choose Platinum when placing Liferay into high demand critical deployments requiring very high reliability. This includes a 1-hour response time as well as 24x7 support worldwide. Platinum subscriptions also include 1 seat at an in-person Portal Administration training class as well as a web session on the best deployment practices.

Limited subscriptions allow customers access to the Liferay Portal EE code base and access to Liferay Service Packs when made available. Customers often use Limited subscriptions for smaller initial project phase deployments.

## Why Use Liferay Portal EE

Customers select Liferay Portal Enterprise Edition when they are looking for the life-cycle features and management capabilities required for a production deployment of Liferay. This includes but is not limited to the following categories:

- Bug report / consultation / fix support
- Security alerts, patches
- Life-cycle support
- Features
- · Ecosystem services and products

Liferay's enterprise support team provides multiple areas to ensure a successful web project. These include both web-based and phone support for consultation and bug submission. Liferay provides both individual issue fixes as well as consolidated patches that administrators can calculate into their system support process. Liferay also provides a strict security support process employing security measures to identify and isolate security issues found within the product. Once the issues are identified, the Liferay Security Fix Process engages to provide rapid notification to Liferay Portal EE customers, bug resolution, testing and evaluation, and transmission of the bug fix to Liferay Portal EE customers. It is impossible to ensure the security of Liferay Portal CE customers as they are not registered within any Liferay system, and therefore Liferay Portal EE customers alone are notified and provided a fix. In these ways, Liferay ensures the safety of our customers and the community.

Liferay is developed along a single trunk from which a branch is made for each version. These versions are initially released as Liferay Portal CE, which is then finally processed to become Liferay Portal EE. Only the Liferay Portal EE branch is supported. Those who implement Liferay Portal EE are then able to easily upgrade to future Liferay Portal EE versions. Liferay Portal EE also simplifies the upgrade to future versions with certified upgrade processes and tools. Leveraging Liferay Portal CE can be considered to be equivalent to custom code, as any modifications are not supported forward within the trunk. Many enterprises do not implement Liferay Portal CE into production as with other

custom codes; the enterprise then becomes responsible for all future maintenance

(even when support is purchased from a non-Liferay systems integrator).

Liferay's Lifecycle Insurance process is very important for Liferay Portal EE customers.

Liferay EE allows seamless upgrade to future EE branches.



#### **LIFERAY EE PRODUCT GUIDE**

Liferay Portal EE also includes specific features required for enterprise deployments.

These features are categorized below into three categories: End-user (or Power User),

Systems Administrator and Integration. When used in production, Liferay Portal EE

provides the additional features required to operate within a heterogeneous environment.

Liferay also provides a rich ecosystem of products and services that are focused on Liferay Portal EE. These include solutions that only work on Liferay Portal EE as well as training and systems integration partners who are certified for the installation, customization and maintenance of Liferay. Building on a common platform allows each to provide the best services to Liferay customers.

Customers leverage these aspects to ensure a successful deployment and long-term project life cycle. The following pages include additional information of features and services available within Liferay Portal EE.



## Liferay Portal Enterprise Edition Exclusive Features

#### **LIFERAY PORTAL 6.1 ENTERPRISE EDITION**

Several Liferay Portal EE features are available as *Applications* (additional features downloaded separately), *Connectors* (to external systems) or *Editions* (bundled software). The following list describes the additional features found in Liferay Portal 6.1 EE, which are not available in Liferay Portal 6.1 CE.

#### 1. Power User and Productivity Features

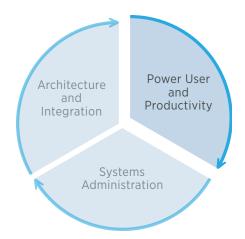
- a. Liferay Sync for Liferay Portal 6.1 EE
  - i. Provides offline synchronization for Liferay Portal Document Repository.
    - 1. Access to documents from iOS/Android/Win/OSX/Linux as native folders.
  - ii. ii. Liferay Sync supports both CE and EE. However, when used with Liferay Portal6.1 EE, it allows users to connect to multiple sites. Liferay Sync will only connect to a single site when used with Liferay Portal 6.1 CE.

#### b. Kaleo Forms

- Allows users to build web forms and to define and associate workflow processing to those forms.
- ii. Designed for power users. Power user will first build a web form, then define a workflow process and last add the form to a web page or community site. Users enter data into the form, hit submit, and data is submitted through a workflow process and aggregated into a single list.
  - 1. Example use cases:
    - a. Team collaboration, (e.g., where should we hold our next team meeting?)
    - b. Business process, (e.g., submit request for vacation time off)
    - c. Customer/partner engagement, (e.g., submit work order)
- iii. Includes Kaleo Form Designer and Kaleo Workflow Designer, which allow users to define a web form and workflow process from a graphical user interface.
- iv. Supports the Kaleo Workflow Engine (engine also available in CE).
- v. Provides workflow enabled, multi-step form submission capabilities for the end user.
  - 1. Kaleo Form Designer allows the design of web forms for data input, which allow forms to be designed at each stage in a workflow process.
  - 2. Kaleo Workflow Designer allows for full design and creation of a workflow process running on the Kaleo Workflow Engine.
- vi. Leverages Dynamic Data Lists (available in CE) to store data from Kaleo Forms and processthrough the Kaleo Workflow Engine.

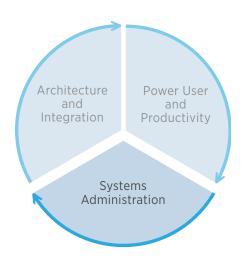
#### c. Liferay Rules Engine Connector

i. Provides integration with Drools rules engine and ensures all Liferay objects
 (e.g. web content, documents, user, tags, categories) are usable inside of rules.



Liferay EE additional features: Applications, Connectors and Editions



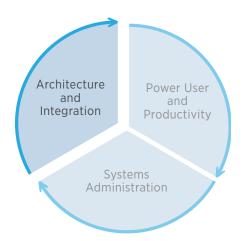


- ii. Allows administrators to define content display rules in an external repository without hard coding rules into applications.
  - 1. Create an advertisement portlet that displays ads appropriate to the users home region.
  - 2. Define rules into Drools and allow results to determine content displayed.
- iii. Sample portlet included to demonstrate how to utilize the rules engine from custom portlets.
  - 1. Retrieve custom content based on the address of the authenticated user.
  - 2. Retrieve custom content based on the net worth of the user.

#### 2. Systems Administration Features

- a. Liferay Auditing Application
  - i. Provides ability for Liferay to capture data like:
    - 1. User login success and failures
    - 2. User logouts
    - 3. User password modifications
    - 4. User role grants
    - 5. User group role grants
    - 6. User group grants
    - 7. User impersonations
    - 8. User profile updates
    - 9. User page visits
  - ii. Provides facilities to easily add new events for capture.
  - iii. Provides basic query interface to view captured audit events.
  - iv. Deployed via a hook and portlet war on top of an EE installation.
- b. Liferay Reporting Engine Application
  - i. Capabilities:
    - 1. Allows for entitlement based on scheduling/triggering report executions
    - 2. Entitlement-based downloading of generated reports
    - 3. Centralized place for managing report definitions
    - 4. Run reports against portal database or bring in other database schema
  - ii. Includes a bundled Jasper Report Engine library and a console for managing report definitions.
- c. High Performance and Scalability Assurance
  - i. EE has gone through significant performance tuning and scalability testing:
    - 1. Test data set includes: 10M users, 10M message boards entries, 1M wiki pages, 1M blogs, 1M documents.
    - 2. Simultaneous user load hitting in excess of 25k virtual users in certain test scenarios.





- ii. Liferay Cache Replication Pack
  - 1. Replaces Ehcache replication with Liferay's own replication for much improved efficiency (Up to 10 x's more efficient).
  - 2. Separate optional deployed package for EE
- iii. Data Grid and large JVM Support
  - Liferay Portal 6.1 EE integrated and supported on Terracotta (via Liferay Portal 6.1 EE, Terracotta Edition) and Big Memory
  - 2. Liferay Portal 6.1 EE tested and supported on Azul appliances
- iv. Performance monitoring for portlets
  - 1. Ability to capture and view performance information for each phase of the portlet.
  - 2. Information captured and accessible for future reporting purposes.

#### 3. Architecture and Integration Features

- a. Identity Applications
  - i. Liferay SAML 2.0 Identity Application
  - ii. Allows administrators to use Liferay as either a SAML 2.0 Identity Provider or Service Provider. Allow users to login to a Liferay instance using their login created/stored in an external repository or to allow users to login to an external application using an account created in your Liferay instance.
    - 1. SAML 2.0 Identity Provider or
    - 2. SAML 2.0 Service Provider (SAML)
- iii. Liferay Virtual LDAP Server
  - 1. Virtual LDAP repository, allowing Liferay to become a user id repository available via the LDAP protocol.
- iv. Liferay OAuth Application
  - 1. Supports OAuth Consumer.
- v. Each is a separate module that can be deployed together or independently onto a Liferay Portal 6.1 EE installation. Note: LDAP and SAML SP modes cannot be deployed together.
- b. Repository connectors for external content repositories
  - i. Connectors for third-party repository implementations into Liferay's Document and Media Gallery. Allows for searching, viewing, etc. of documents that are natively stored in third-party repositories.
    - 1. Liferay Sharepoint 2010 Connector
      - a. Supports Sharepoint 2010
    - 2. Liferay Documentum Connector
      - a. Supports Documentum 6.1
- c. Enterprise Infrastructure Bundles
  - i. Liferay Portal 6.1 EE Terracotta Edition
    - 1. Liferay Portal 6.1 EE bundled and supported with Terracotta EX or FX Servers

- Liferay Portal Terracotta Edition is a single, easily deployed package bringing together the flexibility of Liferay's portal and collaboration functionality with the scalability and cost performance of Terracotta's distributed cache solutions.
- ii. Liferay Portal 6.1 EE TCat Server Edition
  - 1. Liferay Portal 6.1 EE bundled and supported with MuleSoft TCat Server.
  - Provides easy management console for Tomcat with entitlement-based controls to restart servers, view logs, deploy applications, and manage clusters
- d. Liferay Developer Studio (vs Liferay IDE Eclipse Bundle)
  - i. Liferay Developer Studio contains all of the Liferay IDE plug-ins with some additional plug-ins that support EE developers (e.g. WebSphere support)
  - ii. Liferay Developer Studio is also available as an All-in-one bundle, which is a shrink-wrapped copy of Eclipse (3.6.x) that has all of the Studio Eclipse plug-ins pre-installed (which subsequently includes all of the Liferay IDE plug-ins).
  - iii. Features only in Liferay Developer Studio
    - 1. Eclipse all-in-one bundle packaging.
    - 2. Bundled Portal Server EE
    - 3. Bundled Plug-ins SDK EE
    - 4. Example Project wizard for bundled example projects
    - 5. WebSphere 6.x/7.0 Server development support

#### LIFERAY PORTAL 6.1 ENTERPRISE EDITION ADDITIONAL PACKAGES

- 1. Liferay Portal 6.1 EE Terracotta Edition
  - a. Liferay Portal EE bundled and supported with Terracotta EX or FX Servers
  - b. Liferay Portal Terracotta Edition is a single, easily deployed package bringing together the flexibility of Liferay's portal and collaboration functionalities with the scalability and cost performance of Terracotta's distributed cache solutions.

#### 2. Liferay Portal 6.1 EE TCat Server Edition

- a. Liferay Portal 6.1 EE bundled and supported with MuleSoft TCat Server.
- b. Provides easy management console for Tomcat with entitlement-based controls to restart servers, view logs, deploy applications, and manage clusters.

#### 3. Liferay Social Office

a. Liferay Social Office is an out-of-the-box collaborative environment for teams, which leverages all of the collaborative capabilities of the Liferay Platform that can be added to an existing or stand-alone Liferay Portal 6.1 EE installation.



# Liferay Support and Consultative Services

Liferay Support, Training and Services programs are value-oriented services that provide your company with unlimited support for your version of Liferay Portal (set-up, installation, configuration, and deployment). Other key features include training discounts and limited software indemnification.

Learn more about Enterprise Subscription & Support including service levels and end-ofservice life policies for Liferay Portal.

Liferay Support and Consultative Services add additional value.

#### 1. Support Services

- a. Liferay provides support services, both through an online web based interface as well as direct phone support.
  - i. Liferay Incident Resolution: Bug / configuration support.
    - 1. Telephone Consultation: Consultants
    - Liferay Enterprise Support Application (LESA): An innovative web portal to allow customers to report, manage, escalate, track bug fixes to Liferay Portal EE. Customers find LESA to improve system manageability by allowing a visual interface into the repair process.
  - ii. Product Alerts and Notifications: Notification of important systems administration topics such as availability of new patches, fix packs as well as security alerts.
  - iii. Consolidated Service Packs: A consolidated set of patches made available as a single installation. Customers are notified of the availability of service packs through product notifications.
  - iv. Fix Packs: Are smaller than service packs and often address a specific bug fix. Customers can implement individual fix packs and update fully with the next consolidated service pack release.
  - v. Liferay Security Alert and Patching Process: A part of the Product Alert and Notification process, this is a multi-step process for security awareness, repair and customer notification. EE customers are notified to ensure they can become patch fixed quickly to ensure security.

#### 2. Public Training Services

Liferay Training is the quickest way to learn best practices for successful deployment, administration, or tuning of Liferay Portal. Several public courses are available from Liferay, which can also be available via private web or on-site training to Liferay Portal EE customers (see more at: <a href="http://www.liferay.com/services/training">http://www.liferay.com/services/training</a>)

- a. Liferay Portal Administration
- b. Liferay Systems Administration



- c. Themes Development
- d. Liferay Developer
- e. Liferay Advanced Developer

#### 3. Consultation Services

Consultation services for installation, configuration, customization and more are available from Liferay System Integration Partners as well as from Liferay Consultants. Liferay's team of experts can provide leadership on a specific project as well as augment your existing team. Some examples of services Liferay consultants can provide to Liferay Portal EE customers are (note: Liferay Consultants and Partners do not work with Liferay Community Edition):

- a. Sponsored Development
- b. Quick Start Program
- c. Go-Live Program
- d. Installation
- e. Code Reviews
- f. Performance Tuning
- g. Architectural Reviews
- h. Upgrade/Migration Services

## Liferay Ecosystem

The Liferay ecosystem includes several areas built to support Liferay Portal EE customers. A partial list of ecosystem components are the Liferay Community, the Liferay Portal Certified partner Network and the Liferay Marketplace.

Liferay Ecosystem over 55,000 people working together.

#### **LIFERAY COMMUNITY**

http://www.liferay.org

The Liferay community is made up of thousands of individuals who share a common thread: to support and grow the Liferay mission of an open source, developer friendly, enterprise class web interaction framework. Liferay supports various activities to allow experts within several disciplines to collaborate on the future of Liferay releases and the ecosystem.

Activities can be classified into these areas:

- 1. Liferay Forums and Knowledgebase
  - a. http://www.liferay.org/community/forums
  - b. The Liferay community continues to build out this knowledge base for questions on how to use Liferay. Community members often start here to search, share, or learn.
- 2. Liferay Community Activities
  - a. Rotating programs allow community members to contribute back to Liferay on projects ranging from translations to requirement definition processes.
    - i. Translation Team
      - http://www.liferay.com/community/wiki/-/wiki/Main/ Liferay+Translation+Team
    - ii. 100 Papercuts
      - 1. http://www.liferay.com/community/special-activities/100-papercuts
    - iii. Bug Squad
      - 1. http://www.liferay.com/community/bugsquad
    - iv. Community Verifier
      - 1. http://www.liferay.com/community/verifier
    - v. Radio Liferay
      - 1. http://www.liferay.com/radio
- 3. Liferay Community Projects
  - a. http://www.liferay.com/community/liferay-projects
  - b. Includes Liferay-specific open source projects that are led by Liferay or community members that have achieved a level of importance as to be agreed by the community to exist at this level of exposure within the Liferay ecosystem.



- 4. Liferay Marketplace (see below)
  - Includes applications, themes, and more, which run on or with Liferay. Liferay
    community members can contribute to the Marketplace either as free-and-open
    source or as paid-for modules.

Liferay is a community; participants who leverage Liferay technologies are encouraged to find out how they can contribute for the betterment of others. With over 55,000 community members, Liferay is larger than the largest proprietary software vendors when working effectively together.

Liferay Portal Certified Partner Network offers highest skills, most successful deployments.

#### LIFERAY PORTAL CERTIFIED PARTNER NETWORK

http://www.liferay.com/partners/service-partners

Liferay Service Partners provide a full offering of professional services around the world. Enterprises can be assured that Liferay Portal Certified Service Partners meet an expected level of quality and expertise. These service partners ensure project success as well as reduce overall life cycle costs by leveraging past experience and certification requirements from Liferay. Liferay Service Partners also have a close relationship with Liferay's product management, engineering, security and support teams. They each have access to Liferay's internal partner portal network and are supported by a Liferay partner manager who works with them to ensure their needs are communicated to the product and support teams.

#### LIFERAY MARKETPLACE

http://www.liferay.com/marketplace

Liferay Marketplace is an innovative hub for sharing, browsing and downloading Liferay-compatible applications. As enterprises look for ways to build and enhance their existing platforms, developers and software vendors are searching for new avenues to reach this market. Marketplace leverages the entire Liferay ecosystem to release and share apps in a user-friendly, one-stop site.

#### Additional features:

- Integration with Liferay IDE and Liferay Developer Studio
- · Flexible licensing model
- Official Liferay Portal Certification available

Enterprises implementing Liferay Portal 6.1 EE benefit from being able to leverage Liferay Portal Certified applications within the Marketplace. These solutions are certified by Liferay to fully support the Liferay Portal 6.1 EE roadmap.





## Appendix A: Sesame Street Case Study

One of the world's preeminent brands in children's education and entertainment, Sesame Street hosts a number of public and internal sites addressing different segments of its audience. The main branded site visited by children and fans was www.SesameStreet.org. The corporate site, www.SesameWorkshop.org, targets parents and adults and provides more detailed information about the show, the show's purpose and the organization's mission. This corporate site also ran an intranet, three B2B extranets, and over ten other B2C websites.

### **CHALLENGE**

Recognizing the power of the web and the strategic part that it would play in a fast-changing market, the organization set out to revamp its online presence and present educational content in new and engaging ways. In particular, Sesame wanted the site to effectively leverage, promote, and deliver its extensive library of rich-media content. While privately funded competitors in the children's education and entertainment sectors drew on ample resources to deliver state-of-the-art websites and cost-intensive campaigns, the non-profit organization had to find more creative and cost-effective ways of keeping up without sacrificing on capabilities.

#### **LIFERAY SOLUTION**

Liferay Portal offered a flexible, scalable platform for a content-heavy, Web 2.0 website. In collaboration with a team of Liferay's consultants and partners, Sesame Street's IT department delivered a new SesameStreet.org, an impressive interactive site with hundreds of flash-based games and activities; nearly 3,000 classic and current Sesame Street videos; and preschooler-friendly applications including "PlaySAFE," which prevents children from navigating away to other sites on their own.

Since its implementation, the site has seen up to 15.8 million visitors and delivered 1.2TB of content per day. Sesame Street won an Emmy Award in 2009 for the site, which moved the organization from a broadcast-only to a multi-channel model.





WWW.CAPELLA.EDU

# Appendix B: Capella University Case Study

Capella University, a leading online university, aims to take online education to a higher level by providing high quality bachelor's, master's, doctoral, and certificate programs for adults who seek to maximize their personal and professional potential. As a widely acknowledged leader in delivering high-quality education over the web, Capella was the first online university to be recognized by The Council for Higher Education Accreditation (CHEA) for its work on student learning outcomes.

#### **CHALLENGE**

As an institution that hosts all of its courses online, Capella University is heavily reliant on complex web-based systems that can help students and professors navigate university life. Capella's portal, iGuide, also provides Capella's learners with essential support and academic content and tools for managing their academic careers. When Capella implemented the PeopleSoft ERP system in 2007, it was able to deliver this portal functionality through PeopleSoft's built-in tools. While its ERP system is a valuable asset, Capella needed to enhance it with a portal and content management system (CMS) that allowed design flexibility and additional integrations. It was determined that a new portal platform was needed to integrate all of Capella's technologies for a unified, personal, and intuitive user experience.

#### **LIFERAY SOLUTION**

Capella University chose Liferay Portal for its plethora of out-of-the-box features and social networking capabilities. The community and networking tools would help learners build academic and professional networks, as well as their own professional identities. The ability to integrate existing systems was also a key deciding factor, as Liferay's adherence to open standards allowed it to be easily integrated with PeopleSoft ERP. Liferay's open integration capabilities have provided Capella a service-oriented architecture (SOA) layer that helps them access data. The most innovative and popular use of this technology is Capella's course dashboard, personalized for every learner, which uses web services to display real-time academic activity from the Blackboard course room directly onto the home page of the Liferay portal. Today, learners in every degree program in all five of Capella's schools are now using the Liferay-based version of iGuide, which equates to nearly 40,000 users plus faculty and staff.



# Appendix C: Cisco Developer Network Case Study

Cisco Systems' Cisco Developer Network (CDN) provides access to Cisco technologies and support resources that enable third-party development of compelling business solutions that unify data, voice, video, and mobile communications on Cisco development platforms. The program also allows developers to take advantage of Cisco's brand, market leadership position, and installed base to help drive positive business results for themselves and their customers.

#### **CHALLENGE**

Cisco sought a solution to support developers and make Cisco technologies more pervasive in the marketplace. A portal would create an environment where developers could easily locate resources for their solutions, assist each other in developing solutions, and reach out to Cisco resources for assistance.

#### **LIFERAY SOLUTION**

Cisco selected Liferay Portal to leverage tools such as wikis, blogs, and message boards that facilitate communication and collaboration between Cisco and its community and within the community itself. To encourage community participation, Liferay Portal leverages social networking capabilities like activity tracking and network building.

#### WHAT NEXT?

Learn more about Liferay Portal: www.liferay.com/products

Get a FREE 30-Day trial of Liferay Portal: www.liferay.com/free-trial Contact us:

Email: sales@liferay.com

Phone: 1-877-LIFERAY





LIFERAY, INC. is a provider of leading enterprise open source portal and collaboration software products, used by major enterprises worldwide, including Allianz, AutoZone, Cisco Systems, Lufthansa Flight Training, The French Ministry of Defense, and the United Nations. Liferay, Inc. offers professional services, technical support, custom development and professional training to ensure successful deployment in the most demanding IT environments.

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