



Migrating from Liferay 6.x to Liferay 7?

Introduction

Enterprise IT organizations look for powerful ways to build digitization platforms that can work in open domains. Liferay 7 (Digital Experience Platform - DXP) is designed to bring together a single view of the customer from all touch points.

It is important for companies running on Liferay 6.x or lower, to evaluate the newer features and newer security fixes of Liferay 7, in context of their business to get the best ROI of new upgrade. Migrating and upgrading legacy enterprise portals with Liferay is made super easy with the introduction of Liferay 7.

This white paper provides practitioner view on

- whether an upgrade from Liferay 6.x to Liferay 7 is necessary for your business needs
- salient features of Liferay 7 and
- steps required to migrate to Liferay 7

Liferay 7 (DXP) upgrade Checklist

If you have a stable portal on Liferay 6.x, and if you are planning to go an extra mile by migrating to Liferay 7, get on to your feet to evaluate the TCO and ROI. **Rknowsys** advises to go through the following checks before a decision is made for upgrade.

Operational

- Are you looking for a flexible portal that can scale up easily to suffice your needs at lesser operational costs as your business grows?
- Are you willing to streamline your Business Process Automation? Liferay 7 features dynamic personalized forms and elegant workflows to achieve your goals.

Digital Strategy

- Are you planning to bring forward mobility integration to your digital platforms and technology to deliver a consistent digital experience?
- Do you want to revamp your digital strategy to provide more value to your customer experience and improve digital collaboration in the day to day business?
- Do you plan to bring in your customer's social activity into the portal and to improve customer relationship by targeting your audience more accurately?

Enhanced Security

- Are you looking for a more robust security for your customers and their data?

Usability

- Do you have any plans of enriching the portals with new features, themes and other usability customizations that can excite the stakeholders or increase your customer base?

Performance

- Do you spend ample amount of time searching for the required content from huge repository of log files using 6.x SOLR search engine which is very slow? Instead of upgrading to Liferay 7 (which uses Elastic), you can use Elasticray (<http://www.elasticray.com/>) to instantly make your search faster.

End of life support

- With Liferay 6.x, you may be left behind the fast-changing industry trends. Also, you may lose official support for your portal and have to completely depend on the non-guaranteed voluntary, unpaid support from the community. Do you have human resources to support Liferay 6.x, if the official support ceases to exist?

If your answer is 'Yes' to at least 5 questions, then you should consider upgrading from Liferay 6.x to Liferay 7.

What's new in the Liferay 7(DXP)?

Scalability and Improved Performance

- Being modular in nature, allows clustering at any layer
- Usage of advanced caching(EHCache) and ElasticSearch greatly improves the performance
- Usage of leaner and simplified UI makes it a lightweight portal.

Modular development with OSGi Platform

- Develop Liferay 7 plugins in form of OSGI modules and deploy on OSGI container.
- Fine-tuned control to keep only desired (OOTB) modules or features ON while making others OFF
- Using OSGI in Liferay 7 platform will avoid **class loader issue**

Strong Security and data protection

- Implements Government Grade Encryption
- Supports pluggable authentication & authorization
- Has built in support for integration with LDAP, CAS SSO, SAML, Identity Management etc
- Liferay 7 can as well be connected with AWS Cognito
- Granular permissioning

Simplified and Rich User Interface

- Eye catching new UI-“*Single Page Application (SPA)*”
- Building UI layer using Angular, React or any other library of your choice
- Supports SAAS based UI development.
- Makes the creation of UI faster

Developer friendly

- Built on OSGi framework
- Being modular, allows to easily extend & reuse components
- Developers can choose their choice of tools at any layer of application, model, business, controller & presentation layers

Hybrid Mobile App Development

- Liferay Screens 3.0 enables software developers to use Apache Cordova or Xamarin
- Build cross-platform applications from one codebase designed for the web on a PC
- Embed the content into a Screens app for mobile use
- Allows native mobile capabilities and navigation to be mixed with HTML content seamlessly.

Liferay Commerce and Analytic Cloud

- Purchasing experience with straightforward catalog browsing, simplified checkout, easy reorders and tailored price lists.
- Analytics Cloud measures the performance of marketing assets and content ; understand the roles they play.
- Will help companies overcome existing data silos and provide customized experiences.

Steps to migrate from Liferay 6.x to Liferay 7

Upgrade Analysis

- Analyze what has changed and what has not from Liferay 6.x
- Identify the current environment and the updates needed to run Liferay DXP
- Since Liferay DXP runs on Java 8, make sure all your custom plugins run on Java 8.
- Some customizations, plugins developed for 6.x are directly provided by DXP. Else, additional testing is needed for their QA after the upgrade
- Understand the risks of migration and prepare on plans to mitigate them

Backup & Restore

- Always take a latest backup of the database, document library and the current portal server
- Prepare a roll back plan using these backups and make sure the roll back actually works smoothly
- Identify any unused data, documents lying around in the portal and remove them using API.

Staging environment setup for migration

- Preparing a staging environment for migration includes
- OS upgrade if necessary
- Java 8 version upgrade if necessary
- Install the latest Liferay 7.1 bundle, configure the patching tool and apply the latest fix packs available
- If you are already using an older version of Elasticsearch using our ElasticRay plugin (<http://www.elasticray.com/>), then you need to upgrade the Elasticsearch server to the one supported by Liferay DXP. Else, you can install a fresh Elasticsearch version supported

Install database server of your choice (MySQL, PostgreSQL etc)

- Load the current liferay schema on your staging database server
- Copy/move a backup of your document library to your liferay bundle's /data directory

Run migration on Staging

- Migrate the database to DXP
- Migrate the plugins, hooks and other customizations to be DXP compliant.

Post Staging Upgrade

- Perform smoke testing/navigation around multiple sites & sub-sites.
- A heavy functional and performance testing is needed
- Review the logs/ liferay_{date}.log file for any startup or runtime errors
- Repeat the process for several dry runs and do heavy functional and performance testing
- Document any issues faced and the solutions to fix them. These will be helpful while running the migration on production environment.

Production Migration Strategy

- Ensure all the latest backups are taken (data & document library)
- Test restoration of backed up data
- Install the necessary software required to run Liferay DXP. This step is already done on staging.
- Choose a migration window and notify the stakeholders of service downtime
- Ensure all hands-on deck
- Run the db upgrade and portal upgrade
- Do a thorough functional and performance testing
- Continuously check logs for any issues

Conclusion

Liferay 7 creates an interactive digital platform– this platform monitors and delivers relevant, high priority intelligence to the customers. Based on the guidelines specified in this whitepaper, businesses can leverage the power of Liferay 7 within the enterprise or for the next product development to create new services quickly, using cloud-friendly platforms, modular architecture and revamped mobile and web experience tools.



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About Rknowsys Technologies Private Ltd

Rknowsys Technologies Private Ltd is a specialized Enterprise Consulting company focusing on Enterprise portals (intranet and extranet), Enterprise Content management, Enterprise BI, Data Analytics, Outsourced Product Development and Web Applications. Rknowsys has 10+ years of experience in building enterprise level E-commerce portals using Liferay platform.