Alfresco
Tech Talk Live #158

May 15, 2024
• Community news
• Sharebox for Alfresco: ACA and ADW, How we solved the challenges
Join the conversations with your Alfresco developer community in this three-day technical training event that will provide key insights into Hyland’s Alfresco AI vision from Alfresco executives and R&D, as well as deep dives into hands-on technical training with your peers.

**Price**

€1250 | €995*  
Early bird

Alfresco focused technical conference  
September 10-12, 2024 (Lisbon, Portugal)

Register Now

*Early bird pricing available until July 9, 2024.
Track One: Fundamentals

<table>
<thead>
<tr>
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<tr>
<td>Elevating Collaboration, Management, and Security with Alfresco Content and Governance Services</td>
<td>Acquire hands-on experience in Alfresco Content Services (ACS) and Alfresco Governance Services (AGS) in this course designed to enhance team collaboration, content management, and security. Gain proficiency in uploading, storing, sharing, and accessing content seamlessly. Additionally, delve into AGS to automate the record lifecycle from capture through retention to final destruction, ensuring a secure, simple, and compliant records management system.</td>
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<tr>
<td>Developing Modern Business Applications with Alfresco Development Framework (ADF)</td>
<td>Gain the essential knowledge needed to develop a fully operational Alfresco Development Framework (ADF) application, primed for deployment in production environments. You will develop a responsive ADF application that optimizes business processes, all within a single user interface (UI). Key topics covered include integration with Alfresco Content Services and Alfresco Process Services, user authorization, real-time updates, analytics, and reporting.</td>
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<tr>
<td>Alfresco Process Services Foundations</td>
<td>Discover the essentials of Alfresco Process Services (APS) in our hands-on workshop. Learn APS capabilities, process automation, and how to build efficient workflows.</td>
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Track Two: Advanced

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<td>Out-of-Process Extension Project for Alfresco Content Services (ACS)/ActiveMQ Administration</td>
<td>Through the integration of event handling mechanisms and leveraging the Java REST API, we will develop an event listener capable of tailoring content management tasks to meet specific business objectives. In this session, we'll also delve into administering the ActiveMQ component, crucial for the functioning of the Messaging service, to ensure seamless extension operation and troubleshoot any issues that may arise.</td>
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<tr>
<td>Alfresco Migrations: Solr to Elasticsearch &amp; ACS Embedded Workflows to APS</td>
<td>An experience tailored for Alfresco Professionals seeking to migrate from Solr to Elasticsearch while mastering search configuration techniques to boost performance. This hands-on workshop will also provide insight into migrating an embedded Content Services workflow into Process Services.</td>
</tr>
<tr>
<td>Hyland Experience Insight and Automate</td>
<td>Meet the next-generation ecosystem that delivers content and process management capabilities through a variety of SaaS applications and services built on top of a flexible and scalable cloud-native platform. In this demo, you'll learn how Hyland Experience Insight and Automate empower business operations with machine learning and tailored AI capabilities to enrich content and effectively address unique business requirements, while ensuring robust data security and governance measures for comprehensive protection and compliance.</td>
</tr>
</tbody>
</table>

Disclaimer: While it is not our intention, courses, dates, and/or instructors are subject to change.
AfreSCO TechQuest Europe 2024

Get Certified

AfreSCO TechQuest 2024 registration includes the ability to attain an Afresco certification at no additional cost. Attendees will receive a voucher for the assessment that delivers the Hyland Certified Afresco Content Services Administrator (ACSA), Afresco Content Services Engineer (ACSE), Afresco Process Services Administrator (APSA), or Afresco Process Services Engineer (APSE) certification.

More information coming soon!
Resources

Alfresco

OpenSearch Deployer @ GitHub
App Starter Kit @ GitHub and thanks to @hi-ko
Alfresco GenAI @ Docker Blog

Resources to come

• Adapting your logging configuration to log4jv2
• How to set up messages for increased reliability
• Upgrading your addons to Jakarta EE 10 and Spring 6
• Upgrading to Apache Tomcat 10
• Using Control Center App with Community Edition
• Any missing topic you want to be covered?
Collaboration

Blog posts

• [Alfresco in OpenSearchCon Europe 2024](https://github.com/saidone75/graalf) by @saidone75
• [History of Alfresco Versions](https://github.com/OpenPj/alfresco-process-services-project-sdk/releases/tag/v3.0.0) by @PJLucidi

Contributions

• [https://github.com/ONLYOFFICE/onlyoffice-alfresco/releases/tag/v7.0.0](https://github.com/ONLYOFFICE/ONLYOFFICE) by @ONLYOFFICE
TTL Speakers wanted!

- Take the opportunity to showcase your work with the community
- About Alfresco, Nuxeo, and associated technologies
- Best practices, integration, scaling, cloud, …
- In your native language
Today’s talk
Sharebox for Alfresco: ACA and ADW, How we solved the challenges

Peter Löfgren & Bhagya Silva, Loftux
Migrating Sharebox to ADF

Peter Löfgren and Bhagya Silva
Contents

● Speakers, Introduction and Contents
● Demo
● Journey to ADF
● Migration to ADF
● Customisations (Extensions and Core Customisations)
● Packaging and Deployment
● Future Plans
● Notes and Thoughts
● Q&A
Speakers

Peter Löfgren  
CEO, Loftux AB  
Since Alfresco: 1.0 (2005)

Bhagya Silva  
CTO, Loftux AB  
Since Alfresco: 3.4 (2012)
Introduction to Loftux AB

Founded in 2010 with the vision to give organizations a possibility to define and achieve effective information management based on open source solutions.

We bring not only product knowledge, but also knowledge about the processes surrounding document and information management.

We are @LoftuxAB on Twitter and GitHub

Visit us on the web: https://loftux.com, or ping us @bhagyas or @Loftux on Alfresco Discord Channel
Introduction to Sharebox

Since 2015, Sharebox (since 2015) is a flagship product from Loftux AB that offers seamless external sharing capabilities to Alfresco end-users.

Sharebox enables content sharing by end-users in a secure and controllable manner.

It helps Alfresco administrators to stay compliant with regulations and policies.

For both end-users and administrators: Less headaches, overall.
Demo
Contents

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Let's see how Sharebox looks like on Alfresco Share vs ADF (In this case, ACA Application)
Journey to ADF (1/2)

Sharebox has nearly 10 years of continuous development. Major Alfresco customers use Sharebox.

Our original and most widely used internal user interface is built on top of Alfresco Share with Surf.

The external user interface is built with React. It has had its own journey.

Alfresco Share UI is showing age in terms of design and technology.
Journey to ADF (2/2)

We decided to port the existing internal user interface to Alfresco ADF while maintaining parallel support for Alfresco Share.

Alfresco ADF offers a responsive modern user interface with standard features and functionality.
Migration to ADF
Migration Goals

No loss of existing features.

Provide a beautiful and modern look.

Maintain compatibility with existing API and endpoints.

Push the boundaries of customisations as we have done in the past.
Migration Approach

We adopted a phased approach to ensure a smooth transition to ADF.

We started with a prototype with minimal backend integration and with hard-coded values.

We focused on the most basic set of features that were required for a working Sharebox UI and iteratively improved on them to get to where we are today.

The work got broken down into smaller extensions (Actions, UI Components, Custom Views, Administration Console). A common module was created to share code.

We then built and tested individual smaller extensions and tested everything as a whole.
Migration Timeline

**Assessment**
Understand and simplify existing Alfresco Share components. Figure out the counterparts and non-existent features.

**Development and Testing**
Angular development and Alfresco ADF customisation. Testing the extension locally and on the staging servers.

**2020**
- **Prototyping**
  Developing an ACA customisation without any backend integration as an exercise and ensure the feasibility of development with existing tools. Learning more about ADF.

**2022**

**2023**
- **Delivery**
  Define delivery goals, documentation and bundling for delivery for end customers.
Changes to the Alfresco Repository

ADF brings modern Javascript development capabilities and the ability to include JS Libraries, we are able to largely simplify remote API calling.

JSON API to make it easier to work with ADF.

Existing Alfresco Surf Webscripts were used to populate dropdown values and provide default values and localisation for forms.

Localisation now happens on the browser using standard ADF localisation capabilities.
Customisations
Customisations

Extensions

Features that does not require modification of the ACA/ADW code.

- Sharebox Sharing Form
- Indicator Column
- Menu Actions
- Audit View
- Shared With Page
- Hide Custom Aspects

Core Customisations

Features that require modifying the files within ACA/ADW code.

- Top Banner
- Item Banner
Extension: Sharebox Sharing Form

Description: The sharing form allows users to share documents with others, specifying the expiry date, external user emails, permissions and access rights.

Challenge: Maintain the familiar Sharebox sharing user interface and retain the years of experience that has gone to building the form within Share.

We used third-party Angular components that were built as descendents of components we already used within Alfresco Share.

It was important to maintain version compatibility as most publicly available Angular components have version demands that might conflict with supported Angular versions for ADF.

As there was no way to generate forms for actions within ADF, we had to create a JSON API that was compatible with Angular Forms module.
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Extension: Indicator Column

Description: A column with indicators that show visual cues on status or metadata of documents.

In Sharebox, Indicator column shows the following:
- Folder shared/expired status
- Externally uploaded file status

Challenge: Create a compelling indicator column that improves on the existing behavior on Alfresco Share.

ADF provides an example of how an additional column can be added for indicators.

Since ACA/ADW doesn’t provide a standard indicator column, extensions would have to implement their own. For administrators, it is important to note this when you have multiple ADF Extensions from different vendors.
Description: Document Actions for Folders that are related to Sharebox. Actions on Sharebox are made available based on the permissions available for each user.

Challenge: ADF does not provide a mean to use asynchronous evaluators when showing a list of actions available for a given node.

ADF does not provide asynchronous evaluation when showing a list of actions available for a given node (file or a folder).

ADF renders the actions list using static configuration with synchronized JS function validators to toggle the visibility of each action.

Sharebox always has hard validations on the backend, ensuring that any client side privilege escalation is rendered useless.
Extension: Menu Actions (2/2)

We have attempted with multiple approaches to solving this.

Our attempt has been to create a subscriber that would listen to the permissions validation API response, and then inject the menu items dynamically.

The other approach is to show the options, but always invoke the permission validation at the time of user invocation of the action. This shows all the actions to all users, but is not an optimal user experience.

We are continuing to experiment on how to make this better.
<table>
<thead>
<tr>
<th>Timestamp</th>
<th>Folder</th>
<th>Sharebox Title</th>
<th>Expiry Date</th>
<th>Shared To</th>
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<tbody>
<tr>
<td>5/13/24, 8:39 AM</td>
<td>TTL Startup</td>
<td>TTL Startup</td>
<td>8/1/24</td>
<td><a href="mailto:peter@loftux.se">peter@loftux.se</a></td>
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</table>
Extension: Audit View

Description: Sharebox internal users must be able to view an audit trail of external user actions within Sharebox folders.

Challenge: The audit UI has a large number of filters and interactive elements.

The audit query APIs within Alfresco are often not usable for real world applications.

We re-built the Audit view for ADF. We were able to use standard Angular component to delivery a beautiful UI for the end-users.

New audit querying endpoint to the Sharebox API fetch audit related values.

New endpoint has support for improved pagination and better performance.
### Folders Shared with Sharebox

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- TTL Startup: This folder and its content is shared to external users. Share expires on Thu 1 Aug 2024.
- TTL Miscellaneous (Mixed set of docs): This folder and its content is shared to external users. Share expires on Tue 7 Jun 2024.
Extension: Shared With Page

Description: End users must be able to see all the Sharebox folders available within a given site.

Challenge: ADF does not provide a site specific SideNav. (There are no sites anymore)

We decided to change the functionality to list all the Sharebox folders instead.
Extension: Hide Custom Aspects

Description: Sharebox related aspects must not be visible on ADF based clients, unless required.

Challenge: Certain aspects that are used for Sharebox needs to be invisible or protected from user modification.

You can hide aspects you don’t want ADF to show in Manage Aspects view by overriding “content-metadata-presets” configuration within your extension.

Always have backend validations where you suspect users might perform unauthorised modifications.
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Core Customisation: Top Banner

Description: A top banner for the current folder showing the status of it within Sharebox.

Challenge: There is no outlet to include the banner customisation.

Modification of files.component.html to create a new outlet for the customisation to appear.

Custom styles were added to files.component.scss for layout styling.
### TTL Startup - TTL Startup (Set started Docs)

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Miscellaneous:
- TTL Miscellaneous (Mixed set of docs)
  - This folder and its content is shared to external users.
  - Share expires on Sun 9 Jun 2024.
Core Customisation: Item Banner

Description: While navigating a folder, UI must show the current state of child folders/files relating to Sharebox.

Challenge: ADF does not provide a way to inject additional sections to the existing components.

Extending the NameColumnComponent and register it using the extension metadata. (features.documentList.files)

Customisation overrides the standard name column.
Packaging and Deployment
Module Organisation, Components and Dependencies

sharebox-common

sharebox-display-components
Display components for Sharebox, such as banners, columns and other related components.

sharebox-actions
Library list actions and forms related to Sharebox actions.

sharebox-audit-actions
Audit Action and Audit View

sharebox-shared
Shared SideNav Page and related components.

Sharebox Repository API wrappers, custom evaluators and utility functions.
Packaging and Deployment (1/2)

We ship a GZipped tar (.tar.gz) archive containing the project files and scripts to automatically install Sharebox ADF extensions on compatible ACA/ADW versions.

The scripts copy the files and apply patches to existing files to easily make changes to the files that needs to be modified.

The scripts are currently a work in progress.

We hope to make these scripts open-source and public.
Packaging and Deployment (1/2)

Script Breakdown

- Copy extension files (expanded tgz) to /projects
- Modify src/app/extensions.module.ts [General Module Imports]
- Modify src/app/app.module.ts [Core Customisations]
- Modify src/app/components/files/files.component.html [Core Customisation: Top Banner]

**Important:** Installing user must perform a manual merge to ensure there are no syntax or configuration errors within the files. There have been developments relating to the installation of extensions (e.g. Angular Builders) we hope to see later on ADF.
Future Plans
Future Plans

An administrative dashboard (on ADF) for easier overview of Sharebox diagnostics, settings, and triggers for Alfresco Sharebox Administrators.

Iterate on the current state to provide better experiences for the end-users and administrators.

Following up with Hyland on some of the concerns we had during the development.

Continue to gather and incorporate feedback from our customers and the users.
Notes and Thoughts
Some Notes on ADF Development

- Forms Generation for Actions
- Asynchronous Action Evaluators
- Schema based Validation for Extension Configuration
- Extension Points
- Dynamic Administration and Management Console
Some Thoughts on ADF Development

ADF evolves at a fast pace, but doesn’t mean you should not build for ADF, and there are no LTS versions for a stable development.

We would eventually see the deprecation of Alfresco Share, and would have to be ready when that happens.

Existing Alfresco customers are considering moving to ADF, and there are growing opportunities for developers and partners.

Start early on ADF, don't wait.

As Loftux, we are ready to deliver.
Q&A

Peter Löfgren  peter@loftux.se  @Loftux on Alfresco Discord
Bhagya Silva  bhagya@loftux.se  @bhagyas on Alfresco Discord
Thank you

Peter Löfgren  peter@loftux.se  @Loftux on Alfresco Discord
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