Upgrading extensions - help is at hand
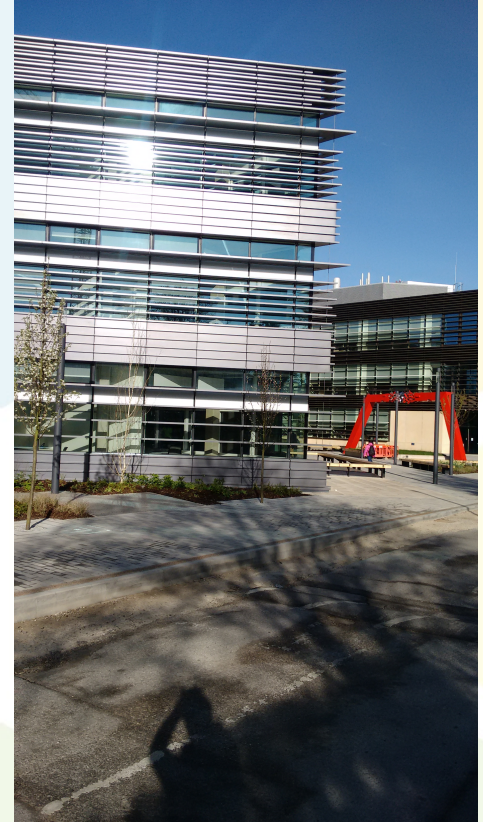
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Introduction

Senior Scientific Software Engineer with MalariaGEN.

MalariaGEN is a research group based across the Big Data Institute and the Wellcome Trust Centre for Human Genetics at the University of Oxford, and the Sanger Institute at the University of Cambridge as well as many collaborators worldwide.

We study the genetics of people, mosquitos and the malaria parasite (*plasmodium*)

Using Alfresco since version 3.5 to manage our collaborations and facilitate communication between all the different groups.

How it all began

Discussions at BeeCon 2016...

Upgrading

Necessary evil?

Exciting opportunity?

https://www.flickr.com/photos/alexnormand/5992512756

For a longer discussion see https://tech.wrighting.org/2016/06/upgrade-time/

QA

Looking for a way to check if add ons will work with the new version

How it works

A quick overview

Caveat Emptor

An *assistant* not a substitute for understanding the application, and the changes between versions.

Does significantly reduce the amount of work required.

Don't skip (major) versions.

Plenty of room for improvement.

Harvest

Parse the extension to collect information about:

- Bean definitions
- Java classes
- Files under extension (SDK 2.2 and 3)

https://upload.wikimedia.org/wikipedia/commons/0/0e/Coffee_Harvest_Laos.jpg

By Thomas Schoch [GFDL (http://www.gnu.org/copyleft/fdl.html) or CC BY-SA 3.0 (http://creativecommons.org/licenses/by-sa/3.0)], via Wikimedia Commons

Compare

Check out the old version and the new version from svn

Look for anything defined in all three places

If it's changed between old and new report it.

Manual Intervention

For cases where the mapping can't be automatically determined you can use a mapping file - upgrade-assist.mapping.json

```
{
    "beans": {
            "custom-mail": {
                "reference-bean-id": "mail"
            },
            "avatarService": {
                "files": [
                        "/templates/webscripts/org/alfresco/slingshot/profile/avatar.get.js",
                        "/templates/webscripts/org/alfresco/slingshot/profile/uploadavatar.post.js"
                        ]
            }
    },
    "aspects": {
        "BuildPerson.aj": {
            "classes": [
                "org.alfresco.repo.web.scripts.discussion.AbstractDiscussionWebScript"
            ]
        }
    }
}
```

Examples

Bean definition

BeanDef in all versions:SiteService_security
*** alfresco/alfresco-open-mirror/5.0.d/repo/alfresco/public-services-security-context.xml
--- alfresco/alfresco-open-mirror/5.1.g/repo/root/projects/repository/config/alfresco/public-services-security-context.xml
****
*** 27,32 ****
--- 27,33 ----
```
            org.alfresco.service.cmr.site.SiteService.listMembers=ACL_ALLOW
            org.alfresco.service.cmr.site.SiteService.listMembersInfo=ACL_ALLOW
            org.alfresco.service.cmr.site.SiteService.listMembersPaged=ACL_ALLOW
+            org.alfresco.service.cmr.site.SiteService.listSiteMemberships=ACL_ALLOW
            org.alfresco.service.cmr.site.SiteService.listSites=ACL_ALLOW,AFTER_ACL_NODE.sys:base.ReadProperties
            org.alfresco.service.cmr.site.SiteService.listSitesPaged=ACL_ALLOW,AFTER_ACL_NODE.sys:base.ReadProperties
            org.alfresco.service.cmr.site.SiteService.removeMembership=ACL_ALLOW
```

You need to check: example/example-platformjar/src/main/resources/alfresco/module/example-platform-jar/context/public-services-security-context.xml
Different bean definition:
Old file:alfresco/alfresco-open-mirror/5.0.d/repo/alfresco/public-services-security-context.xml
New file:alfresco/alfresco-open-mirror/5.1.g/repo/root/projects/repository/config/alfresco/public-services-security-context.xml

diff output from custom code to old version

This lead to PR https://github.com/jpotts/share-site-creators/pull/24

What happens next?

You need to manually examine the output of the tool and work through the files listed

What could happen next?

- Create a patch file

- Patch your code

- Create a pull request

- (Optionally when using Alfresco git) create a PR against the Alfresco code base

This would be best done with an interactive mode

Bean replacement 1

```
<bean id="usernamePropertiesDecorator" parent="baseDecorator"
    class="org.wrighting.alfresco.upgrade.repo.jscript.app.CustomUsernamePropertyDecorator">
    <property name="nodeService" ref="nodeService" />
    <property name="personService" ref="PersonService" />
    <property name="propertyNames">
      <set>
        <value>cm:creator</value>
        <value>cm:modifier</value>
        <value>cm:workingCopyOwner</value>
        <value>cm:lockOwner</value>
        <value>cm:owner</value>
        <value>qshare:sharedBy</value>
      </set>
    </property>
  </bean>
```

BeanDef in all versions:usernamePropertiesDecorator
Bean definitions match
Custom class is being used:org.wrighting.alfresco.upgrade.repo.jscript.app.CustomUsernamePropertyDecorator
Checking java for:org.alfresco.repo.jscript.app.UsernamePropertyDecorator org.alfresco.repo.jscript.app.UsernamePropertyDecorator

You need to check: /home/iwright/git/upgrade-assist/example/example-platform-
jar/src/main/java/org/wrighting/alfresco/upgrade/repo/jscript/app/CustomUsernamePropertyDecorator.java
Different java between versions

Diff output

Bean replacement 2

```xml
<!-- https://gist.github.com/AFaust/b83b405998cb4303e77a -->
<bean class="de.axelfaust.examples.beans.ImplementationClassReplacingBeanFactoryPostProcessor">
    <property name="targetBeanName" value="dbNodeService" />
    <property name="originalClassName" value="org.alfresco.repo.node.db.DbNodeServiceImpl" />
    <property name="replacementClassName" value="de.axelfaust.examples.service.BetterDbNodeServiceImpl" />
    <property name="active" value="${my.patches.service.betterDbNodeService.enabled}" />
</bean>
```

BeanDef in all versions:dbNodeService
Bean definitions match
Custom class is being used:de.axelfaust.examples.service.BetterDbNodeServiceImpl
Checking java for:org.alfresco.repo.node.db.DbNodeServiceImpl org.alfresco.repo.node.db.DbNodeServiceImpl
Cannot find java for class:de.axelfaust.examples.service.BetterDbNodeServiceImpl

You need to check:
Different java between versions
Old file:/home/iwright/git/upgrade-assist/alfresco/alfresco-open-mirror/5.0.d/repo/root/projects/repository/source/java/org/alfresco/repo/node/db/DbNodeServiceImpl.java
New file:/home/iwright/git/upgrade-assist/alfresco/alfresco-open-mirror/5.1.g/repo/root/projects/repository/source/java/org/alfresco/repo/node/db/DbNodeServiceImpl.java

Diff output

Derived classes

You want to know if something has changed – even if you're not directly interacting with it

```
{
    "beans": {
            "custom-mail": {
                "reference-bean-id": "mail"
            },
    }
}
```

Javascript 1

file in all versions:/templates/webscripts/org/alfresco/slingshot/documentlibrary/doclist.get.js

You need to check: example/example-platform-
jar/src/main/resources/alfresco/extension/templates/webscripts/org/alfresco/slingshot/documentlibrary/doclist.get.js
Different file:
Old file:alfresco/alfresco-open-mirror/5.0.d/repo/root/projects/remote-
api/config/alfresco/templates/webscripts/org/alfresco/slingshot/documentlibrary/doclist.get.js
New file:alfresco/alfresco-open-mirror/5.1.g/share/share-
services/src/main/resources/alfresco/templates/webscripts/org/alfresco/slingshot/documentlibrary/doclist.get.js

Diff output

Javascript 2

You need to check:
Conflicting customization
Old file:example/example-platform-jar/src/main/resources/alfresco/extension/templates/webscripts/org/alfresco/repository/site/site.put.json.js
New file:example/custom-site-props-repo/src/main/amp/config/alfresco/extension/templates/webscripts/org/alfresco/repository/site/site.put.json.js
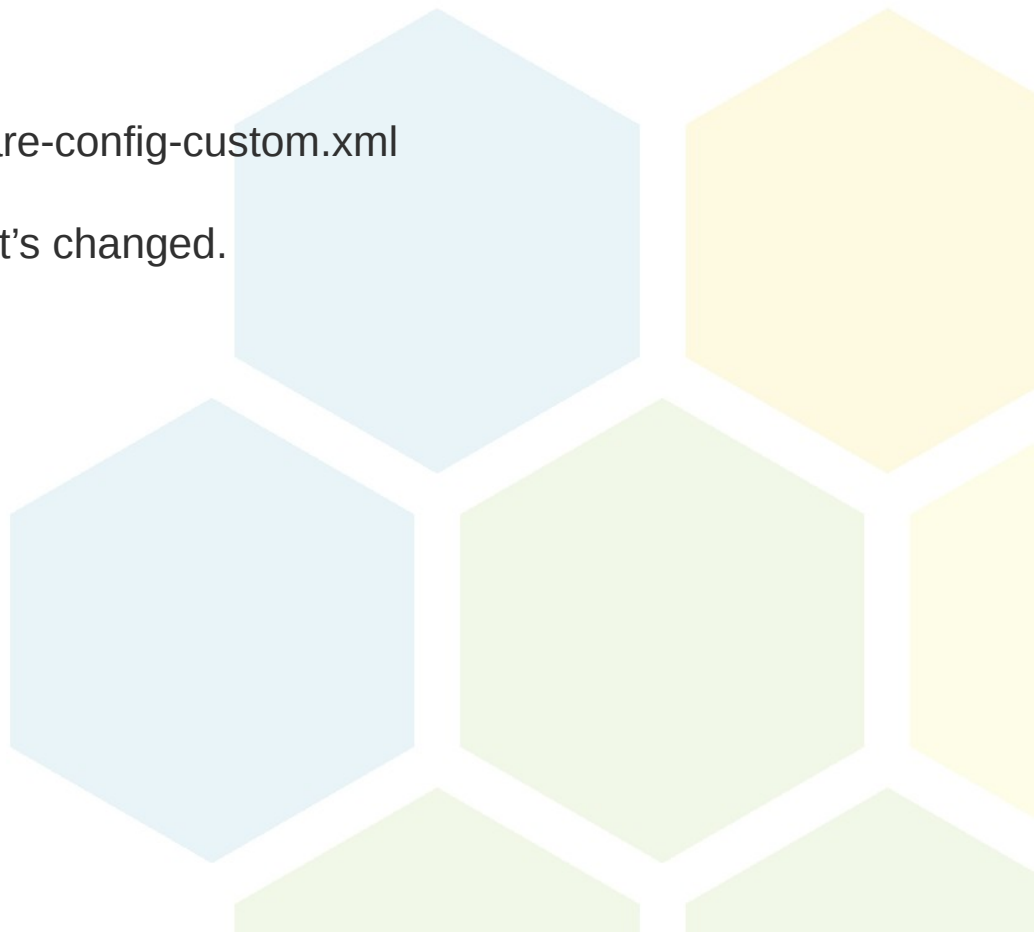
Good example of why the tool can't always help.
https://community.alfresco.com/community/ecm/blog/2016/11/23/create-and-edit-site-customization
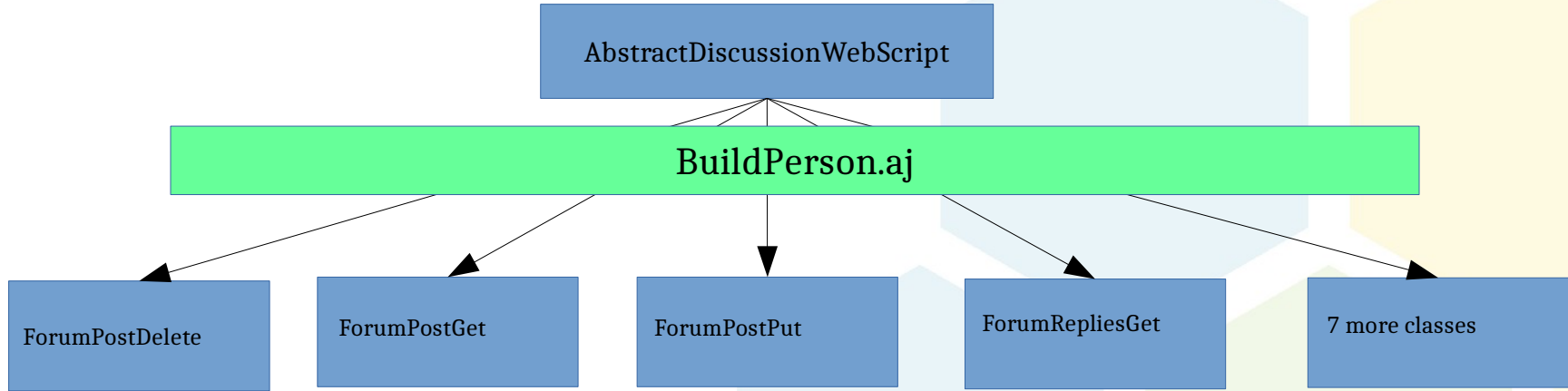
(Note the SDK 2.2 vs SDK 3 paths)

XML

Reports on differences in web.xml and share-config-custom.xml

Quite a lot of noise but useful to know what's changed.

Aspects


```
"aspects": {
    "BuildPerson.aj": {
        "classes": [
            "org.alfresco.repo.web.scripts.discussion.AbstractDiscussionWebScript"
        ]
    }
}
```

Custom class is being used:BuildPerson.aj
Checking java for:org.alfresco.repo.web.scripts.discussion.AbstractDiscussionWebScript org.alfresco.repo.web.scripts.discussion.AbstractDiscussionWebScript
Cannot find java for class:BuildPerson.aj
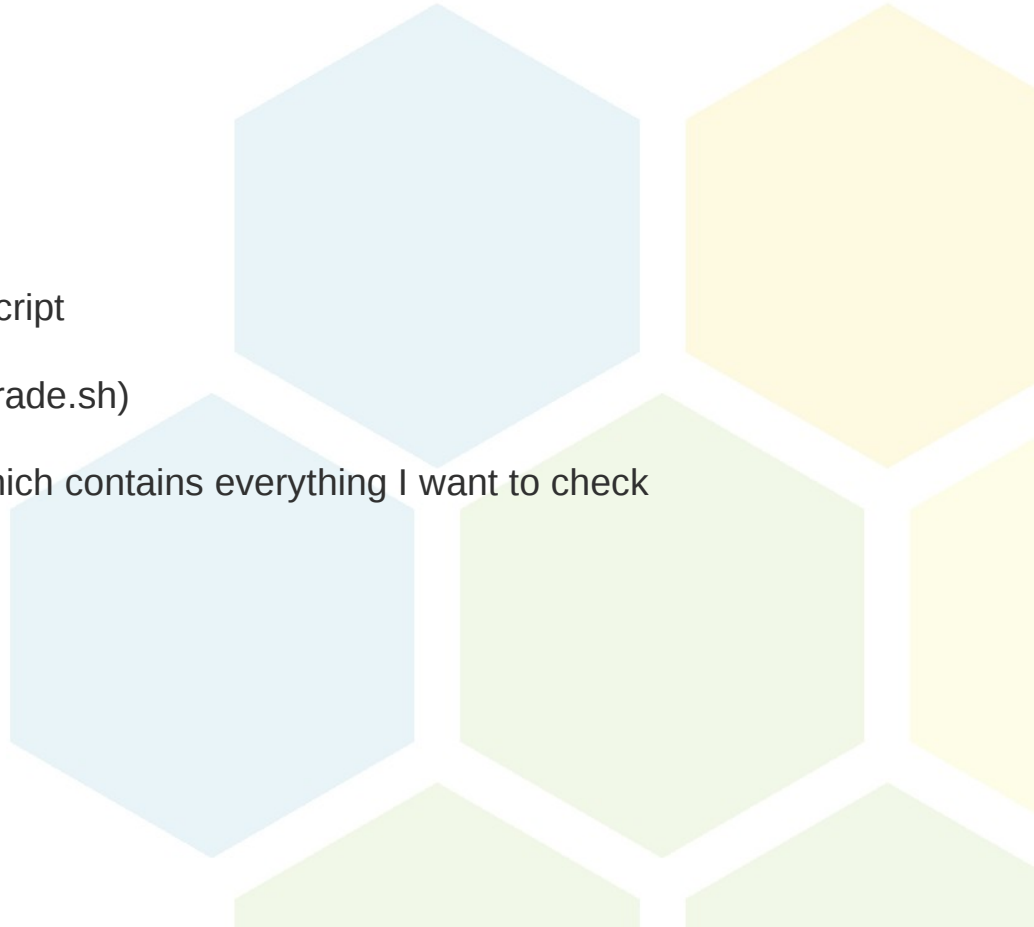
Usual different java output

How to use it?

Python 3 script so you'll need that installed.

https://github.com/wrighting/upgrade-assist

All the examples and more via the example.sh script

(which is more or less the same as alfresco-upgrade.sh)

I use links to set up ../my-alfresco-extensions which contains everything I want to check

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