

Log4j2 upgrading (cont)

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Continue Log4j2 Upgrade, provide more detail information on how to achieve this.

Updated Information


- Latest version: 2.8.2
- We went for a bigger migration and eradicated Log4j 1.2.x API from our product modules, bundles, and tests.
- We will document the upgrade, including possibility for projects to use the bridge library `org.apache.logging.log4j:log4j-1.2-api:2.8.2` for backward compatibility
 - see [DOCU-1164](#) - Getting issue details...

Implementation

- On main: [changes on main](#)
- On ui: [changes on ui](#)
- On log tools: [changes base on Runger's work](#)

After upgrade:

with Log Tools app 1.1, adapted to log4j 2.


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LOG LIST LOG LEVELS ⌵ ⌵

Use the tool below to view or download log files.

| | | |
|-------------------------------------|-------------------------|---------|
| <input type="checkbox"/> | bootstrap.log | 0 bytes |
| <input type="checkbox"/> | magnolia-access.log | 0 bytes |
| <input type="checkbox"/> | magnolia-activation.log | 0 bytes |
| <input type="checkbox"/> | magnolia-audit.log | 0 bytes |
| <input checked="" type="checkbox"/> | magnolia-debug.log | 783 KB |
| <input type="checkbox"/> | magnolia-error.log | 60 KB |
| <input type="checkbox"/> | magnolia-form.log | 0 bytes |

VIEW **DOWNLOAD**

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LOG LIST LOG LEVELS ⌵ ⌵

Edit log levels in the grid below; or register a new logger config for a specific logger name. Unless present in the grid, loggers inherit the level of their closest parent package.

| Name | Level |
|---|-------|
| | ALL |
| com | WARN |
| freemarker | WARN |
| httpclient | WARN |
| info.magnolia | INFO |
| info.magnolia.cms.exchange | INFO |
| info.magnolia.importexport.Bootstrapper | INFO |
| info.magnolia.module.activation | INFO |
| info.magnolia.resourceloader.classpath.service.impl.devmode.DevelopmentModeClasspathService | INFO |
| log-access | ALL |
| log-audit | ALL |
| log-form | ALL |
| net | WARN |
| openwfe | WARN |
| openwfe.org.log | WARN |

Logger name

ADD LOGGER CONFIG

libs and dependencies status: [ui-tree.txt](#), [main-tree.txt](#), [dev-web-app-tree.txt](#), [dev-web-app-lib.txt](#)

Suggest for fix issues mentioned in previous investigation

New package

- Refer to: [affectedmodules](#)

DOM and Property Configurator was removed

- Need to update implementation:
 - Update Log4jConfigurer.java, refer changes on main.

Log4J2 over the old fashioned properties file is not supported so far

- Support for old log configuration file is still not available yet. Suggest to:
 - Provide default log4j2.xml file
 - A fallback mechanism to use default log4j2.xml in case cannot parse configured file.

API for setLevel / getEffectiveLevel

- Refer to: [setLevel sample](#)

Custom Level

- Sample deprecated declaration:

Deprecated declaration

```
public class LoggingLevel extends Level {  
  
    public static final LoggingLevel AUDIT_TRAIL = new LoggingLevel(99, "AUDIT_TRAIL", 0);  
  
    protected LoggingLevel(int level, String levelStr, int syslogEquivalent) {  
        super(level, levelStr, syslogEquivalent);  
    }  
  
    public static Level toLevel(String sArg) {  
        return AUDIT_TRAIL;  
    }  
  
    public static Level toLevel(int val) {  
        return AUDIT_TRAIL;  
    }  
  
}
```

- Deprecate preference (info.magnolia.audit.AuditLoggingManager)

Deprecated preference

```
org.apache.log4j.Logger.getLogger(trail.getLogName()).log(LoggingLevel.AUDIT_TRAIL, message.toString());
```

- Update to:

Updated

```
public class CustomLogLevel {  
    public static final org.apache.logging.log4j.Level AUDIT_TRAIL = org.apache.logging.log4j.Level.forName("AUDIT_TRAIL", 99);  
}
```

Updated

```
org.apache.logging.log4j.LogManager.getLogger(trail.getName()).log(LoggingLevel.AUDIT_TRAIL, message.toString());
```

- For more info: [Custom log level](#)

Unit-testing

Many tests are reconfiguring loggers for getting/verifying log content. Using old APIs, those tests are either failed to compile or error.

- Add Appender

Deprecated

```
Writer loggerOut = new StringWriter();
final Layout layout = new EnhancedPatternLayout(EnhancedPatternLayout.TTCC_CONVERSION_PATTERN);
Logger.getRootLogger().setLevel(Level.INFO); // Other tests might have set this to silent
Logger.getRootLogger().addAppender(new WriterAppender(layout, loggerOut));
```

Updated

```
StringWriter stringWriter = new StringWriter();
StringLayout layout = PatternLayout.createDefaultLayout();
Appender appender = WriterAppender.newBuilder().setName("name").setLayout(layout).setTarget(stringWriter).
build();
org.apache.logging.log4j.core.Logger coreLogger = (org.apache.logging.log4j.core.Logger) org.apache.logging.
log4j.LogManager.getRootLogger();
coreLogger.setLevel(org.apache.logging.log4j.Level.WARNING);
```

- Custom Appender

Deprecated

```
public static class TestAppender extends AppenderSkeleton {
    public List<LoggingEvent> events = new ArrayList<>();

    @Override
    public void close() {
    }

    @Override
    public boolean requiresLayout() {
        return false;
    }

    @Override
    protected void append(LoggingEvent event) {
        events.add(event);
    }
}
```

Updated

```
public class Log4j2TestAppender extends AbstractAppender {  
  
    //for verifying.  
    List<LogEvent> events = new ArrayList();  
  
    public Log4j2TestAppender(String name, Filter filter, Layout<? extends Serializable> layout) {  
        super(name, filter, layout);  
    }  
  
    @Override  
    public void append(LogEvent event) {  
        events.add(event);  
    }  
  
    public List<LogEvent> getEvents() {  
        return events;  
    }  
}
```

Log Tools can not start due to it relies on Log4j

Fixed by [Upgrade to log4j2](#)

Affected product modules

| | Module | Affected Files | Remove | Note |
|---|--|--|--|-----------------------------|
| ✓ | ENTERPRISE/repos/advanced-cache - MGNLADVCACHE-95 | magnolia-advanced-cache/src/test/java/info/magnolia/module/advancedcache/EagerRecacheFlushPolicyTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender org.apache.log4j.Level | compile error / test failed |
| | | magnolia-advanced-cache/src/test/java/info/magnolia/module/advancedcache/NotifyFlushListeningPolicyRepositoryTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender | compile error / test failed |
| ✓ | ENTERPRISE/repos/content-translation-support | info/magnolia/module/contenttranslationsupport/reimport/TranslationBundleUpdater.java | org.apache.log4j.Logger | compile error |
| | ENTERPRISE/repos/ldap - MGNLLDAP-114 i PR ready - ldap is not bundled, hence not blocking | magnolia-ldap/src/test/java/info/magnolia/jaas/sp/ldap/TesterTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender | compile error / test failed |
| | ENTERPRISE/repos/personalization - MGNLPN-401 i can wait, no log4j dependency at runtime, version is still 5.5-based | magnolia-personalization-preview-app/src/test/java/info/magnolia/personalization/preview/ui/PagePreviewSubAppTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender | compile error / test failed |
| ✓ | MODULES/repos/4-5-migration | info/magnolia/migration/task/general/AbstractPostMigrationTaskTest.java | org.apache.log4j.Logger | compile error |

| | | | | |
|---|--|--|--|-----------------------------|
| | | info/magnolia/migration/task/general/IdCreationMigrationTaskTest.java | org.apache.log4j.Logger | |
| ✓ | MODULES/repos/inplace-templating | info/magnolia/module/inplacetemplating/InplaceTemplatingModule.java | org.apache.log4j.Logger | compile error |
| ✓ | MODULES/groovy | using slf4j-simple (without proper exclusions), version no longer managed after upgrade —trivial, pre-emptively removed slf4j-simple usage at all | poms | |
| | MODULES/repos/javascript-models - SM ODELS-18 i PR ready | src/test/java/info/magnolia/module/jsmodels/rendering/JavascriptRenderingModelTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender org.apache.log4j.Level | compile error / test failed |
| ✓ | MODULES/repos/log-tools - LOGTOOLS-29 | src/main/java/info/magnolia/log/tools/level/LogLevelSubApp.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / bug risk |
| | | src/main/java/info/magnolia/log/tools/level/LogLevelView.java | org.apache.log4j.Level | bug risk |
| | | src/main/java/info/magnolia/log/tools/level/LogLevelViewImpl.java | org.apache.log4j.Level | bug risk |
| | | src/main/java/info/magnolia/log/tools/level/model/LogLevelBean.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / bug risk |
| | | src/main/java/info/magnolia/log/tools/level/model/StringToLogLevelConverter.java | org.apache.log4j.Level | bug risk |
| | | src/test/java/info/magnolia/log/tools/level/LogLevelSubAppTest.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |
| ✓ | MODULES/repos/mail - MGNLMAIL-86 | src/main/java/info/magnolia/module/mail/handlers/LoggingLevel.java | org.apache.log4j.Level | bug risk |
| | | src/main/java/info/magnolia/module/mail/util/MailUtil.java | org.apache.log4j.Logger | compile error |
| ✓ | MODULES/repos/standard-templating-kit - MGNLSTK-1556 | info/magnolia/module/templatingkit/util/SureFireModuleManager.java | org.apache.log4j.Logger | compile error |
| ✓ | PLATFORM/repos/main - MAGNOLIA-6794 | src/main/java/info/magnolia/audit/LoggingLevel.java | org.apache.log4j.Level | bug risk |
| | | magnolia-core/src/main/java/info/magnolia/audit/AuditLoggingManager.java | org.apache.log4j.Logger | compile error |
| | | magnolia-core/src/test/java/info/magnolia/cms/filters/ContentTypeFilterTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender org.apache.log4j.Level | compile error / test failed |
| | | magnolia-core/src/test/java/info/magnolia/cms/security/RepositoryBackedSecurityManagerTest.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |
| | | magnolia-core/src/test/java/info/magnolia/logging/Slf4jSelfTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender org.apache.log4j.Level | compile error / test failed |
| | | magnolia-core/src/test/java/info/magnolia/module/model/reader/BetwixtModuleDefinitionReaderTest.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |

| | | | | |
|---|-----------------------------------|--|--|-----------------------------|
| | | magnolia-core/src/test/java/info/magnolia/setup/for5_0/AbstractNodeTypeRegistrationTaskTest.java | org.apache.log4j.Logger org.apache.log4j.AppenderSkeleton org.apache.log4j.Level | compile error / test failed |
| | | magnolia-core/src/test/java/info/magnolia/test/AbstractMagnoliaTestCase.java | org.apache.log4j.Logger org.apache.log4j.Level | test failed |
| | | magnolia-core/src/test/java/info/magnolia/test/RepositoryTestCase.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |
| | | magnolia-core/src/test/java/info/magnolia/test/TestUtil.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |
| | | magnolia-rendering/src/test/java/info/magnolia/rendering/engine/RenderingFilterTest.java | org.apache.log4j.Logger org.apache.log4j.WriterAppender org.apache.log4j.SimpleLayout | compile error / test failed |
| | | magnolia-templating/src/test/java/info/magnolia/templating/functions/TemplatingFunctionsTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender org.apache.log4j.Level | compile error / test failed |
| ✓ | PLATFORM/repos/ui - MAGNOLIA-6794 | magnolia-ui-form/src/test/java/info/magnolia/ui/form/field/factory/CompositeFieldFactoryTest.java | org.apache.log4j.Level | test failed |
| | | magnolia-ui-workbench/src/test/java/info/magnolia/ui/workbench/tree/HierarchicalJcrContainerTest.java | org.apache.log4j.Logger org.apache.log4j.AppenderSkeleton | compile error / test failed |
| | | magnolia-ui-mediaeditor/src/main/java/info/magnolia/ui/mediaeditor/MediaEditorPresenterImpl.java | org.apache.log4j.Logger | compile error |
| | | magnolia-ui-mediaeditor/src/main/java/info/magnolia/ui/mediaeditor/action/InstantMediaEditorAction.java | org.apache.log4j.Logger | |
| | | magnolia-ui-mediaeditor/src/main/java/info/magnolia/ui/mediaeditor/action/MediaEditorAction.java | org.apache.log4j.Logger | |
| | | magnolia-ui-mediaeditor/src/main/java/info/magnolia/ui/mediaeditor/action/MediaEditorUIAction.java | org.apache.log4j.Logger | |
| | | magnolia-ui-mediaeditor/src/main/java/info/magnolia/ui/mediaeditor/data/EditHistoryTrackingPropertyImpl.java | org.apache.log4j.Logger | |
| | | magnolia-ui-mediaeditor/src/main/java/info/magnolia/ui/mediaeditor/field/image/ImageMediaField.java | org.apache.log4j.Logger | |

Other affected repos/projects

| Module | Affected Files | Remove | Note |
|---|--|---|-----------------------------|
| MODULES/repos/magnolia-templating-compatibility (skip - project closed) | src/test/java/info/magnolia/module/templating/paragraphs/JspParagraphRendererTest.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |
| COOP/repos/cma-extranet (skip) | cma-extranet-project-webapp/src/main/webapp/WEB-INF/config/default/log4j.dtd | org.apache.log4j.Level | .dtd file |
| FORGE/repos/deadlink-app | de/marvinkerkhoff/checker/LinkChecker.java | org.apache.log4j.Logger | compile error |

| | | | |
|---|---|--|-----------------------------|
| | de/marvinkerkhoff/checker/PageLink.java | org.apache.log4j.Logger | |
| | de/marvinkerkhoff/checker/TaskOverflowHandler.java | org.apache.log4j.Logger | |
| | de/marvinkerkhoff/checker/TasksMonitorThread.java | org.apache.log4j.Logger | |
| FORGE/repos/google-analytics-demo | info/magnolia/analyticsdemo/views/StatsViewImpl.java | org.apache.log4j.Logger | compile error |
| FORGE/repos/site-verification | info/magnolia/module/siteverification/pages/SiteVerificationPage.java | org.apache.log4j.Logger | compile error |
| INTEGRATION/repos/magnolia-magento | info/magnolia/magento/integration/app/browser/container/MagentoItemContainerProxy.java | org.apache.log4j.Logger | compile error |
| INTEGRATION/repos/salesforce (skip) | src/test/java/info/magnolia/salesforce/SalesForceModuleTest.java | org.apache.log4j.Logger org.apache.log4j.EnhancedPatternLayout org.apache.log4j.WriterAppender | compile error / test failed |
| INTERNAL/repos/openutils-log4j (skip) | src/main/java/it/openutils/log4j/AlternateSMTPAppender.java | org.apache.log4j.AppenderSkeleton org.apache.log4j.Level | compile error / test failed |
| | src/main/java/it/openutils/log4j/Log4jConfigurationServlet.java | org.apache.log4j.Level | test failed |
| | src/test/java/it/openutils/log4j/FilteredPatternLayoutTest.java | org.apache.log4j.Logger | compile error |
| SERVICES/repos/deadlink-app-demo | de/marvinkerkhoff/checker/LinkChecker.java | org.apache.log4j.Logger | compile error |
| | de/marvinkerkhoff/checker/PageLink.java | org.apache.log4j.Logger | |
| | de/marvinkerkhoff/checker/TaskOverflowHandler.java | org.apache.log4j.Logger | |
| | de/marvinkerkhoff/checker/TasksMonitorThread.java | org.apache.log4j.Logger | |
| SERVICES/repos/magnolia-module-content-translation-support-extend | info/magnolia/module/contenttranslationsupport/extend/common/helper/bundle/ExtTranslationBundleUpdater.java | org.apache.log4j.Logger | compile error |
| SERVICES/repos/uzh - (skips) | uzh-wcms-security/src/test/java/com/namics/uzh/wcms/security/aai/AAIUtilsTest.java | org.apache.log4j.Logger org.apache.log4j.Level | compile error / test failed |
| SUPPORT/repos/quest-diagnostics | info/magnolia/module/mail/util/MailUtil.java | org.apache.log4j.Logger | compile error |
| TELIASONERA/repos/merge | java/info/magnolia/merge/api/service/impl/DiffServiceImpl.java | org.apache.log4j.Logger | compile error |
| | com/pcloud/MyUI.java | org.apache.log4j.Logger | |
| | com/pcloud/jcr_demo/NodeDiff.java | org.apache.log4j.Logger | |
| | com/pcloud/jcr_demo/Utils.java | org.apache.log4j.Logger | |
| | com/pcloud/jcr_demo/AppTest.java | org.apache.log4j.Logger | |

Others refs to **slf4j-simple**

| Files | |
|---|--|
| https://git.magnolia-cms.com/projects/BUILD/repos/poms/browse/poms/super-pom/pom.xml | |
| https://git.magnolia-cms.com/projects/FORGE/repos/external-indexing/browse/pom.xml | |
| https://git.magnolia-cms.com/projects/FORGE/repos/magnolia-alfresco-integration-module/browse/alfresco-integration-core/pom.xml | |
| https://git.magnolia-cms.com/projects/FORGE/repos/magnolia-alfresco-integration-module/browse/alfresco-integration-ui/pom.xml | |
| https://git.magnolia-cms.com/projects/INTERNAL/repos/demo-license-registration/browse/pom.xml | |
| https://git.magnolia-cms.com/projects/INTERNAL/repos/ondemand/browse/pom.xml | |
| https://git.magnolia-cms.com/projects/PRESALES/repos/us-demo/browse/pom.xml | |
| https://git.magnolia-cms.com/projects/SYS/repos/doctools/browse/shared/pom.xml | |
| https://git.magnolia-cms.com/projects/SYS/repos/jenkins-scripts/browse/pom.xml | |

| | |
|---|--|
| https://git.magnolia-cms.com/projects/SYS/repos/magnolia-sys-tools/browse/pom.xml | |
| https://git.magnolia-cms.com/projects/SYS/repos/nexus-client/browse/pom.xml | |
| https://git.magnolia-cms.com/projects/SYS/repos/project-health/browse/shared/pom.xml | |
| https://git.magnolia-cms.com/projects/SYS/repos/secret-santa/browse/shared/pom.xml | |
| https://git.magnolia-cms.com/projects/SYS/repos/user-account-scripts/browse/shared/pom.xml | |
| https://git.magnolia-cms.com/projects/TELIASONERA/repos/data-transfer/browse/magnolia-data-transfer-parent/pom.xml | |