



adaptTo()

APACHE SLING & FRIENDS TECH MEETUP
10-12 SEPTEMBER 2018

A better developer experience
M. Chromiński, K. Panek, Cognifide



Developer Experience



<https://www.pexels.com/photo/man-standing-937546/>



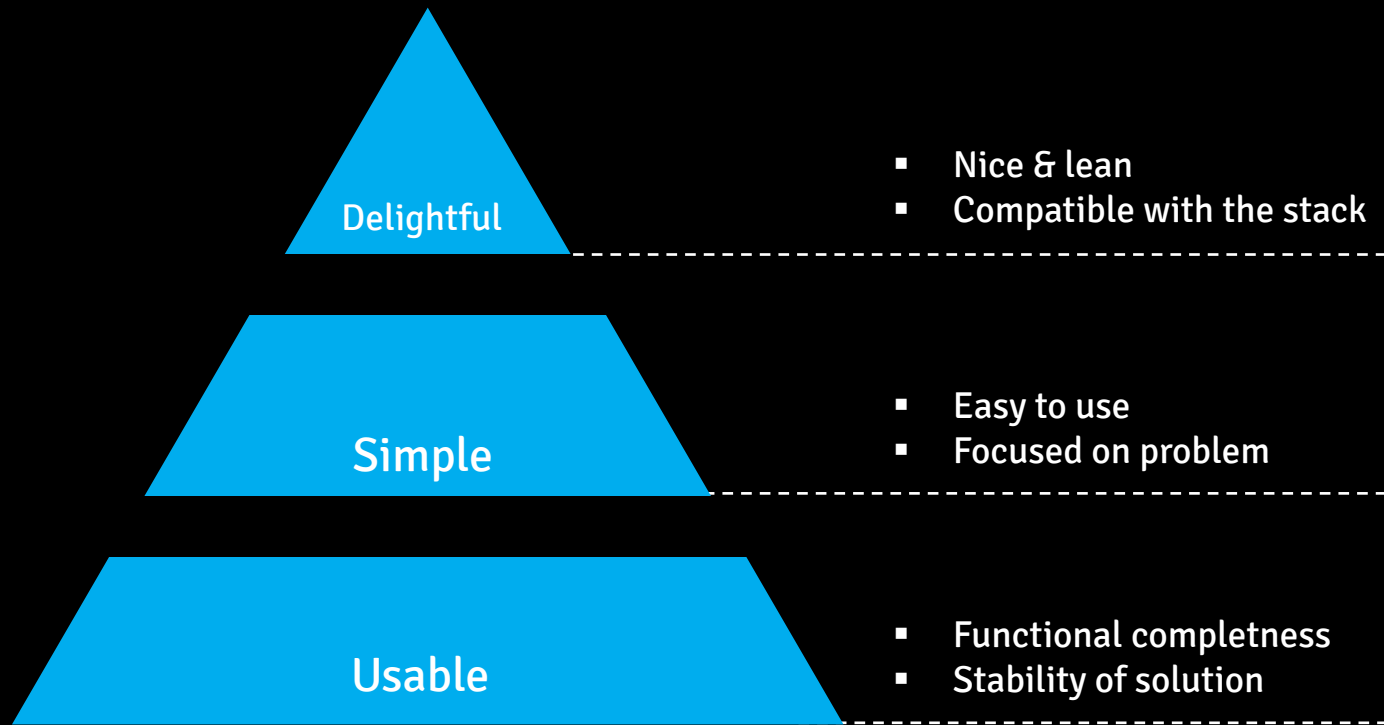
Developer Experience



Developer Experience



Developer's hierarchy of needs



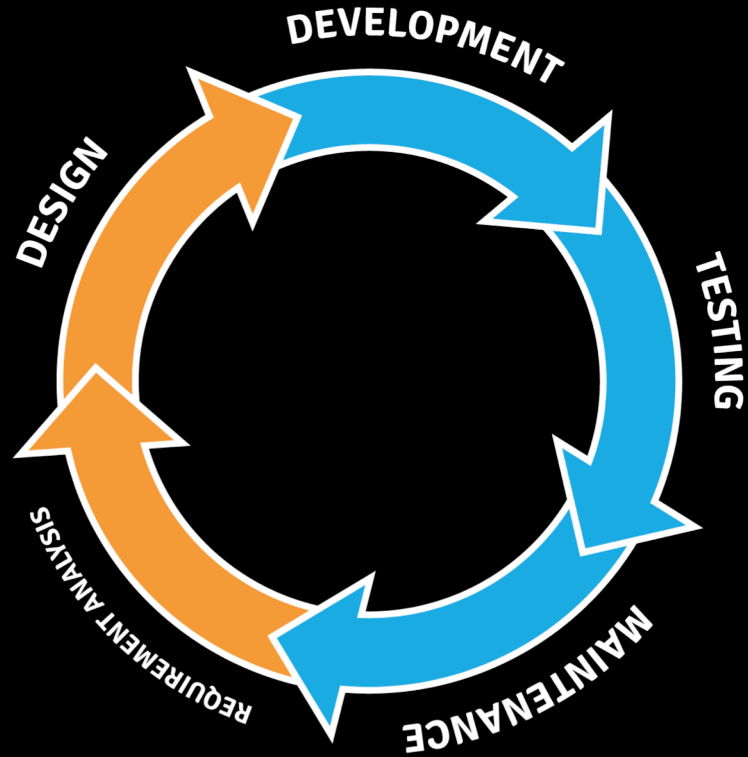
Developer Experience on Assembly Lines



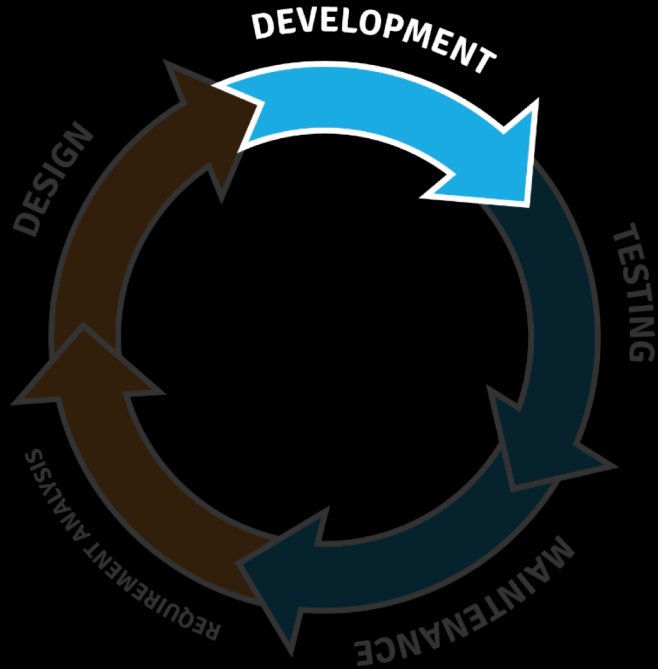
https://upload.wikimedia.org/wikipedia/commons/2/29/Ford_assembly_line_-_1913.jpg

DX while building Sling based applications

Software Development Life Cycle

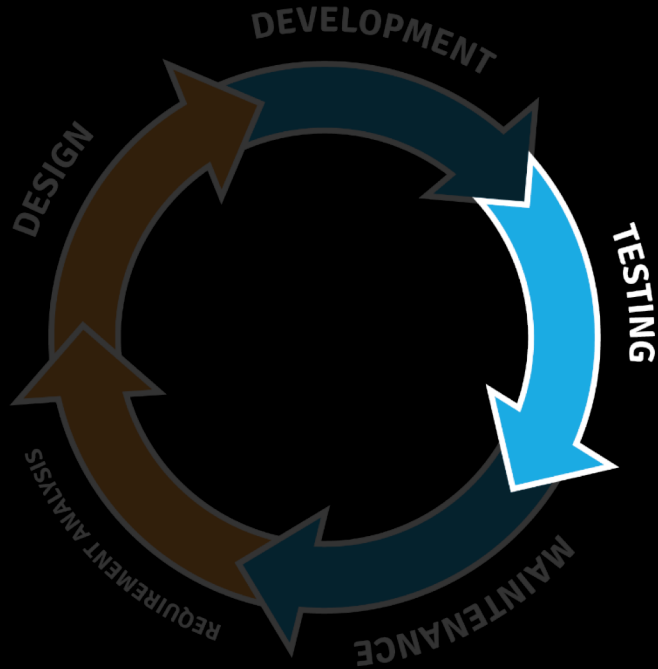


Development: typical activities



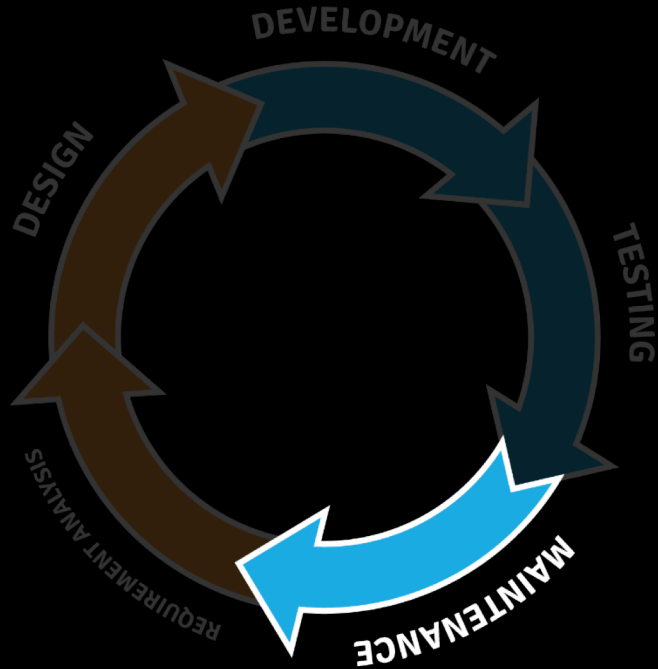
- Environment setup
- Application setup
- Code development
- Application build

Testing: typical activities



- Manual testing
- Unit testing
- Functional testing
- Regression testing
- Static code analysis

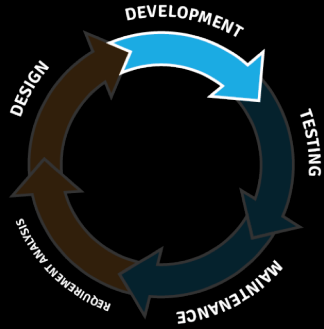
Maintenance: typical activities



- Diagnostic & monitoring
- Issue reproduction
- Troubleshooting

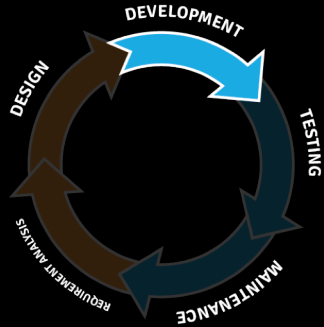
Improvements

Environment setup: expectations



- Minimal time to run application
- Minimal manual steps
- Fast & reproducible environment
- Environment as a code

Environment setup powered by Gradle



Gradle AEM Plugin

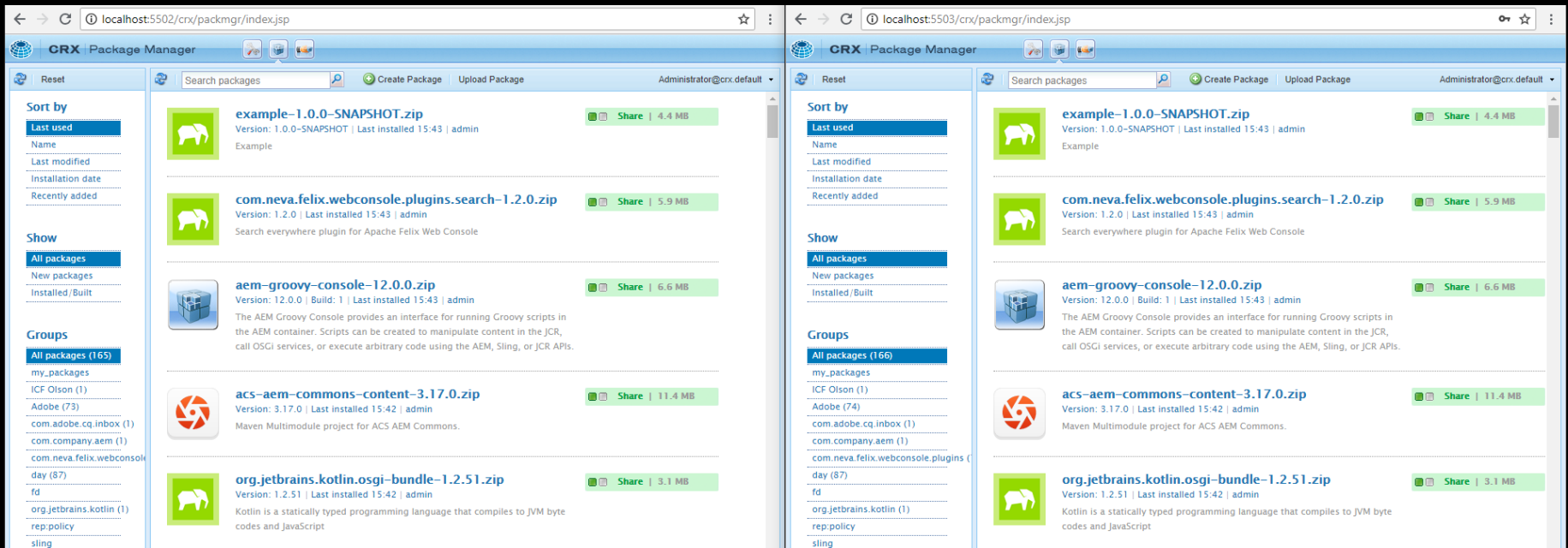
- No virtualization → Native AEM performance
- Environment as a code → Easily maintainable
- Gradle based → Basic software prerequisites (JDK only)

<https://github.com/Cognifide/gradle-aem-plugin>

Environment setup: demo

<https://youtu.be/7VG5AjpKZyo>

Environment setup powered by Gradle



The image displays two side-by-side screenshots of the CRX Package Manager web interface. Both screenshots show a list of packages with the following details:

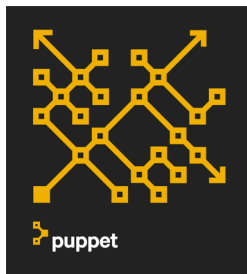
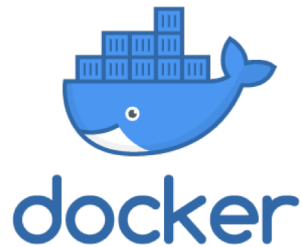
- example-1.0.0-SNAPSHOT.zip**: Version: 1.0.0-SNAPSHOT | Last installed 15:43 | admin | 4.4 MB
- com.neva.felix.webconsole.plugins.search-1.2.0.zip**: Version: 1.2.0 | Last installed 15:43 | admin | 5.9 MB
- aem-groovy-console-12.0.0.zip**: Version: 12.0.0 | Build: 1 | Last installed 15:43 | admin | 6.6 MB
- acs-aem-commons-content-3.17.0.zip**: Version: 3.17.0 | Last installed 15:42 | admin | 11.4 MB
- org.jetbrains.kotlin.osgi-bundle-1.2.51.zip**: Version: 1.2.51 | Last installed 15:42 | admin | 3.1 MB

The interface includes a search bar, navigation tabs (Reset, Create Package, Upload Package), and a sidebar with sections for 'Sort by', 'Show', and 'Groups'. The 'Groups' section lists various categories like 'my_packages', 'ICF Olson (1)', 'Adobe (73)', etc.

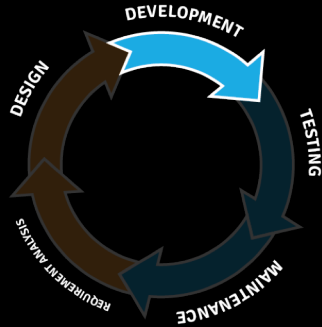
Environment setup: alternatives



HashiCorp
Vagrant

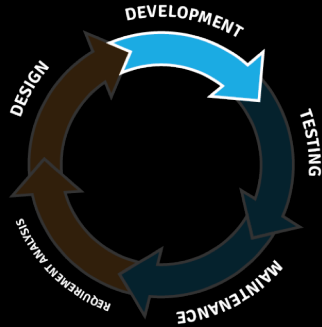


Application build: expectations



- Quick build time
- Intelligent & interactive
- Perfectly integrated
- Well customizable

Application build powered by Gradle

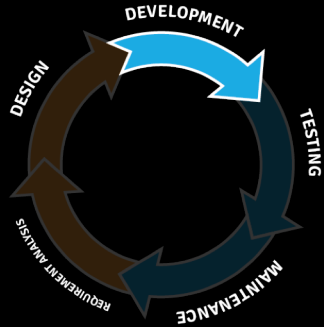


Gradle AEM Plugin

- Incremental build → 2-3x faster comparing to Maven
- Instance health checking → Notifications when up&running
- Automated dependencies deployment → Self-sufficient dev

<https://github.com/Cognifide/gradle-aem-plugin>

Application build powered by Gradle



Gradle AEM Plugin

- Very useful for building AEM applications
- **Optionally** useful to set up AEM environments

<https://github.com/Cognifide/gradle-aem-plugin>

Application build: demo

<https://youtu.be/sEUn2-uxlog>

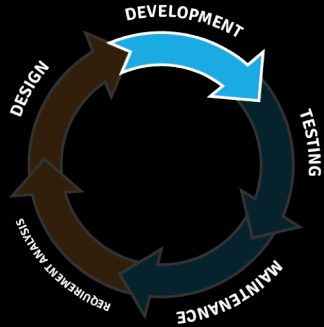
Application build: alternatives

MavenTM

 **eclipse** +  **Sling**TM

Gradle plugin CQ Package

Gradle for Sling - now available



Gradle Sling Plugin

- Fork of Gradle AEM Plugin that includes **all** it's features

<https://github.com/Cognifide/gradle-sling-plugin>

Gradle for Sling - all-in-one demo:

Cognifide / [gradle-sling-single](#) Unwatch 11 Star 1 Forks 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

Example Single-Module Sling application built by Gradle Build System

245 commits 1 branch 0 releases 2 contributors Apache-2.0

Branch: master New pull request Create new file Upload files Find file Clone or download

pun-ky Workaround Latest commit 243ad5e 22 days ago

docs	GSP logo	27 days ago
gradle	Gradle upgrade	27 days ago
src/main	VLT ignore	28 days ago

Browser Packages Users Felix

packages

- com.company.sling
 - sample-1.0.0-SNAPSHOT.zip**
 - com.neva.felix.webconsole.plugins
 - com.neva.felix.webconsole.plugins.search

Search

status	group	name
	com.company.sling	Sample
	com.company.sling	sample
		1.0.0-SNAPSHOT

installed
 sealed
 valid

created: 2018-06-26 08:18:16 by krystian.panek
 last modified: 2018-06-26 08:18:16 by admin
 sample-1.0.0-SNAPSHOT.zip

last unpacked: 2018-06-26 08:18:17 by admin
 last unwrapped: 2018-06-26 08:18:16 by --
 last wrapped: -- by --

Filter List

/apps/sample

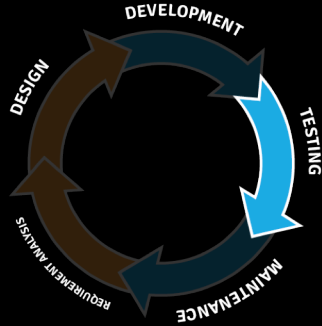
/content/sample



Gradle for Sling: demo

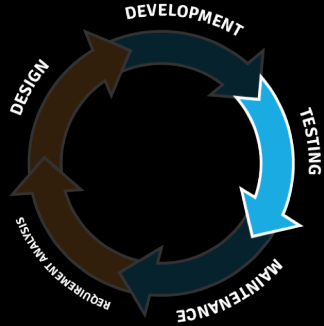
<https://youtu.be/sEUn2-uxlog>

Regression testing: expectations



- Focus on change
- Shield against change by accident
- Test quickly
- Reduce human testing

Regression testing powered by AET



- Configurable website monitoring → Find unwanted changes
- Scalable → Testing all volume platforms
- Various comparators → Testing change wide

<https://github.com/Cognifide/aet>

Regression testing: demo

<https://youtu.be/8Zpn7LGeV98>

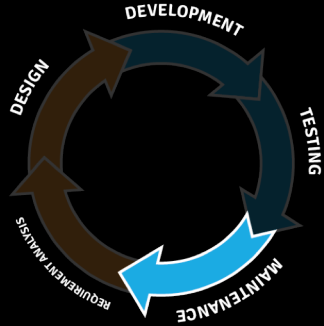
Regression testing: alternatives

 **applitools**eyes

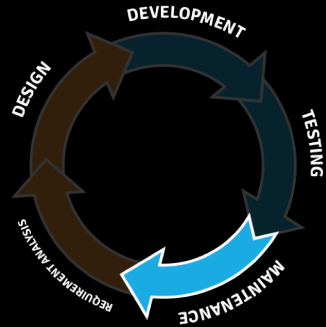
vis  w!z

 Visual Review

Troubleshooting: expectations



- Easy way to find source of bug
- Easy issue reproduction
- See actual code instead of just version



Search Web Console Plugin

for Apache Felix

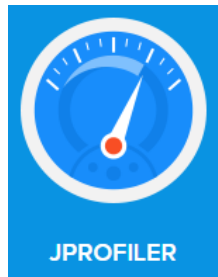


- Single JAR to deploy → Immediate way to discover runtime
- Decompile & search → Finding bug root cause
- Assemble OSGi bundles → Debugging at breakpoint

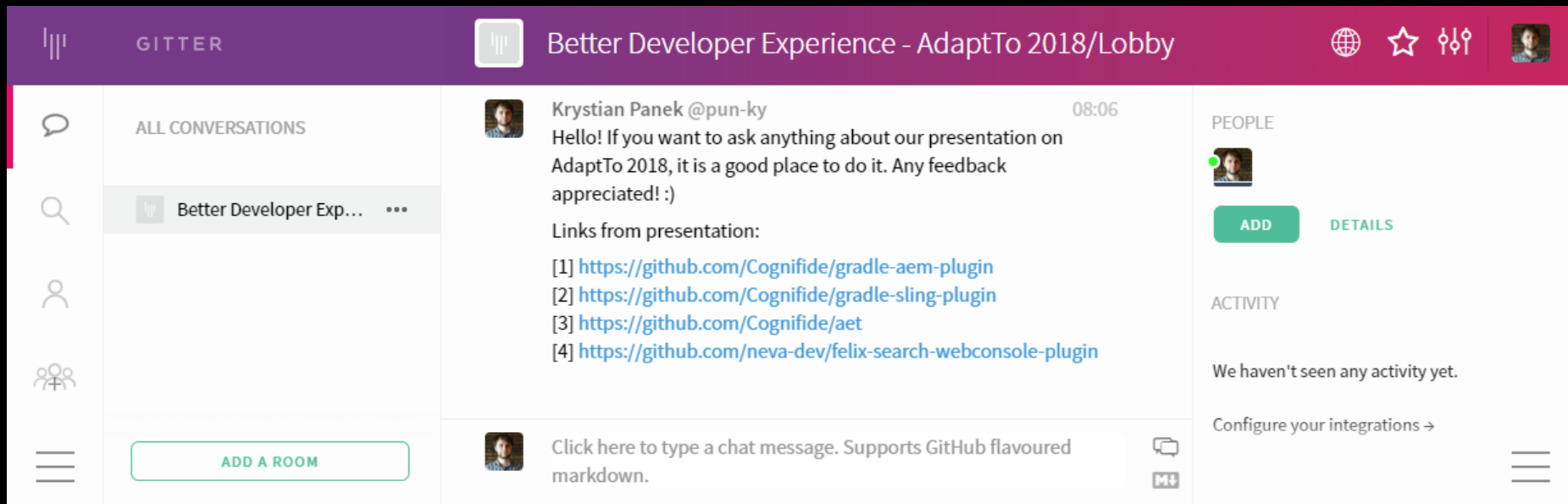
<https://github.com/neva-dev/felix-search-webconsole-plugin>

<https://youtu.be/6UH0U5uNvU4>

Troubleshooting: alternatives



Summary

A screenshot of a Gitter chat interface. The header is purple and contains the Gitter logo, the room name "Better Developer Experience - AdaptTo 2018/Lobby", and icons for globe, star, settings, and a user profile. The left sidebar shows navigation icons for messages, search, user, and group, along with an "ADD A ROOM" button. The main chat area shows a message from Krystian Panek (@pun-ky) at 08:06, containing a greeting and four GitHub links. The right sidebar shows a "PEOPLE" section with an "ADD" button and a "DETAILS" link, and an "ACTIVITY" section with the text "We haven't seen any activity yet." and a "Configure your integrations" link.

GITTER Better Developer Experience - AdaptTo 2018/Lobby

ALL CONVERSATIONS

Better Developer Exp... ⋮

ADD A ROOM

Krystian Panek @pun-ky 08:06

Hello! If you want to ask anything about our presentation on AdaptTo 2018, it is a good place to do it. Any feedback appreciated! :)

Links from presentation:

- [1] <https://github.com/Cognifide/gradle-aem-plugin>
- [2] <https://github.com/Cognifide/gradle-sling-plugin>
- [3] <https://github.com/Cognifide/aet>
- [4] <https://github.com/neva-dev/felix-search-webconsole-plugin>

Click here to type a chat message. Supports GitHub flavoured markdown.

PEOPLE

ADD DETAILS

ACTIVITY

We haven't seen any activity yet.

Configure your integrations →

<https://gitter.im/better-dx-adapto2018>

All berries are edible*



<https://images.pexels.com/photos/87818/background-berries-berry-blackberries-87818.jpeg>

Thank you

Krystian Panek

<krystian.panek@cognifide.com>



Mateusz Chromiński

<mateusz.chrominski@cognifide.com>