



adaptTo()

APACHE SLING & FRIENDS TECH MEETUP
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Future-proof content architecture designs
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Agenda

- Content structure analysis in AEM
- Content categories
- Content maintenance and management
- Use case: Sling CA configurations

Content structure analysis in AEM

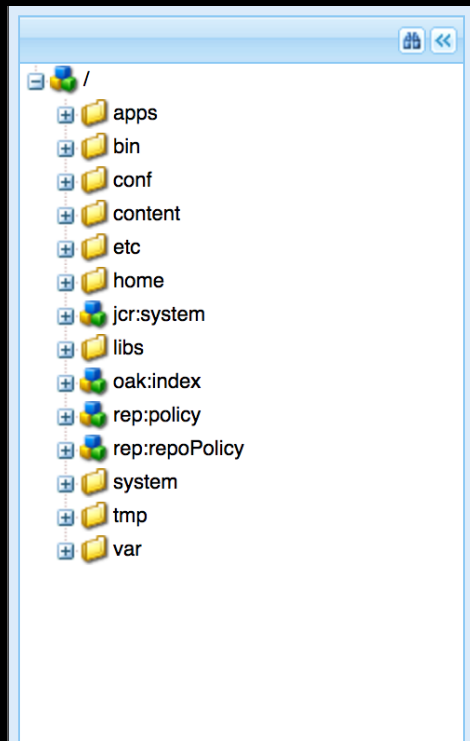
Why?

- Provide clear guidelines for the future
- Prevent clashes with custom content
- Avoid and solve the /etc/... mess

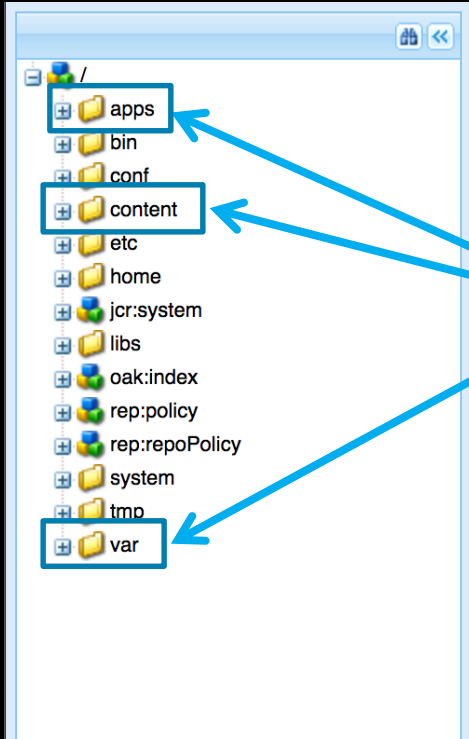
Content analysis

- Inventoried all AEM content models
- Extracted sets of feature requirements
- Mapped storage location to feature set(s)

Content inventory



Content inventory



What do we have here?

Content Categories

Content categories - Flags

- Who produces this content?
 - Producer category
- Who consumes this content?
 - Consumer category
- Is this a kind of configuration?
 - Configuration category

Content categories - Flags

- Is this disposable at runtime?
 - Disposable category
- Are updates at runtime required?
 - Updateable at runtime category
- Should this be shared in a cluster?
 - Cluster shared category

Content categories - Producer

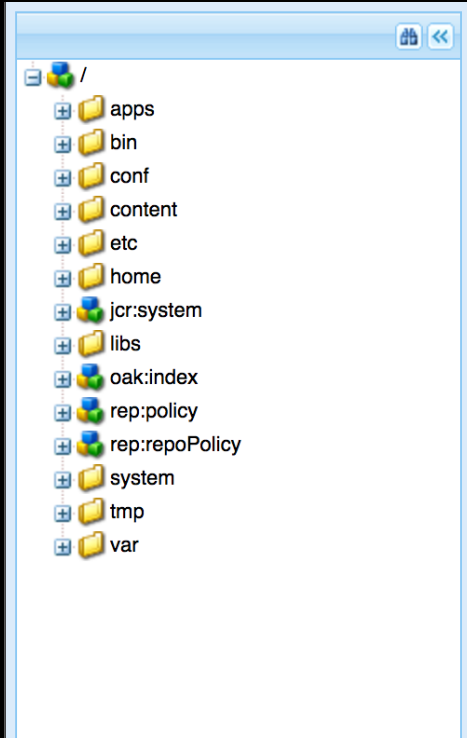
- AEM Developer
- Integrator
- DevOps
- User
- System

Content categories - Consumer

- User
- System

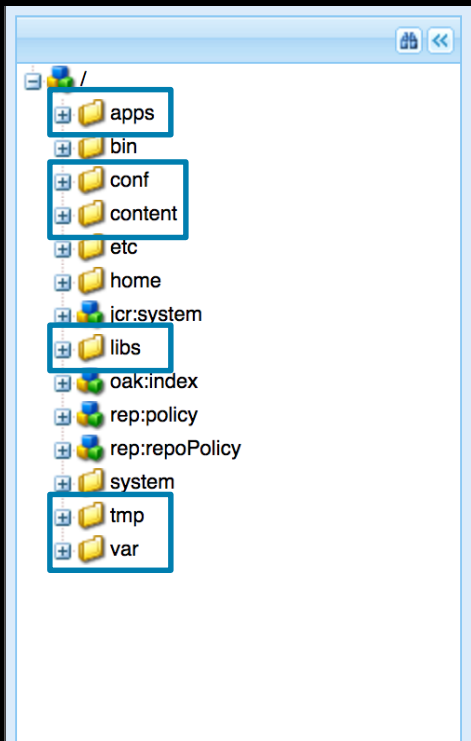
Content maintenance and management

Content architecture – Root locations



- Which ones do we use?

Content architecture – Root locations



- /libs
- /apps
- /conf
- /content
- /var
- /tmp

Content architecture - Mapping

Producer	Consumer	Config	Disposable	Clusterable	Writable	Destination
AEM Dev	User	No	No	Yes	*	/content
AEM Dev	User	*	No	No	No	/libs
AEM Dev	System	*	No	*	No	/libs

- Easier future maintenance
- Overlay instead of in-place edits
- Avoids overlapping filters
- No generic storage locations

Use Case:Context-Aware configurations in Sling

Sling CA Configuration – Use case

- Assume an OOTB configuration node in the repository

```
/etc
  /media
    /player-config
      @speed="1.0"
```

- We want to update the config model

```
/etc
  /media
    /player-config
      @speed="1.0"
      @quality="HD"
```

- **OOTB configuration**

 - `/libs/sling:settings`
 - `/media/player-config`

- **Integrator**

 - `/apps/sling:settings`
 - `/media/player-config`

- **Runtime**

 - `/conf/*/sling:settings`
 - `/media/player-config`

- **Reading the configuration properties**

```
ConfigurationResolver configResolver = sling.getService(...);
ConfigurationBuilder configBuilder = configResolver.get(resource)
    .name("media/player-config");
ValueMap playerConfigProps = configBuilder.asValueMap();
```

Configuration lookup order

- Lookup order ↑
- /libs
 - /apps
 - /conf/global
 - /conf/tenant
 - /conf/tenant/sub-tenant

Sling CA Configuration – main features

- Property inheritance
- Child configuration list merging
- Customizable configuration lookup

Content management ownership

Location	Owner(s)	Remarks
/libs	AEM Dev	Deploy
/apps	Integrator, DevOps	Deploy
/conf	DevOps, User, System	Runtime
/content	All	All
/var	User, System	Runtime
/tmp	User, System	Runtime

- **Sling Context-Aware Configurations**

<https://sling.apache.org/documentation/bundles/context-aware-configuration/context-aware-configuration.html>

Q & A

Appendix

Mapping -1

Producer	Consumer	Config	Disposable	Clusterable	Writable	Destination
AEM Dev	User	No	No	Yes	*	/content
AEM Dev	User	*	No	No	No	/libs
AEM Dev	System	*	No	*	No	/libs
Integrator	User	No	No	Yes	*	/content
Integrator	User	*	No	No	No	/apps
Integrator	System	*	No	No	No	/apps

Mapping - 2

Producer	Consumer	Config	Disposable	Clusterable	Writable	Destination
DevOps	System	Yes	No	Yes	No	/conf
DevOps	System	*	No	No	No	/apps
User	User	Yes	No	Yes	*	/conf
User	User	No	No	Yes	*	/content
User	System	No	Yes	Yes	*	/tmp
User	System	No	No	Yes	*	/var

Mapping - 3

Producer	Consumer	Config	Disposable	Clusterable	Writable	Destination
System	User	No	Yes	Yes	*	/var
System	User	No	No	Yes	*	/content
System	System	Yes	No	Yes	*	/conf
System	System	No	Yes	Yes	*	/tmp
System	System	No	No	Yes	*	/var